Rec#	Recommendation	Status / Implementation Plan	Related Rec#s		
	Science Recommendations				
A1	The County should use the Science Committee's Statement on Sea Level in the Coming Century to guide future climate change mitigation and adaptation policy.	The CCATF Committees have considered the Science statement in their deliberations since 2007. The Statement has become accepted as mainstream and is cited in many reports and meetings outside of the CCATF. The SE Florida Regional Climate Compact will be convening local scientists and experts in the fall of 2010 to discuss the various sea level rise projections and attempt to gain consensus on a regional sea level rise planning scenario for the region.	A2		
A2	The County should commission detailed maps for all of Miami-Dade County created from calibrated LIDAR (Light Detection and Ranging) surveys (or other elevation survey technology that employs best known practices). The maps will allow identification of which areas will become flooded in association with different sea levels.	In 2008 and 2009, the Department of Environmental Resources Management (DERM) drafted and then updated a Digital Elevation Model (DEM) using three 2003 LiDAR data sources: CSOP-USACOE, IHRC-FIU, and Woolpert-ETSD. These were the most up to date and accurate LiDAR sources available at the time. The County is partnering with the U.S. Geological Survey (USGS) to develop a modeling program for surface and groundwater flows. This will help the County in its climate change adaptation planning process. The SE FL Regional Climate Compact is convening its Regional Vulnerability Assessment Technical Work Group for a one-day workshop facilitated by NOAA to build consensus on planning parameters and vulnerability assessment to apply to regional digital elevation models developed by the South Florida Water Management District and adopted by the Compact Counties in May 2010.	A1		

GHG Recommendations

B1 Ordinances related to the award/allocation of taxicab medallions include a requirement for all new medallions issued after January 1, 2008 to be allocated to hybrid or other vehicles having a combined average fuel efficiency of 28 MPG or higher

Commissioner Barreiro sponsored Ordinance in July '08 to phase in more B2, B4 fuel efficient vehicles as part of the annual replacement schedule. Following several meetings and taxicab workshops, this item was deferred in November '08 and has not yet been advanced. On July 27, 2010 the New York Court of Appeals sided with the Metropolitan Taxicab Board of Trade in a suit and ruled against a new policy that would have mandated a higher fuel economy standard for taxis .

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	GHG Reco	ommendations	
B2	Require that taxicabs being retired be replaced with new hybrid or other vehicles having a combined average fuel efficiency of 28 MPG or higher. Implementation of this recommendation is expected to affect 300 owners each year. The County should develop a financing mechanism to either subsidize the initial purchases or provide a revolving loan fund to assist owners to purchase new hybrids on reasonable terms and at reasonable interest rates.	The County has investigated a revolving fund, but has not finalized an action. See comment above under B1.	В4
B3	It is recommended that Miami-Dade County regularly evaluate greenhouse gas emission reductions and the net environmental benefit of each fuel and vehicle under consideration for purchase and use in internal operations in order to ensure the use of the most efficient vehicles and sustainably-sourced alternative fuels, including those that are locally produced, and adjust investment accordingly. Net environmental benefit shall be determined.	No action has been taken. The recommendation may require a County Commission action. The Department of Solid Waste Management has purchased 6 hybrid garbage trucks. Smaller departments may find the implementation more difficult. As per communication with EPA in June of 2010, there is not a single model for lifecycle analysis for biofuels. Therefore, it would be extremely difficult for County staff with limited expertise in this area to undertake such an analysis. In addition, Miami-Dade County does not have a procurement mechanism in place that allows it to identify the feedstock and country origin of the feedstock used to make biodiesel purchased by the County. Using a collection of analytical tools, EPA has done its own analysis of certain feedstocks/process combinations in order to determine whether various feedstock/process combinations can be expected to result in the federally required 50% GHG lifecycle reduction. In the case of biodiesel (compared to petroleum diesel), the following has been determined. • Biodiesel and renewable diesel from soy oil or waste oils, fats, and greases will meet the 50% GHG threshold for biomass-based diesel compared to the 2005 petroleum diesel baseline. • Biodiesel and renewable diesel produced from algal oils will also comply with the 50% threshold should they reach commercial production. EPA is in the process of evaluating the lifecycle of biodiesel made from palm oil.	B4

Rec#	Recommendation	Status / Implementation Plan	Related Rec#s		
	GHG Recommendations				
В4	Procurement Management Department should take necessary steps to improve pricing and access to sustainably-sourced alternative fuels and high efficiency vehicles for County operations. This would include forming a joint committee or committees to pursue collective purchasing opportunities and to evaluate the costs and benefits of collective bids.	On April 5, 2010, the County awarded a new contract for unleaded and diesel fuel which includes options to procure various biodiesel and ethanol blends.	В3		
B5	The Climate Change Advisory Task Force recommends that as Miami-Dade County fueling facilities are built, modified, or upgraded, they be designed and constructed to accommodate alternative fuels, including, but not limited to, E85 and B100. In addition, the County should consider dispensing E85 at two Miami-Dade County fueling stations within 6 months of it becoming locally available as determined by the process described in Recommendation B.3. It is recommended that Miami-Dade re-evaluate the use of E85 six months after dispensing is initiated to assess local availability, overall net costs and environmental impacts. Furthermore, new vehicles being purchased now and in the future by Miami-Dade County should have the capability of using ethanol and biodiesel, without the need for retrofit.	The General Services Administration (GSA) had been converting its single wall tanks to double wall tanks to comply with the Environmental Protection Agency's (EPA's) requirements for storing alternative fuels. GSA is aware of Recommendation B.5, which did not necessarily require County Commission action. Regarding a County Manager memorandum indicating that by April 2009, the County should be using B20 diesel fuel, the County is currently buying E10 and B5 fuels. GSA has determined that using E85 is not economically feasible.			
B6	Require the use of sustainably-sourced biodiesel in all County diesel fleet vehicles and equipment (except standby equipment) as determined by the process described in Recommendation B.3, starting with B5 and increasing to B20 in 6 months. The Climate Change Advisory Task Force recommends that a portion of the local option gasoline tax be used to offset the cost difference for biodiesel.	This recommendation will require County Commission action, since this would require a policy shift. LOGT dollars are currently committed to other efforts for the most part. See comment above under B3. The County is currently unable to determine whether the biodiesel it is procuring is sustainably-sourced. The County is currently using B5 biodiesel and E10 ethanol in most County operations. County departments met on July 19, 2010 to discuss increasing its biodiesel blend to B10.			
B7	Require that Miami-Dade County develop a vehicle procurement process, which ensures that vehicles owned by MDC increase their mpg by 5% annually per vehicle class (whenever higher MPG vehicles are available) and that the cost of carbon emissions is included in the life cycle cost analysis process.	No action has been taken to date. May require legislation.			

