



CITY OF FORT LAUDERDALE

TRANSPORTATION & MOBILITY

Sustainable Master Plan



PAVE DRAIN SYSTEM



Orchid Parking Lot





In the Spring of 2013, The Orchid Lot was rehabilitated with green, sustainable products. These products reduced energy use, greenhouse gases and heat absorption.

The following is a list of green, sustainable improvements:

SOLAR REFLECTIVE

Reduced solar absorption by approximately 40%

RECYCLED BUMPER BLOCKS

Each bumper block is made for up to 1000 recycled plastic milk cartons.

SUSTAINABLE LIGHTING

Increase candle footage will using less energy and provides cost savings

BIKE RACKS

Provides safe and secure parking for alternative transportation that reduces greenhouse gases.

PARKLET

Added amenity in the City to sit, have lunch, or relax and enjoy the Fort Lauderdale Experience.





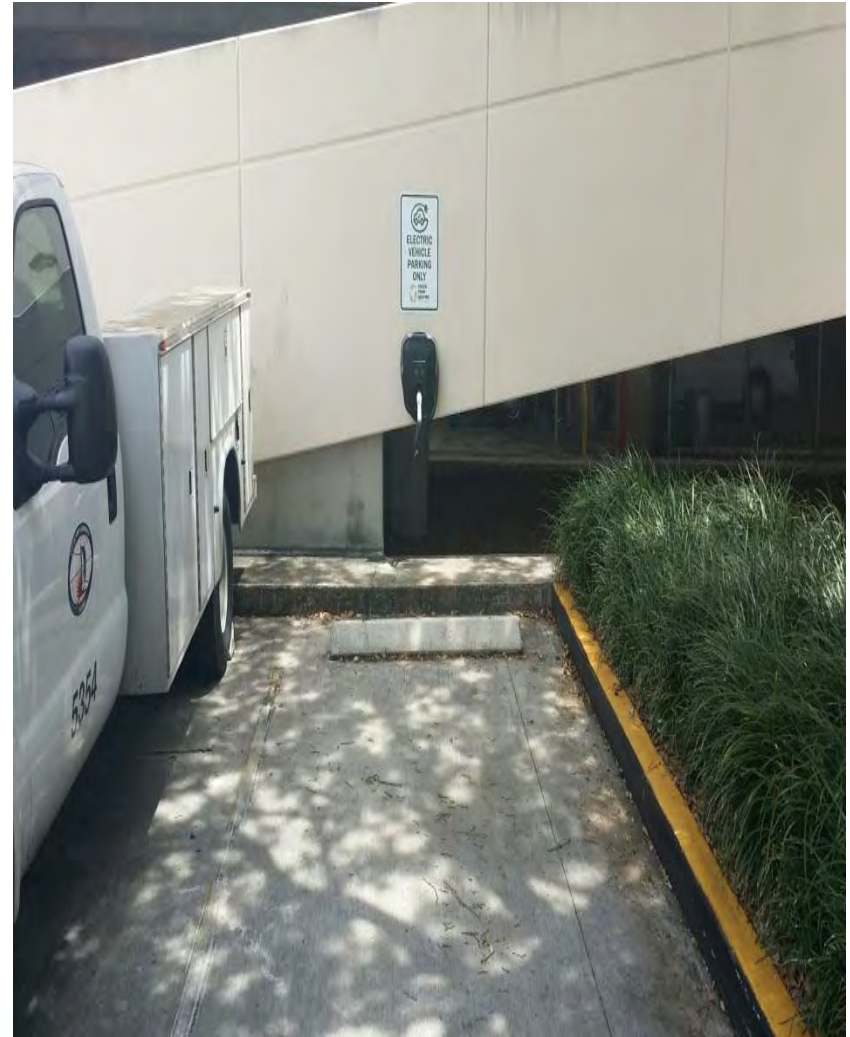
Orchid Lot – Electric Vehicle Charging



**ELECTRIC
VEHICLE
PARKING
ONLY**



**GREEN
YOUR
ROUTINE**
CITY OF FORT LAUDERDALE



Pelican Lot - Solar Lighting Project



Pelican Lot - Solar Lighting Project



Solar Powered Meters in Covered Garage



Solar Powered Meters in Covered Garage



Other Sustainable Uses For Parking Spaces



"Shifting the Paradigm"
Designed by Nikki Rowingschi

PARK(ing) Day

www.parkingday.org



www.regroup.org
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Bicycle Parking



Technology Driven Practices

- On-line Beach Permits *(43,000 per year)*
- Pay by phone parking





» WE ARE CONNECTED

We move seamlessly and easily through a safe transportation system where the pedestrian is first.

