

## **Problem**

As urban centers expand to accommodate Florida’s increasing population, the impacts associated with the heat island effect are growing. Impaired water quality; incidents of heat related mortality; increased energy consumption; and elevated emissions of air pollutants and greenhouse gases are a few examples of heat island dangers. These impacts place a significant strain on public safety services and considerably increase energy costs for local government operations.

### **a. Solutions:**

- i. Adopt cool/green roofing standards for new roof construction and replacement roofs.
- ii. Require all government owned or managed buildings to convert to cool or green roofs within 10 years.
- iii. Establish a sustainability fund for collection of ordinance waivers fees. The sustainability fund shall be used for local government sustainability projects.

### **b. Goals:**

- i. Reduce energy costs for consumers and local governments.
- ii. Reduce air pollution and greenhouse gas emissions.
- iii. Increase air quality while decreasing heat related breathing complications.
- iv. Reduce heat related mortality.
- v. Enhance stormwater management and water quality.

### **c. Ordinance elements:**

- i. Prohibit asphalt roof shingles in new roof construction or replacement roofs.<sup>1</sup>
- ii. Collection of a “sustainability fee” from the property owner or applicant if a sustainable roofing system is not utilized.<sup>1</sup>
- iii. Define Sustainable roofing system as a solar roof, blue roof, white roof, cool roof, green roof, metal roof, or any other roofing system recognized by a green building certification agency that reduces heat island effect, allows for the reuse or retention of stormwater or reduces greenhouse gases.<sup>2</sup>
- iv. Define a Green roof as a green space created by layers of growing medium and vegetation added on top of a traditional roofing system. It may also include additional layers such as a root barrier and drainage and irrigation systems.

### **d. Financing:**

- i. Comes from taxes allotted for federal, city, and or county respectively.
- ii. Fees collected for permitting.

### **e. Counties and Cities that implement or proposed such programs:**

- i. City of Miami Beach
  1. Can be found:
    - a. [City of Miami Beach](#)
- ii. City of Dallas, Texas
  - b. [City of Dallas, Texas](#)
- iii. City of Denver, Colorado
  - c. [City of Denver, Colorado](#)

---

<sup>1</sup> City of Miami Beach Ordinance Article 4, Division 1, Section 142-875

<sup>2</sup> City of Miami Beach Chapter 114, Section 114-1