Rec#	Recommendation	Status / Implementation Plan Relate
	GHG Recommenda	tions
B8	Miami-Dade County fleet procurement if that vehicle is determined to recomm	mmendation will require County Commission action. The endation was made to ensure that the County only purchase hicles when they were really needed.
B9	conservation incentive and awareness campaign for employees. Department. This campaign should use information from the Chicago Climate Exchange membership, the Climate Change Advisory Task Force (CCATF) Science Committee, and other pertinent sources toconservation incentive and awareness campaign for employees in conjunction with the Miami-Dade County's Resource Conservation Committee, DERM's Pollution Prevention and Environmental Education work groups, and GSA. In addit to income in depa Specific employees.	the award of the Energy Efficiency and Conservation Block (CBG), the County has developed a communitywide energy tion campaign to engage residents, as well as County es, to serve as a catalyst for long-term behavior changes in reduced energy use. Elements of the campaign include, but mited to a revamped green.miamidade.gov, home energy orkshops, light bulb exchanges, and upcoming residential and energy savings challenges and incentive programs for low-esidents. In, beginning in 2009-10 all County departments were required orate sustainability efforts into their business plans, as well as ment directors' goals and objectives. Ily, as part of this campaign the County launched its first ever e green pledge. As of 8/3/10, 16,773 employees have made pledges. Additionally, fuel and electricity consumption are now cked per department on the County's scorecard system.
B10	put forth as a result of the most recent Miami-Dade County fleet current analysis that lead to an increase in fleet fuel efficiency and a reduction in vehicle miles traveled (VMT). The Task Force recommends that the police v	nty is addressing this recommendation on an ongoing basis. The ear's budget contains a 2% reduction of the County's light fleet. It is having difficulty purchasing hybrid sedans for non-pursuit hicles. The County Manager is encouraging fleet reduction and exencing.

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GHG Recommendations

- B11 The Task Force recommends that Miami-Dade County implement the following steps to ensure their ability to meet the Cool Counties greenhouse gas reduction commitments:
 - i. Commit to a 20% reduction in GHG emissions by 2020 through an annual 2% reduction from the base year of 2005 for both County government and County-wide GHG emissions. Provide annual reporting on greenhouse gas emissions for the County government and Countywide GHG emissions. This annual report should include steps taken to reduce GHG emissions internally and geographically, results, and steps needed to meet the next year target.
 - ii. Recognize this commitment takes dedicated resources to develop, implement and report on these plans. The County Manager intends to adequately resource this initiative to achieve targets established in the Cool Counties resolution and in paragraph (i) of this resolution.
 - iii. The County establish a countywide alliance of municipalities and large corporations, public and nonprofit institutions that will need to collaborate in order to meet previously established targets. This consortium will be used to:
 - a. Enlist partners to explicitly adopt all primary goals of the Cool Counties GHG reduction targets and to report on their own GHG reductions.
 - b. Identify and implement strategies for the financing and performance of energy efficiency and renewable energy upgrades in Miami Dade County/South Florida,
 - c. Increase purchasing power of energy efficiency related financing, services and products, and
 - d. Enlist partners to assist with the dissemination of information and incentives designed to assist individuals and small businesses in meeting these reduction goals.

(This alliance could also be used to coordinate Countywide adaptation).

The Office of Sustainability (OOS) is supporting this through efforts to improve accuracy of electricity data, efforts to align energy use with business units, creation of an Energy Master Plan for County operations and helping form and participate in an alliance of municipalities and large corporations, public and nonprofit institutions, that will collaborate to pursue countywide targets.

In addition, through the award of the Energy Efficiency and Conservation Block Grant (EECBG), the County has undertaken several initiatives to reduce energy consumption and therefore GHG emissions. The projects have been designed to be scalable so they can be replicated when a viable source of funding is identified. Some of these projects include: enterprise-wide and facility-based energy management systems upgrade and coordination, development of sustainable capital improvement procedures and guidelines to ensure that the County's capital improvement process maximizes energy conservation and use of renewable energy for capital improvement projects, and an evaluation of building/zoning codes and permitting processes to identify obstacles to sustainable land use and development and to generate a list of suggested code and permitting process updates for the County and State to consider.

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GHG Recommendations

- B12 The CCATF recommends that Miami-Dade County implement the According to R-228-09, an Energy Master Plan must be created to reduce following in order to promote energy conservation and efficiency in buildings owned by Miami-Dade County and support Resolution R-228-09 (Resolution to Reduce Miami-Dade County's Electrical Energy Consumption):
 - electricity consumption in County governmental operations by 20% below 2007 consumption levels by no later than 2014. The goal is to prepare and implement a plan that addresses our energy needs for the next five years while taking into consideration the addition of new facilities. In addition, the Energy Master Plan will be integrated with other existing Master Plans and implementation of Capital Projects. One of the objectives with the implementation of such a plan is to empower end users to control their own energy consumption.
 - County-owned outdoor lighting to high efficiency lighting technologies. The study should include a review and summary of current standards and case studies of implementation in other communities. High efficiency light options to be considered may include: Light emitting diodes (LED), induction lighting, with a preference given to solar fuel consumption. powered lights. Additionally, an evaluation should be made to improve the efficiency of outdoor lighting with the goal to reduce non-essential outdoor lighting during daytime hours.
 - 1. Conduct a feasibility study and develop a plan for retrofitting all OOS is also supporting existing efforts to demonstrate LED technology (GSA project/LED City events); working to identify which buildings should be prioritized to undergo energy audits, as well as expand participation in existing ESCO program; and strategizing how to move toward department-level management of greenhouse gas emissions/energy &
 - 2. Require that all county buildings that annually consume more than This will be addressed in the Energy Master Planning process. 500,000 kilowatt hours (kwh) and have not received a comprehensive energy audit in the last 5 years, receive a comprehensive energy audit and/or retro commissioning, with the intent of identifying energy saving and carbon footprint reducing opportunities.