The City of Fort Lauderdale committed to be a fully connected city of tomorrow by 2035. Like other American cities, we grew through sprawl. Fort Lauderdale was anchored by the railroad, the interstate, and a network of waterways, which created a reliance on the vehicle. At the age of 100, the City was poised to transition to be a wise and mature city, instead, buoyed by mobility and walkability. While virtually connected in an era of rapid advances in technology, what we still lacked were the real-life community infrastructure connections.

Our original design was due in large part to road designers' traditional focus on adding lanes for cars and not making them safer for bikers, pedestrians, and transit riders. Our problems were similar to those encountered by much of the United States. Most cities built during the 1950s and 1960s typically built too much capacity into the roadway network without providing for adequate or, in many cases, any bike, pedestrian, or transit facilities. Through the community Visioning effort, the City committed to a major ideological shift - from moving cars to moving people. People first. **Complete Street** fundamentals such as **landscape buffers, narrow-**

ing lanes, and on-street parking requirements did not exist in the 2013 zoning code, even though 133 big ideas obtained through the Visioning effort reflected the community's substantial desire for these pedestrian-friendly elements. While the concept was widely discussed, it took time to integrate the principles of **Complete Streets** into local codes and more time for implementation. The City prioritized the pedestrian and committed to providing **transportation options** to connect great people to great places for our future.

The shift was not easy and it did not occur overnight. South Floridians loved their cars in the late 20th century and well into the millennium. At the time, the best way to get car lovers out of their cars was to provide **safe, convenient, accessible, and comfortable connections**. Compounding the challenge were Fort Lauderdale's rising temperatures and extreme weather events, which were becoming more and more frequent. The year 2012 was the warmest to date, with all but one of the 48 continental states recording temperatures above average. Shade structures, tree canopies, and other amenities became a necessity to realistically facilitate walking and biking.

FAST FORWARD FORT LAUDERDALE »»»



Starting with ...



Streets designed solely to move cars..... fast.



Resulting In...

- Limited transportation options
- Traffic congestion
- Increased GHG emissions
- Safety hazards for all users
- Health impacts
- Stormwater impacts



Safety Hazards

Bike Crashes
2008-2010

Dangerous By Design 2014

Transportation America

| Rank | Metropolitan Area | Total Pedestrian deaths (2003-2012) | Annual pedestrian deaths per 100,000 (2008-2012) |
|------|---|-------------------------------------|--|
| 1 | Orlando-Kissimmee, FL | 583 | 2.75 |
| 2 | Tampa-St. Petersburg-Clearwater, FL | 874 | 2.97 |
| 3 | Jacksonville, FL | 359 | 2.48 |
| 4 | Miami-Fort Lauderdale-Pompano Beach, FL | 1539 | 2.58 |
| 5 | Memphis, TN-MS-AR | 239 | 1.72 |
| 6 | Birmingham-Hoover, AL* | 148 | 1.33 |
| 7 | Houston-Sugar Land-Baytown, TX | 1034 | 1.7 |
| 8 | Atlanta-Sandy Springs-Marietta, GA | 839 | 1.59 |
| 9 | Phoenix-Mesa-Scottsdale, AZ | 840 | 1.86 |
| 10 | Charlotte-Gastonia-Concord, | 254 | 1.65 |

Fort Lauderdale Statistics

(2010 – current)