3. Require that all County departments include their goals and plans for For the first time, in FY2009 -2010, the department director goals and evaluation include a reporting on outcomes. Present sustainability award to Departments and Directors that achieve most impressive results. One department (e.g., Office of Sustainability, DERM and/or GSA) could be responsible for providing strategies, tools and resources to each department to assist departments in achieving their reduction goals.

greenhouse gas reduction and climate change adaptation in their objectives contained a specific sustainability measurement. This can strategic plans and that each Department Director's performance evolve yearly into a GHG reduction/climate change adaptation objective.

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- B.13 The CCATF recommends that Miami-Dade County continue to support funding opportunities available through the American Recovery and Reinvestment Act (ARRA) and other federal programs to retrofit homes, commercial, and housing facilities for energy and water efficiency, and educate residents and homeowners about conservation. The following should be included in order to optimize, leverage, and facilitate energy conservation federal programs and funding. including but not limited to Neighborhood Stabilization Program, Weatherization programs, Public Housing Capital improvements, Community Development Block Grants, Community Services Block Grants, and homelessness prevention.
 - 1. Incorporate educational, behavioral, and operational training programs with all retrofit and renovation options.
 - 2. Monitor and analyze results of retrofits to include but not be limited to obtaining an energy rating of all renovated homes and public housing facilities.
 - 3. Use some or all of the funds created from the resale of foreclosed and renovated homes for further development and promotion of energy and water efficiency outreach programs.
 - 4. Maximize the use of Smart Meters to monitor results and compliment behavioral programs.

Miami-Dade County has been very aggressive about pursuing ARRA funding. A complete listing with details of ARRA funds can be found at: http://www.miamidade.gov/recovery/managers memos.asp

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B.14 The CCATF recommends that Miami-Dade County develop incentives for energy and water efficiency, conservation, and distributed low- and

- no-carbon energy generation for existing residential, industrial, and commercial buildings. The CCATF recommends that the County:
- 1. Explore development of a public/private partnership that would provide financing and technical assistance to smaller scale commercial, multifamily and residential facilities to retrofit homes for improved energy and water efficiency. This should support current and future technologies (e.g., metered charging stations in parking garages for electric vehicles and roof hook ups for PV, and, where feasible, the installation of renewable energy technologies such as solar water heaters).
- term, identify potential partners to develop and implement a financing solution for solar water heaters similar to Lakeland Electric.
- 3. Analyze and maximize GHG reduction opportunities through all county services to residents and businesses.
- 4. Work with FPL on the installation of a real-time, web-based smart meter program in County government and other large institutions.
- 5. Promote the use of green roofs, e.g. vegetative roofing, high reflectivity roofing materials, etc.
- 6. Include solar reflectance, emissivity and Solar Reflectance Index (SRI) values into the roof system product approval process.
 7. Develop incentives for retrofitting buildings to accommodate energy-saving additions such as PV panels on rooftops and metered charging outlets/stations in parking garages for electric vehicles.
 8. Develop incentives for the addition of customer-paid electric vehicle (EV) charging stations in portions of public and county-run parking lots.
- 9. Consider a demonstration retrofit of a County-owned building that could be used as a public outreach and education vehicle for promoting energy-saving retrofits.

Through the award of the Energy Efficiency and Conservation Block Grant (EECBG) the County is reviewing building and zoning codes and permitting processes in order to draft recommendations for changes that will foster green building design and remodeling, including renewable installations. In addition, grant funds are being used to create a revolving loan fund for energy efficiency projects in the Miami-Dade industrial sector, MDC has partnered with the South Florida Regional Planning Council for the development and administration of the revolving fund loan program. Additionally, OOS is exploring a Voluntary Energy Efficiency and Renewable Energy Program to provide a financing mechanism for residents and commercial institutions. Through the EECBG Program, the County will be providing businesses incentives to be more efficient. The Grants to Green Nonprofits (G2GN) is a \$1 million re-granting program which provides energy-efficiency improvements on a competitive basis to local 501(c)(3) certified community and faith-based organizations. And the County will soon offer competitive energy-efficiency revolving loan funds (RLF) to business for energy retrofits. The Miami-Dade Building Code Compliance Office developed information about green roofs for its website. BCCO also provided free training on the subject to municipal building officials.

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- B.15 The CCATF recommends that Miami-Dade County educate the business sector and the public on energy and water efficiency and conservation. The CCATF recommends that this would best be accomplished if Miami-Dade County collaborates with corporate, nonprofit, and educational organizations to develop a broad scale and culturally competent media and community based educational campaign dedicated to promote the adoption of conservation, efficiency and renewable behaviors, systems and technologies in residences and businesses. CCATF suggests that this educational campaign should:
 - 1. Inform residents and the business sector of the economic benefits of, and resources available for, energy efficiency and appropriate renewable technologies (e.g., green roofs, solar water heaters, smart meters, etc.).
 - Develop two separately designed and targeted campaigns and approaches: one for residents and one for business. For consumer/resident examples, refer to the Home Energy Saver (attached) and Green Homes Challenge (attached) descriptions. For a business example see www.e4s.org, the Entrepreneurs for Sustainability website.
 - 3. As part of this education campaign, include information about the Energy Gauge performance rating system for new and existing commercial and residential buildings and encourage property buyers to ask for the rating.

Through the award of the Energy Efficiency and Conservation Block Grant (EECBG), the County has developed a communitywide energy conservation campaign engaging residents and businesses to serve as a catalyst for long-term behavior changes resulting in reduced energy use. Elements of the campaign include, but are not limited to a revamped green.miamidade.gov, home energy saving workshops lead by Dream in Green (one in each commission district), light bulb exchanges, and upcoming residential and business energy savings challenges and incentive programs for low-income residents.