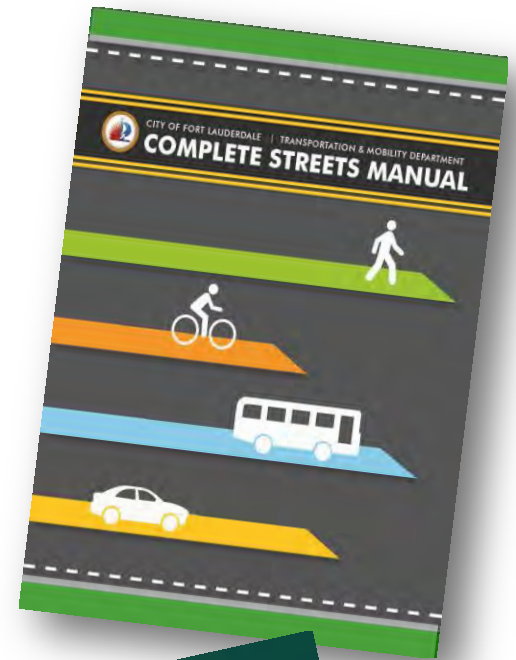
| Year | Pedestrian fatalities | Bicycle Fatalities | Driver/Passenger Fatalities | Other | Total |
|---------------|-----------------------|--------------------|-----------------------------|----------|-----------|
| 2010 | 10 | 2 | 8 | 0 | 20 |
| 2011 | 4 | 1 | 9 | 0 | 14 |
| 2012 | 11 | 3 | 12 | 2 | 28 |
| 2013 | 9 | 1 | 8 | 0 | 18 |
| 2014 | 4 | 1 | 3 | 1 | 9 |
| Totals | 38 | 8 | 40 | 3 | 89 |

| Roadway | Pedestrian Fatalities | Bicycle Fatalities | Driver/Passenger Fatalities | Total |
|-----------------|-----------------------|--------------------|-----------------------------|-------|
| Federal Highway | 5 | 1 | 7 | 13 |
| Sunrise Blvd | 8 | 0 | 4 | 12 |
| Broward Blvd | 6 | 0 | 5 | 11 |
| A1A | 6 | 0 | 1 | 7 |
| Davie Blvd | 2 | 0 | 3 | 5 |
| Commercial Blvd | 1 | 0 | 2 | 3 |
| Las Olas Blvd | 2 | 1 | 0 | 3 |
| SE 17th St | 1 | 1 | 1 | 3 |
| NE/NW 62nd St | 1 | 0 | 2 | 3 |



Making Change

- Adopt Complete Streets Policy
- Establish standards
- Developed Multimodal Connectivity Program



Complete Streets





Making a Connected Community

- Developing a long-range transportation plan
- Enhancing existing projects
- Considering the context of street
- One street at a time



Implementation

IN DESIGN

- Broward Mobility Project – including 6 miles of bike lanes
- Powerline Road – Sunrise Blvd to City limit
- US1 – Broward Blvd to NE 17th Way
- Broward Blvd – I95 to US1
- NW 9th Ave – Broward Blvd to Sistrunk Blvd
- NW Neighborhoods Phase III – sidewalk project
- A1A – multiple projects
- Old Dixie Highway – NE 13th St to City limit

TO BE IN DESIGN

- *NE 13th St – NE 4th Ave to NE 9th Ave*
- *NE 19th St – NW 31st Ave to Powerline Rd*
- *Las Olas Blvd – Andrews Ave to NE 15th Ave*
- *NE 4th Ave – Sunrise Blvd to City Limit*
- *Andrews Ave – Las Olas Blvd to City Limit*
- *SE 3rd Ave – SE 17th St to SE 7th St*



Sustainable Practices

- Improved Multimodal Connectivity
 - Reduced GHG emissions
- Bioswales
- Shade
- LED Pedestrian Lighting & Crosswalk Lighting



Transit

- SunTrolley
- Uptown Link
- Wave Streetcar



Major Initiatives Undertaken Executive Airport

- Continue to replace quartz taxiway edge lights with new LED edge lights, consistent with the City's sustainability goals
- Upgrade the Airport Administration Building utilizing environmentally sustainable practices
- FXE operates a comprehensive noise abatement program to minimize noise pollution and preserve quality of life
- Commenced construction of the newly designed LEED certified Silver U.S. Customs and Border Protection Facility



Planned Initiatives – Executive Airport

- Upgrade the Airport Administration Building utilizing environmentally sustainable practices
- Upgrade the Administration parking lot lights with LED



Future Strategies

- Conversion of fleet
- Conversion of all parking meters to solar
- Multimodal Connectivity Program
- Expanded Wave Streetcar
- Community Bus Service





GREEN YOUR ROUTINE *IN ACTION*

Discover, explore, and create a sustainable Fort Lauderdale!