The Miami-Dade Green Business Certification program is being developed to help local enterprises maximize their social, ecological and 2. financial performance. The program aims to help businesses become more resource-efficient with energy and water use, raw materials and waste production. The County is also collaborating with the Florida Department of Environmental Protection's Green Lodging Program to assist local hotels in obtaining their Green Lodging Certification. Through the EECBG Program, the County will be providing businesses incentives to be more efficient. The Grants to Green Nonprofits (G2GN) is a \$1 million re-granting program which provides energy-efficiency improvements on a competitive basis to local 501(c)(3) certified community and faith-based organizations. And the County will soon offer competitive energy-efficiency revolving loan funds (RLF) to business for energy retrofits.

B.16 WASD is the County's highest consumer of electricity and one of the These items are being reviewed by WASD. highest consumers in the State of Florida. The CCATF recommends that Miami-Dade County undertake an assessment of the County's water and sewer rates and conservation/efficiency programs. The County should:

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- B.16 1. Conduct a long term comparative cost/benefit analyses on the cont. combination of increasing electricity and water generation vs. ramping up conservation and efficiency programs. The CCATF recognizes that both options may be necessary but a preference should be given to increasing conservation and efficiency.

 The 20 year Water Use Permit, which is WASD's plan for meeting future water supply demands, anticipates meeting more than 20% of future demands through conservation. Because per capita consumption has dropped, a permit modification will soon be approved to eliminate som capital projects and defer others, reflecting WASD's commitment to a
 - The 20 year Water Use Permit, which is WASD's plan for meeting future water supply demands, anticipates meeting more than 20% of future demands through conservation. Because per capita consumption has dropped, a permit modification will soon be approved to eliminate some capital projects and defer others, reflecting WASD's commitment to a "conservation first" approach. The plan will continue to be reviewed to maximize the benefits of conservation and avoid, to the extent feasible, more expensive and energy intensive alternatives. WASD is not involved in analyzing the extent to which future electrical demands can be met through conservation rather than new supply facilities, but the BCC did approve an agreement with FPL to provide reclaimed water for cooling new electrical facilities, should such facilities be constructed.
 - 2. Provide consumer education on the current comparatively low rates they have enjoyed and the need for increasing rates to pay for efficiency and conservation efforts. The goal of this education is to build voter acceptance that increased rates are essential to maintaining and improving the quality of life here.
- WASD provides both comparative rate information and future facility requirement information on its website, and similar information is regularly provided in the newsletter that is sent to all customers as part of the billing process. In addition, WASD has public service spots in various media outlets to inform the public about its plans and service, and the conservation program, in particular, works with many individuals and homeowner's associations to reinforce these messages. These efforts will continue.
- 3. Determine the feasibility of using Miami-Dade County's Water and Sewer Department (WASD) facilities for installation of renewable energy technologies, including for water and sewer operations.
- WASD has done a preliminary assessment of properties which might be suitable for deployment of sustainable energy infrastructure. This includes the possibility of using the open areas of various wellfields for photovoltaic arrays, the possibility of incorporating photovoltaics in new buildings, and the feasibility of participating in bio-fuel production. Meetings have been held with FPL representatives regarding deployment of solar panels, and those discussions continue. With the support of stimulus funding, a pipeline will be constructed from the South Dade Landfill to the South District Wastewater Treatment Plant to utilize landfill gas to generate electricity to supply the plant. A groundbreaking for this project is being scheduled. Similar opportunities to improve energy recovery from treatment processes are being reviewed.

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- B.17 Recognizing that support at the state and federal level are important in facilitating action at the local level, the Climate Change Advisory Task Force recommends that Miami-Dade County advocate that:
 - 1. The Florida Public Service Commission require FPL to achieve at least The FY 2010 2011 county legislative priorities will be considered by the a 20% reduction in GHG generation from the 2005 baseline by 2020. Board of County Commissioners in October and November of 2010. This would include incorporating the costs of the proposed nuclear power plants by Florida Power and Light at Turkey Point in the comparative costs and benefits of energy efficiency and renewable energy systems and improve and expand incentive structures for energy efficiency, energy conservation and renewable generation. These incentive structures need to promote both customer owned and utility owned energy efficiency and demand side renewable energy systems. Additionally, the cost benefit analysis needs to place a greater emphasis on reducing overall energy consumption, not just capacity reduction, to achieve greater reduction in greenhouse gas emissions.

2. The Florida Building Commission, the Energy Technical Advisory The FY 2010 - 2011 county legislative priorities will be considered by the Committee, and the 2010 Energy Code Work Group work to ensure Baord of County Commissioners in October and November of 2010. that new construction and significant renovations and replacement equipment requirements increase energy efficiency and promote renewable by requiring a combination of methods and elements to include: solar water heaters, photovoltaic panels, shading devices, vegetative roofing, controllers and monitoring equipment, best practices and quality installation procedures such as HVAC sizing and duct testing, pre-wiring of buildings to accommodate future GHG reducing technologies such as monitoring devices, HVAC zoning, centralized data centers and distributed renewable power sources on rooftops and metered charging outlets in parking garages for electric vehicles. Advocate for the use of green building standards including the National Association of Homebuilders' (NAHB) Green Building Standards and the Florida Green Building Coalition as one of several model options that can be used to reduce GHG emissions and promote energy efficiency.

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B.17 3. Florida	and/or the United States pass an energy efficiency resou	rce	

- cont. standard (EERS), a target that will help utility companies reduce electricity usage by 15%.
 - 4. State and Federal Renewable Portfolio Standards of at least 20% by 2020 be implemented.
 - 5. The Federal Clean Energy bill includes a goal of reducing GHG reduction by 20% from 2005 by 2020. (This would parallel's the County's current target.)
 - 6. Federal appropriations for the Energy Efficiency Conservation Block Grant (EECBG) program are continued, at least at current levels.

Built Environment Adaptation

C1 Require all County agencies (and entities that receive County funding The County Manager & Office of Sustainability Manager met with for significant infrastructure or built investments) to assess climate change impacts on the agency's/entity's responsibilities. This assessment should be incorporated into their master planning agenda or such a planning process should be initiated if it does not exist. The assessment should include the impact of sea level rise on all public investments and identification of vulnerabilities in order to produce strategies for mitigation and adaptation. These assessments should utilize a 50-year planning horizon.

department directors in fall 2008, and directed them to begin incorporating climate change planning into their strategic plans. The County Manager announced that the County would be developing and implementing a formal Sustainability Plan in the coming year. The County Administration is beginning to address this recommendation on public investiments, which is a GreenPrint initiative, and it will require administrative and legislative action.