3

Layers

Up to

297

POIs

(99 per layer)

Covering all

6

GYR Topics

1/4

Development
time of a
webpage

GOALS:

- Directs web users inside our website
- Inspires action
- Provides a platform for dialogue

ADDITIONAL APPLICATIONS:

- Walking tours or expanded locator maps
- Historical Record
- Project “stories” (progress reports)

STORY BANK EXAMPLES:

- PaveDrain System
- South Florida Wildlife Care Center
- Home Depot Rain Barrel

The Fort Lauderdale Clean Sky Ordinance

AN ORDINANCE TO BE ADDED INTO TITLE xxx OF THE FORT LAUDERDALE MUNICIPAL CODE, RELATING TO ENVIRONMENTAL PROTECTION, INTRODUCED AND PROPOSED IN ACCORDANCE WITH SECTION xxx OF THE MUNICIPAL CODE IN THE CITY OF FORT LAUDERDALE

BE IT ORDAINED BY THE PEOPLE OF THE CITY OF FORT LAUDERDALE:

Title. The rules and regulations of this Article shall be known as the "**FORT LAUDERDALE CLEAN SKY ORDINANCE.**"

Authority. The rules herein are established pursuant to the provisions of Section xxx of the Fort Lauderdale Municipal Code, and in accordance with Florida Constitution provisions, specifically Article xxx, Section xxx on Conservation and Development of Resources^{iv} and Article xxx, Section xx on Environmental Rights.

Purpose. The preservation, protection, and conservation of the natural environment in the City of Fort Lauderdale, including but not limited to water, soil and air quality, is one of the greatest concerns of its government and its people. Pollution and contamination of the land, air, and water supply is unacceptable because of the adverse effects on the health, safety and welfare of the people of the City of Fort Lauderdale and the natural environment, especially when the effects and reversibility are unknown.

Therefore, it is the purpose and intent of this ordinance to regulate the disbursement of aerosols, chemicals or any particulate matter into the skies above or around Fort Lauderdale, other than those byproducts and standard emissions of industry, agriculture, commerce and transportation that are *both* properly disclosed and approved by applicable governmental agencies. There is currently inadequate research on the collateral effects such disbursements may have on the health of the people and the environment.

Therefore, the purpose of this law is to require any person, firm, corporation, agency, or entity that intends on discharging or disbursing such aerosols, chemicals or any particulate matter, to file a complete Environmental Impact Statement with the City of Fort Lauderdale, in a form prescribed by the City, and obtain written and informed approval from the City prior to taking such action.

Findings.

A. The people of the City of Fort Lauderdale recognize that various organizations, both governmental and nongovernmental, propose the global disbursement of aerosols and other particulates into the atmosphere for the stated goal of countering the negative effects of global warming – a process labeled

with various terms, including but not limited to: “geoengineering,” “climate engineering,” “climate remediation,” and/or “solar radiation management.”^{vi}

B. The people of the City of Fort Lauderdale find that there is increasingly more information, studies, and reports indicating that such geoengineering efforts have been proposed and may be currently occurring.^{vii}

C. The people of the City of Fort Lauderdale further find that studies show that disbursements from stratospheric aerosol geoengineering and other such programs may contain potentially harmful substances with many known and unknown health and environmental consequences, which may contaminate the air, water, soil and people of Fort Lauderdale.^{viii}

D. The people of the City of Fort Lauderdale conclude that any such program that may result in potentially adverse health and environmental implications must obtain the informed consent of the people of the City of Fort Lauderdale. Such informed consent must be legally obtained by filing an Environmental Impact Statement with, and receiving approval from, the Fort Lauderdale City Commission.

Proposed Law:

A. Prohibited Activities:

Except as described under subsection B, it is unlawful for any person, firm, corporation, agency, or entity to:

- 1) Use any type of aircraft or other self-propelled or buoyant airborne object, or any other land-based, air-based, or water-based device or vehicle to disburse aerosols, chemicals, or any particulate matter into the airspace above or around the City of Fort Lauderdale that may enter the breathing atmosphere, the rain, or the soils of the City of Fort Lauderdale; or
- 2) Engage in any act of geoengineering, climate engineering, or any other act related to the climate manipulation of the City of Fort Lauderdale; or
- 3) Engage in any activity that is intended to alter the weather or the sunlight of the City of Fort Lauderdale.

B. Exceptions:

- 1) Nothing in this chapter prohibits any act stated in Subsection A, so long as the person, firm, corporation, agency or entity has first submitted an Environmental Impact Statement to the Fort Lauderdale City Commission, in a form prescribed by the City Commission or its designee, and has received written informed approval from the Fort Lauderdale City Commission; and
- 2) Nothing in this chapter prohibits any act stated in Subsection A, so long as the disbursements are the byproducts and emissions of industry, agriculture, commerce and transportation that are *both* properly disclosed and approved by applicable governmental agencies.

Form Established. The City Commission is hereby authorized, empowered, and directed to develop an Environmental Impact Statement Form to be used by persons, firms, corporations, agencies or entities

wishing to perform any disbursements, climate altering activities, weather modification, or geoen지니어ing, as discussed in this chapter.

Penalty. Any person, firm, corporation, agency or entity who knowingly violates this Title shall be fined not more than ten thousand dollars (\$10,000.00) or by imprisonment not exceeding one year, or by both. The continuance of any such violation shall be deemed a new violation for each day of such continuance. In addition, the City Attorney may institute an action to prevent, restrain, correct, or abate any violation of this Title and seek such relief by way of injunction or otherwise, as may be proper under the facts and circumstances of the case, in order to fully effectuate the purposes of this Title.

Administrative rules. The Director of Environmental Management may adopt administrative rules to implement this chapter, pursuant to Chapter xxx, Florida Revised Statutes.

Administrative enforcement. In lieu of or in addition to, enforcement by criminal prosecution, the Director of Environmental Management may enforce this chapter pursuant to section xxxx of this code, relating to administrative enforcement.

Severability. If any portion of this code, or its application to any person or circumstance, shall be held unconstitutional or invalid, the remainder of this code and the application of such portion to other persons or circumstances shall not be affected thereby.

Effective Date. This ordinance shall take effect 10 days after recorded with the Fort Lauderdale County Clerk.

APPROVED AS TO FORM AND LEGALITY:

City Attorney, City of Fort Lauderdale

ADOPTED this the _____ day of _____, 2014.

Mayor
JOHN P. "JACK" SEILER

ATTEST:

City Clerk
JONDA K. JOSEPH

WE HEREBY CERTIFY that the foregoing BILL NO. _____)

REFERENCES

ⁱ Broward County, Code of Ordinances, Title xxxx – *Environmental Protection*.

ⁱⁱ **“Section 4-2. Introduction, Consideration and Passage of Ordinances and Resolutions.**

1. Every proposed ordinance shall be initiated as a bill and shall be passed after two readings on separate days.
2. Except as otherwise provided by law, resolutions may be adopted on one reading.
3. Upon the request of three members of the council, a public hearing shall be held on any proposed ordinance or resolution.
4. Digests of all bills which pass first reading and the votes thereon shall be published once in a newspaper of general circulation in the county at least three (3) days before final reading.
5. After passage all bills shall be promptly advertised once by title only in a newspaper of general circulation in the county, with the ayes and noes.
6. Should the council find by a two-thirds vote of its entire membership the existence of an emergency threatening life, health, or property due to a public calamity, the council may waive all of the requirements of this section pertaining to procedure, except all votes shall be recorded. Every emergency ordinance, including any amendments made therein after its adoption, shall automatically stand repealed on the ninety-first (91st) day following the date on which it became effective. The council may prescribe by rule procedures for emergency meetings of its membership to be held by conference telephone or similar communication equipment in the event of public calamity.
7. Resolutions authorizing proceedings in eminent domain shall be adopted as provided by law.
8. Bills and resolutions may be passed on first reading by council members and passed on second reading by their successors.”