County staff is exploring ways to incorporate climate change adaptation planning into departments' master planning process by incorporating into department scorecards.

Use County charter authority to establish minimum criteria and standards related to climate change (including sea level rise), for public investment for all municipalities in Miami-Dade County.

This recommendation requires legislative action by the County Commission as well as input from affected municipalities. County staff have been seeking input from municipalities on GreenPrint, but can also reach out to them through the League of Cities.

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	Buili	Environment Adaptation	

- C3 Expand the mission of the County's Office of Sustainability (OOS), and thus its resources and staffing, to provide a centralized agency for climate change information, monitoring, analysis, and benchmarking. (Note: also see Recommendation F.4)
 - a.) Establish a base case of information at an identified current or recent past date, to which all ensuing data might be compared;b.) Assist in integrating the activities of the various entities including the coordination of data collection so that it can be used across departments/disciplines for analysis and comparison; and determine the appropriate metrics for critical issues;
 - c.) Monitor the effects of climate change on Miami-Dade County using the evolving data base, and publish the results for use by elected leaders, public agencies, and the general public.

The Office of Sustainability (OOS) was created in 2008 to facilitate the sustainable transformation of the County with respect to organizational culture, operations, infrastructure and service delivery. It assists departments and leads initiatives that enable the County to target and realize improved performance that simultaneously values economic, social and environmental impacts and opportunities. In 2009, the focus of OOS was broadened with the award of the Energy Efficiency and Conservation Block Grant Program (EECBG) and re-alignment of existing resources. The Office provides knowledge on energy, renewable energy, infrastructure, water resources, resource conservation and transportation, and includes outreach and educational programs.

- a. Still, the recommendation will require additional funding and legislative action by the County Commission. The EECBG is only for energy and energy efficiency. OOS constantly monitors grants and it will look for those that addressed benchmarking.
- b. The Office of Sustainability leads the development and implementation of the County's sustainability plan, GreenPrint. The plan will set the framework for the County to inspire, inform and enable our communities to improve their quality of life and increase economic prosperity through environmental responsibility.
- c. Specific climate change information, monitoring, analysis, and benchmarking will be handled by DERM, with the assistance and support of OOS.

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	Built Environment Adaptation		
C4	The CCATF recommends that Miami-Dade County use the on-going cycle of the Evaluation and Appraisal Report to include amendments to the Comprehensive Development Master Plan that will further the principles of Smart Growth (www.smartgrowth.org)	The EAR, as going before the BCC in November 2010, includes recommendations that substantially support Smart Growth, including items concerning 1) changes to the Land Use Map allowing for greater density, 2) incentives and the removal of barriers to infill and redevelopment, 3) Requiring Land Use Element properties for residential developed inbusiness categories to include a percentage mix of residential and business and/or office activities with minimum and/or maximum.4) to provide for horizontal mixed-use development that will facilitate the development of walkable and transit-supportive neighborhoods and corridors. 5) The County's Comprehensive Development Master Plan must also be a mobility plan that promotes transit, pedestrian and bicycle friendly development; supports transit use; encourages a mix of uses and enhances transportation strategies to help reduce vehicle miles traveled and, therefore, reduce Greenhouse Gas emissions; 6) Designates Multimodal Transportation Corridors as "Activity Corridors" on the Land Use Plan Map, Land Use Element and Transportation Element	
C5	The County should begin a process of planning and public education, coordinated with the South Florida Regional Planning Council and the Metropolitan Planning Organization that integrates the mapping of projected sea level rise and storm surge impacts with the locations of infrastructure and other public investment, and with the locations of projected growth and development. The goal is to ensure the safety and resilience of public investment, and to consolidate private investment on transit-served high ground.	The SE FL Regional Climate Compact is utilizing its Regional Vulnerability Assessment Technical Work Group and NOAA staff to build consensus on planning parameters and vulnerability assessment to apply to a regional digital elevation model. This will allow development of maps and other planning tools to facilitate the necessary planning and public education. The South FLorida Regional Planning Council is an invited participant in the Technical Working Group.	
C6	The CCATF recommends that Miami-Dade County (by its departments of Planning and Zoning, DERM, MPO, and Public Works) develop a memorandum of understanding for integrated planning efforts with the Florida Department of Transportation and the South Florida Regional Planning Council.	This item has been included as a Greenprint initiative.	

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	Built Environment Adaptation		

- The CCATF recommends that Miami-Dade County develop mandates OOS is working to support departments in their compliance with the Comprehensive Development Master Plan. If the County does develop implementation of the current standard. such mandates and incentives, the CCATF further recommends that:
 - and incentives for building designs that meet green building standards Sustainable Buildings Ordinance, as well as managing the data entry of such as those established by Energy Star, the Florida Green Building over 100 buildings in the Energy Star Portfolio Manager. OOS is also Coalition, the U.S. Green Building Coalition (USGBC) Leadership in working on developing incentives for green/energy efficient building Energy and Environmental Design (LEED) or the National Association of design for the building community. The current County Building Home Builders (NAHB) Green Building Standards. These standards Ordinance has been reviewed for inclusion in other green design must comply with the Florida Building Code and not conflict with the standards and to include lessons learned during inception and
 - Buildings eligible to receive an EPA rating using Energy Star's Portfolio Manager, should achieve an energy performance rating of at least 70.
 - Buildings not eligible to receive an EPA rating using Portfolio Manager, demonstrate energy efficiently in at least the 20th percentile for typical buildings of similar type using benchmarking against national median energy source data provided in the Portfolio Manager tool.
- amendments to the Florida Building Code that will reduce the impact of Baord of County Commissioners in October and November of 2010. greenhouse gas emission and improve climate change resiliency.

The CCATF recommends that Miami-Dade County advocate for The FY 2010 0 2011 county legislative priorities will be considered by the

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	Natural Systems Adaptation				
D1	Fully support the Comprehensive Everglades Restoration Plan (CERP), and increase funding and resources for other regional and local habitat restoration and preservation efforts and initiatives.	The County is supporting portions of this very broad recommendation,			
D2	Increase funding and resources for land acquisition and management programs of Miami-Dade County. Investigate new and creative mechanisms to boost funding, such as the creation of a County-administered "carbon credit purchasing" program, as a potential alternative to current development, industry, and government mitigation requirements.	The County Commission would have to create and approve such a program, OOS will meet with DERM staff to consider ways to fund DERM's Environmentally Endangered Lands (EEL) program and ways to offset the costs of the EEL program.			
D3	Acquire all undeveloped lands needed for restoration purposes and for mitigation and adaptation to climate change effects. Secure strategic open lands to provide transition zones to accommodate retreat or spatial shifts in natural areas, such as coastal wetlands and freshwater marshes.	·			
D4	Create a plan to locate infrastructure and development outside coastal or flood hazard prone areas using projections of sea level rise to identify those areas. Describe a transitional zone between the hazard area and the built area to be protected and prohibit incompatible land uses that would convert open lands in the transitional zone. Establish a comprehensive planning and zoning policy, such as development setbacks and limits on density and infrastructure in coastal and transitional zones to consider vulnerability to sea level rise and saltwater intrusion. (Note: see also Recommendations C.2. and E.1)	The SE FL Regional Climate Compact is utilizing its Regional Vulnerability Assessment Technical Work Group and NOAA staff to build consensus on planning parameters and vulnerability assessment to apply to the regional digital elevation models. This information will be used in conjunction with Miami-Dade County's Stormwater Master Plan to identify flood hazard prone areas and create planning maps and tools for use in the comprehensive planning and zoning policy process.			
D5	Encourage the continued funding of the County Agriculture Purchase of Development Rights Program beyond the current funding levels to maintain open lands for aquifer recharge, habitat, and buffers.	The County funded the PDR program with \$30 million by the General Obligation Bond. In 2008, Mr. Charles LaPradd, the County's Agricultural Manager, acquired federal grants that matched local dollars 50%. The County will continue the aforementioned funding efforts.			

CLIMATE CHANGE ADVISORY TASK FORCE

Rec#	Recommendation	Status / Implementation Plan	Related Rec#s
	Natural Systems Adaptation		
D6	Provide incentives to study and develop best practices for agricultural management that contribute to carbon sequestration and reduce greenhouse gas emissions.	DERM and Mr. LaPradd acquired a grant this year from the Environmental Protection Agency (EPA), funded with American Recovery and Reinvestment Act dollars, which the County used to provide money to farmers to replace old irrigation pump engines with more energy efficient engines. County staff will seek for additional grants.	
D7		This recommendation requires legislative action, as well as budget action for the first and second parts.	
D8	Review current stormwater management operations, including the operation of canals and structures, in order to eliminate unnecessary over-drainage and limit the extent of saltwater intrusion into ground and surface water resources. Additionally, require water conservation	DERM, has reported that eliminating unnecessary drainage and limiting saltwater intrusion is part of the critical path of issues in South Dade. DERM has applied for regulatory permits to constuct an earthen plug in the Card Sound Canal and has completed design on improvements to	

and surface water resources. Additionally, require water conservation the Card Sound Canal and has completed design on improvements to Recommendations D.2 and D.3)

measures for all users of the Biscayne Aquifer. (Note: see also the Florida City Canal. Both projects should be constructed before 2012. The SFWMD is aware of the inherent conflicts with providing dry season canal drawdowns to lower ground water levels to facilitate agriculture and the possible negative effect on salt water intrusion. For the dry season (2009/2010), the District Governing Board authorized a modified operational range beginning on October 15th. Subsequestnly, SFWMD published a July 2010 report on South Dade Canal operations.

	Rec#	Recommendation	Status / Implementation Plan	Related
				Rec#s
- 1				

Natural Systems Adaptation

Develop a "Vital Signs" monitoring program, following the model of the County staff has contacted potential partners (NPS, USGS, SFWMD) to D9 National Park Service, to serve as a multi-parameter ecosystem begin establishing a team to work on a Pilot Program to assess feasibility monitoring program that will help track climate change effects. Expand of using existing monitoring efforts and determine if the information can current ongoing monitoring efforts, such as those within the Comprehensive Everglades Restoration Plan (CERP), to include specific gathering Information about data being collected by these agencies areas of Miami-Dade County, to provide a better view of how natural which may be considered as a climate change indicator. areas are changing over time and what forces are responsible. Dedicate a source of funds to collect information and establish and maintain a long-term data management system.

be used as indicators or "vital signs" of climate change. Staff has begun

D10 Miami-Dade County should establish partnerships, both formal and informal, with other governmental entities, including local, State, and Federal governments; the private sector; non-governmental organizations; and other stakeholders in the County. Partnerships should focus on cooperative efforts to restore existing natural ecosystems; protect natural and open lands; mitigate impacts; and monitor natural systems and indicators of climate change. Partnerships should also be undertaken to effectively practice adaptive management as we increase our understanding over time of the effects of climate change on natural systems in the County and implement coordinate our efforts. management actions to restore and protect natural systems in the County. (Note: see also Recommendations D.3, D.8, F.2, and F.3)

This recommendation is ongoing, administrative, and legislative. Several items to highlight include the following: South Florida counties of Broward, Monroe, Palm Beach and Miami-Dade joined forces to develop regional collaboration for a coordinated climate change strategy. In December 2009, the Board of County Commissioners approved a regional compact to develop joint policy positions and legislative policy statements, as well as develop a Southeast Florida Regional Climate Change Action Plan. In addition, the County has established a municipal working group for sustainability in order to share information and

Rec#	Recommendation	Status / Implementation Plan	Related
			Rec#s
	Economic,	Social and Health Adaptation	

The Task Force recommends that the Miami-Dade County Comprehensive Development Master Plan (CDMP) be revised to include a new policy to restrict land uses in areas that would be at risk from sea level rise and associated impacts within the next 50 years as per the CCATF Science Committee's Statement on Sea Level in the Coming Century report and projections. A continuous 50-year planning horizon should be used. (Note: see also Recommendations C.2 and D.4)

The EAR, as coming before the BCC in November 2010, recommends adding a new policy under the Land Use Element Objective LU-3 to require the County to initiate an analysis on climate change and its impacts on the built environment addressing development standards and regulations to avoid investments in infrastructure, development/redevelopment and public facilities in hazard prone areas. The analysis will evaluate, among others, property rights issues and municipal jurisdictional challenges and opportunities associated with the avoidance of areas prone to hazard due to sea level rise and other climate change impacts. The current land supply/demand methodology will also be evaluated against the risk associated with infrastructure investments in flood prone areas, and the CDMP long-term time horizon will be evaluated in relation to climate change impacts. Recommendations that result from this study would include, but not be limited to, changes to land use designations, development entitlements and zoning, and development standards.