ⁱⁱⁱ **“Section 4-5. Codification of Ordinances.**

1. The council shall cause any codification of all of the ordinances of the county heretofore prepared and published to be revised and updated at least biennially.
2. Prior to passage of a bill providing for the adoption of a uniform code not less than three copies of the uniform code shall be filed for use and examination by the public in the office of the county clerk at least sixty (60) days prior to passage thereof.”

^{iv} “For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect the City of Fort Lauderdale’s natural beauty and all natural resources, including land, water, air, minerals and energy sources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State.”

^v “Each person has the right to a clean and healthful environment, as defined by laws relating to environmental quality, including control of pollution and conservation, protection and enhancement of

natural resources. Any person may enforce this right against any party, public or private, through appropriate legal proceedings, subject to reasonable limitations and regulation as provided by law.”

^{vi} See David Victor, et al., *Geoengineering: Workshop on Unilateral Planetary Scale Geoengineering* (Council on Foreign Relations, May 5, 2008), archived online at: <http://www.cfr.org/projects/world/geoengineering-workshop-on-unilateral-planetaryscale-geoengineering/pr1364>

See also David Victor, et al., *The Geoengineering Option: A Last Resort Against Global Warming* (Foreign Affairs Magazine. Council on Foreign Relations, March/April 2009), archived online at: <http://www.foreignaffairs.com/articles/64829/david-g-victor-mgranger-morgan-jay-apt-john-steinbruner-and-kat/the-geoengineering-option>

See also *Stop Emitting CO2 or Geoengineering Could Be Our Only Hope* (Royal Institute, August 28, 2009), archived online at: <http://royalsociety.org/Stop-emittingCO2-or-geoengineering-could-be-our-only-hope/>

See also *Geoengineering the Climate: Science Governance and Uncertainty* (Royal Society, September 1, 2009), archived online at: <http://royalsociety.org/policy/publications/2009/geoengineering-climate/>

See also *Geoengineering – Taking Control of Our Planet’s Climate* (Royal Institute, November 8-9, 2010), archived online at: <http://royalsociety.org/events/2010/geoengineering/>

See also Lee Lane, et al., *Workshop Report on Managing Solar Radiation* (NASA, April 2007), archived online at: <http://event.arc.nasa.gov/main/home/reports/SolarRadiationCP.pdf>

See also Vergano, Dan, *Can Geoengineering Put the Freeze on Global Warming?* (*USA Today*, February 25, 2011), archived online at: http://www.usatoday.com/tech/science/environment/2011-02-25geoengineering25_CV_N.htm

See also Kunzig, Robert. *Geoengineering: How To Cool Earth—At A Price* *Scientific American*. October 20, 2008), archived online at: <http://www.scientificamerican.com/article.cfm?id=geoengineering-how-to-cool-earth>

See also Erika Engelhaupt, *Engineering a Cooler Earth: Researchers brainstorm a radical ways to counter climate change* (*Science News*, June 5, 2010, pp 16-20) archived online

at: <http://www.scribd.com/doc/78635966/Engineering-a-Cooler-Earth> See also *The Regulation of Geoengineering* (UK House of Commons Science and Technology Committee, Fifth Report Session 2009-2010), archived online at: <http://www.publications.parliament.uk/pa/cm200910/cmselect/cmsstech/221/221.pdf> See also *Us House of Representatives and UK Parliament House of Commons Joint Statement on Geoengineering 2010*, archived online

at: <http://www.publications.parliament.uk/pa/cm200910/cmselect/cmsstech/221/22111.htm> See also J. J. Blackstock et al., *Climate Engineering Responses to Climate Emergencies* (Novim, 2009), archived online at: <http://arxiv.org/pdf/0907.5140>