The EAR also recommends a new policy under the Land Use Element Objective LU-3 that requires the County to establish a Climate Change Checklist, or similar mechanism, to be used to evaluate proposed new development and redevelopment to assess the suitability of proposed use(s), density and/or intensity of use(s), and the level of risk of exposure to climate change impacts, among others. The checklist is to be based initially on the requirements of the CDMP Coastal Management Element Policy CM-9H and Chapter 163 F.S., pursuant to House Bill 697 of 2008, and is to be updated as appropriate based on the recommendations of the analysis discussed above. The review of proposed development would include a statement of anticipated impacts on climate change.

Rec#	Recommendation	Status / Implementation Plan	Related Rec#s
E1 cont.		The 2010 EAR recommends adding a new policy under the Conservation, Aquifer Recharge and Drainage Element Objective CON-1 requiring all County departmental master plans and strategic business plans to be amended to include and prioritize climate change mitigation and adaptation strategies. All departmental recommendations related to climate change shall be monitored, and annual progress reports shall be published in a central location (such as a website) that encourages and facilitates public review and participation. The 2010 EAR recommends that Objective LU-2 should include a statement about limitations to future land use and urban expansion related to climate change adaptation, specifically sea level rise (increased flooding along the coast and in the western and southern parts of the	
		County and near waterways). In addition, the target date in the Objective should be changed from 2015 to the new short-term planning horizon.	
E2	Initiate an additional long-term CCATF advisory board committee composed of representatives from federal, state, and local environmental agencies (including Miami-Dade County DERM, WASD, Cooperative Extension), the Miami-Dade County Department of Health, local colleges and universities, and community leaders to address potential human infectious disease changes and increases that may accompany climate change and to make technical and funding recommendations to the Miami-Dade County Board of County Commissioners.	This recommendation will require County Commission action. Mayor Alvarez's Sustainability Advisory Board is focused on helping OOS develop GreenPrint. Once GreenPrint is completed, the Mayor's board will also sunset in approximately a year. At that point, the County may want to create a group to act as an implementing partner or facilitator. In the meantime, the County is working with staff in the Epidemiology, Disease Control, and Immunization Services Program of the Miami-Dade Health Department (MDCHD), to create a working group to analyze potential climate change related public health impacts (for example, infectious disease changes, heat-related illnesses).	
E3	The County shall form an interdisciplinary, community-wide working group, including the media and institutions of higher education, which (a) focuses on public education and information regarding climate change and adaptation and (b) assesses public opinion regarding these subjects.	The EECBG communitywide campaign is comprehensive and addresses energy and water conservation and recycling with an overarching theme of climate change. There is no dedicated source of funding to launch an educational campaign specific to climate change.	

Rec#	Recommendation	Status / Implementation Plan	Related Rec#s		
	Economic, Social and Health Adaptation				
E4	The Task Force recommends that the County bring together all agencies and entities involved in economic development and planning in order to develop a unified and comprehensive response to the challenges of climate change, housing, economic development, and quality of life.	This recommendation will require County Commission action. No action has been taken to date.			
E5	The CCATF recommends the following in reference to green jobs and the economy:	These recommendations are captured in the GreenPrint Vibrant Economy initiatives.			
	1. The County should sign the Local Government Green Jobs Pledge (attached).	The County adopted the Green Jobs Challenge by Resolution in January 2010.			
	 2. The County should establish a full Green-collar Jobs Task Force. This committee should promote green jobs and building a local green economy as follows: Establish a local action plan for Miami-Dade County, 				
	· Indentify goals and opportunities, and				
	· Identify key partners, both governmental and NGO's, for sharing best practices and resources.				
E6	The CCATF recommends that Miami-Dade County initiate efforts for a county-wide assessment of local public knowledge and opinion on climate change. The effort should:	Funds have not been identified to carry out this recommendation.			
	1. Review and assess existing data on local public knowledge and opinion related to climate change (both mitigation and adaptation), and				
	2. Supplement available data through additional polling, attitude research, and other appropriate information gathering methods.				

Rec#	Recommendation	Status / Implementation Plan	Related Rec#s
	Economic, Social an	d Health Adaptation	
E7	The CCATF recommends that Miami-Dade County take the following steps to facilitate a county-wide education outreach program on climate change to educate the general public: Step I - review and assess existing entities (such as internal County departments, Miami-Dade County Environmental Education Providers consortium, local colleges and universities, etc.) that could provide education on climate change	The EECBG communitywide campaign is comprehensive and addresses energy and water conservation and recycling with an overarching theme of climate change. There is no dedicated source of funding to launch an educational campaign specific to climate change.	
	Step II - coordinate relevant entities identified through Step # I in order to share information gathered as a result of County-wide Assessment of Local Public Knowledge and Opinion on Climate Change (as outlined in #1)		
	Step III - direct funding and resources to relevant entities identified through Step $\#\ I$		

Intergovernmental Affairs

Conduct a survey of Miami-Dade County municipalities to gauge their A survey was completed by the South Florida Regional Planning Council about their activities, and begin the creation of an intergovernmental, The Office of Sustainability has established a municipal working group learning network that allows members to work with each other and the for sustainability in order to share information and coordinate our County on adaptation / mitigation issues. Once the survey has been completed, engage the cities in a dialogue about the survey findings Association are engaged in our efforts. and work of the Climate Change Advisory Task Force. This dialogue could happen in a number of ways including a meeting with the Miami-Dade League of Cities and/or a convening of Miami-Dade municipal and county leaders in a shared discussion of the issues and information exchange

level of knowledge and engagement in climate change issues, learn and the League of Cities. The final report was published December 2009. efforts. The Miami-Dade League of Cities and the City/County Managers

Rec#	Recommendation	Status / Implementation Plan	Related Rec#s		
	Intergovernmental Affairs				
F2	Convene local and state agencies and water and sewer utilities around a discussion of climate change and impacts on water quantity, quality, and availability and implications for infrastructure planning and investment. (Note: see also Recommendations D.7, D.10, and F.3)	The SE Florida Regional Climate Change Compact has begun this process by convening the Regional Vulnerability Assessment Technical Work Group, which is initially working on consensus for sea level rise projections and mapping.			
F3	Convene a broader group of local and state agencies around a discussion of their activities related to climate change. Agencies / groups would include, but not be limited to, DOT 4 & 6, DEP, SFWMD, DCA, Health Planning Agencies, Ecosystem Restoration Task Force, etc. In this conversation we will gain a better understanding if there are issues or concerns that we need to be aware of and identify opportunities for collaboration moving forward. (Note: see also Recommendations D.10, and F.2)	The SE Florida Regional Climate Change Compact has begun this process by convening the Regional Vulnerability Assessment Technical Work Group, which is initially working on consensus for sea level rise projections and mapping parameters	•		
F4	Develop a County internet website with up-to-date information about the work of the Miami-Dade Board of County Commissioners, the CCATF, and municipalities with links to information and best practices related to climate change, adaptation and mitigation efforts by individuals and organizations. (Note: see also Recommendations C.3 and E.3)	STATUS: Web sites have been established for CCATF and Greenprint: http://www.miamidade.gov/derm/climatechange/taskforce.asp http://www.miamidade.gov/GreenPrint/			
F5	Work with the region's children's museums and foundations to create and fund educational exhibits on climate change, green technologies, clean cities, etc. (Note: see also Recommendation E.3)	The Office of Sustainability has discussed this recommendation with the Museum of Science, Department of Cultural Affairs and the Library Department and will develop into their workplans.			
F6	Identify and develop educational materials that can be incorporated into a Miami-Dade Public Schools curriculum on climate change, the environment, and sustainability. The materials should be shared with other educational institutions to facilitate the dissemination of information to Miami-Dade residents. (Note: see also Recommendations C.3 and E.3)	Miami-Dade County Public Schools created a sustainability office. The Office of Sustainability will incorporate educational materials into Dream in Green's School Green Challenge. In addition, it has discussed this recommendation with Miami-Dade County Public Schools.			

Re	c# Recommendation	Status / Implementation Plan	Related Rec#s
	Intergovernmental Affair	rs	Recino

- **F7** The CCATF recommends that Miami-Dade County develop as quickly as possible an Action Plan identifying the "who, what, when, where, and how" that will further the objectives identified in the Board of County Commissioners' December 1, 2009 resolution in support of the Southeast Florida Regional Climate Change Compact (Compact) and related activities. Taking immediate action to further the activities highlighted in the Compact and BOCC Resolution will help elevate the importance of mitigating greenhouse gas emissions and adapting to the potential impacts of climate change in Miami-Dade County and the Region. The CCATF recommends that these actions be taken well in advance of the 2010 Climate Summit to allow for stakeholder participation and regional discussion.
- The SE Florida Regional Climate Change Compact has begun this process by developing a Work Plan which includes goals and milestones for developing a regional GHG baseline, as well as a regional climate change adaptation plan. The Compact has also created 3 working groups to address specific goals identified in the Work Plan, all of which are meeting in the Fall of 2010 to take concrete steps towards identified goals.

- 1. Common measures of success and benchmarks;
- 2. Acknowledgement of the need to create uniform standards and
- 3. A comprehensive outreach strategy that will engage the wide range of stakeholders, acknowledge differing views, and work to reach consensus on a shared course of action moving into the future.
- The CCATF recommends that the County collaborate with and Ongoing. This will be further developed as the SE Florida Regional encourage its regional partners in the development of uniform message on climate change as part of a regional outreach and education campaign. Such a campaign should include the use of high profile media and other appropriate outlets to raise general awareness of climate change in Southeast Florida. This regional message on climate change can be supplemented with county-specific information as needed to educate Miami-Dade County residents on the potential impacts of climate change and make the connection between mitigation, adaptation, and policy changes in the County's climate change and sustainability initiatives.

Climate Change Compact partners reach consensus on regional climate change planning scenarios, and develop the regional climate change action plan.

Rec#	Recommendation	Status / Implementation Plan	Related Rec#s
F9	The Office of Sustainability, in partnership with the Miami-Dade County League of Cities, should develop a local government outreach program to raise awareness about climate change science and potential climate change impacts on Miami-Dade County and possible mitigation and adaptation strategies. Local governments should be encouraged to identify a point of contact who will serve as an agency liaison to the County in issues of climate change and sustainability.	The Office of Sustainability has established a municipal working group for sustainability in order to share information and coordinate our efforts. The County has invited the League of Cities and local municipalities to participate in the GreenPrint planning process. In addition, the Second Annual Southeast Florida Regional Climate Change Summit scheduled for October 2010 will be geared towards further engaging local municipalities in the regional climate change mitigation and adaptation planning process.	
F10	To enhance coordination between the County and its municipalities and make it easier to incorporate "green technologies" in both residential and commercial settings, the CCATF recommends the following:	Through the award of the Energy Efficiency and Conservation Block Grant (EECBG) the County is reviewing building and zoning codes and permitting processes in order to draft recommendations for changes that will foster green building design and remodeling, including renewable installations.	
	1. To enhance understanding among code officials and design professionals of what green technologies and innovative approaches are currently allowed in the code, request that the Florida Building Code Commission consider a statewide augmentation of continuing education requirements for Engineers and Architects.	No action has been taken to date.	
	2. Request that the Office of Code Compliance develop checklists that can be used as guidelines for Building Officials and Design Professionals to further the uniform application of codes.	The Office of Building Code Compliance Developed a "Renewable Energy Uniform Permit Submittal Guidelines" and checklist in May of 2009.	
F11	The CCATF recommends that the Board of County Commissioners encourage the convening of a regional discussion around the opportunities and challenges posed to the Region's businesses and economy by potential climate change related impacts. Key partners in a regional discussion include, but are not limited to, the region's economic development organizations, county economic development officials, Chambers of Commerce, key business organizations representing existing and emerging industries in Southeast Florida, Enterprise Florida, and the South Florida and Treasure Coast Regional Planning Councils.	These recommendations are captured in the GreenPrint Vibrant Economy initiatives.	B14