^{vii} See *Task Force on Climate Remediation Research* (The Bipartisan Policy Center, October 2011), archived online at:

<http://www.bipartisanpolicy.org/sites/default/files/BPC%20Climate%20Remediation%20Final%20Report.pdf>

See also *International Consortium of NGOs Calls for Coordinated Action on Geoengineering Research* (Royal Institute, December 2, 2011), archived online at:

<http://royalsociety.org/news/srmgi-report-2011/>

See also Zabarenko, Deborah, *Geo-engineering: A Bad Idea Whose Time Has Come?* (Reuters, December 9, 2011), archived online at:

<http://www.reuters.com/article/2011/12/09/us-climate-geoengineeringidUSTRE7B81Y820111209>

^{viii} **See** *What In The World Are They Spraying?* (Truth Media Productions, 2010), archived online at: <http://www.youtube.com/watch?v=if0khstYDLA>

See also *Climate Change 2007: Working Group III: Mitigation of Climate Change*. IPCC Fourth Assessment Report: Climate Change 2007, (Intergovernmental Panel on Climate Change, 2007), archived online at:

http://www.ipcc.ch/publications_and_data/ar4/wg3/en/spmssp-c.html

("Geo-engineering options, such as ocean fertilization to remove CO₂ directly from the atmosphere, or blocking sunlight by bringing material into the upper atmosphere, remain largely speculative and unproven, and with the risk of unknown side-effects.")

^{ix} "19.530.030 -Administrative enforcement. In lieu of, or in addition to, enforcement by criminal prosecution, if the director of public works, the director of environmental management, the director of water supply, or the planning director determines that any persons are violating any provision of titles 8, 12, 14, 16, 18, 19 and 20 of this code, any rules adopted thereunder, or any permit issued thereto, the director may have the person served, by mail or personal delivery, with a notice of violation and order pursuant to this chapter and such administrative rules as the director may adopt.

A. Contents of the notice of violation. The notice shall include at least the following information:

1. Date of the notice;
2. The name and address of the person noticed;
3. The section number of the provision or rule, or the number of the permit which has been violated;
4. The nature of the violation; and
5. The location and time of the violation.

B. Contents of the order.

1. The order may require the person to do any or all of the following:

1. a. Cease and desist from the violation;
2. b. Correct the violation at the person's own expense before a date specified in the order;
3. c. Pay a civil fine not to exceed \$1,000.00 in the manner, at the place, and before the date specified in the order;
4. d. Pay a civil fine not to exceed \$1,000.00 per day for each day in which the violation persists, in the manner and at the time and place specified in the order; and
5. e. Pay a civil fine not to exceed one percent of the project cost as provided in Section 20.08.260.E.2 of this code.

2. The order shall advise the person that the order shall become final thirty days after the date of its mailing or delivery. The order shall also advise that the director's action may be appealed to the board of variances and appeals.

C. Effects of order; right to appeal. The provisions of the order issued by the director of public works, the director of environmental management, the director of water supply, or the planning director under this section shall become final thirty days after the date of the mailing or delivery of the order. The person may appeal the order to the board of variances and appeals as provided for in this article. However, an appeal to the board of variances and appeals shall not stay any provision of the order.

D. Collection of unpaid civil fines. In addition to any other procedures for the collection of civil fines available to the County by law or rules of the court, the County may add unpaid civil fines as herein defined to any County taxes, fees or charges except for residential water or sewer charges.

E. Judicial enforcement of order. The director of public works, the director of environmental management, the director of water supply, or the planning director may institute a civil action in any court of competent jurisdiction for the enforcement of any order issued pursuant to this section. Where the civil action has been instituted to enforce the civil fine imposed by said order, the director or agency need only show that the notice of violation and order were served, that a civil fine was imposed, the amount of the civil fine imposed, and that the fine imposed has not been appealed in a timely manner nor paid."

The Fort Lauderdale Clean Sky Ordinance

AN ORDINANCE TO BE ADDED INTO TITLE xxx OF THE FORT LAUDERDALE MUNICIPAL CODE, RELATING TO ENVIRONMENTAL PROTECTION, INTRODUCED AND PROPOSED IN ACCORDANCE WITH SECTION xxx OF THE MUNICIPAL CODE IN THE CITY OF FORT LAUDERDALE

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Title. The rules and regulations of this Article shall be known as the "**FORT LAUDERDALE CLEAN SKY ORDINANCE.**"

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Purpose. The preservation, protection, and conservation of the natural environment in the City of Fort Lauderdale, including but not limited to water, soil and air quality, is one of the greatest concerns of its government and its people. Pollution and contamination of the land, air, and water supply is unacceptable because of the adverse effects on the health, safety and welfare of the people of the City of Fort Lauderdale and the natural environment, especially when the effects and reversibility are unknown.

Therefore, it is the purpose and intent of this ordinance to regulate the disbursement of aerosols, chemicals or any particulate matter into the skies above or around Fort Lauderdale, other than those byproducts and standard emissions of industry, agriculture, commerce and transportation that are *both* properly disclosed and approved by applicable governmental agencies. There is currently inadequate research on the collateral effects such disbursements may have on the health of the people and the environment.

Therefore, the purpose of this law is to require any person, firm, corporation, agency, or entity that intends on discharging or disbursing such aerosols, chemicals or any particulate matter, to file a complete Environmental Impact Statement with the City of Fort Lauderdale, in a form prescribed by the City, and obtain written and informed approval from the City prior to taking such action.

Findings.

A. The people of the City of Fort Lauderdale recognize that various organizations, both governmental and nongovernmental, propose the global disbursement of aerosols and other particulates into the atmosphere for the stated goal of countering the negative effects of global warming – a process labeled

with various terms, including but not limited to: “geoengineering,” “climate engineering,” “climate remediation,” and/or “solar radiation management.”^{vi}

B. The people of the City of Fort Lauderdale find that there is increasingly more information, studies, and reports indicating that such geoengineering efforts have been proposed and may be currently occurring.^{vii}

C. The people of the City of Fort Lauderdale further find that studies show that disbursements from stratospheric aerosol geoengineering and other such programs may contain potentially harmful substances with many known and unknown health and environmental consequences, which may contaminate the air, water, soil and people of Fort Lauderdale.^{viii}

D. The people of the City of Fort Lauderdale conclude that any such program that may result in potentially adverse health and environmental implications must obtain the informed consent of the people of the City of Fort Lauderdale. Such informed consent must be legally obtained by filing an Environmental Impact Statement with, and receiving approval from, the Fort Lauderdale City Commission.

Proposed Law:

A. Prohibited Activities:

Except as described under subsection B, it is unlawful for any person, firm, corporation, agency, or entity to:

- 1) Use any type of aircraft or other self-propelled or buoyant airborne object, or any other land-based, air-based, or water-based device or vehicle to disburse aerosols, chemicals, or any particulate matter into the airspace above or around the City of Fort Lauderdale that may enter the breathing atmosphere, the rain, or the soils of the City of Fort Lauderdale; or
- 2) Engage in any act of geoengineering, climate engineering, or any other act related to the climate manipulation of the City of Fort Lauderdale; or
- 3) Engage in any activity that is intended to alter the weather or the sunlight of the City of Fort Lauderdale.

B. Exceptions:

- 1) Nothing in this chapter prohibits any act stated in Subsection A, so long as the person, firm, corporation, agency or entity has first submitted an Environmental Impact Statement to the Fort Lauderdale City Commission, in a form prescribed by the City Commission or its designee, and has received written informed approval from the Fort Lauderdale City Commission; and
- 2) Nothing in this chapter prohibits any act stated in Subsection A, so long as the disbursements are the byproducts and emissions of industry, agriculture, commerce and transportation that are *both* properly disclosed and approved by applicable governmental agencies.

Form Established. The City Commission is hereby authorized, empowered, and directed to develop an Environmental Impact Statement Form to be used by persons, firms, corporations, agencies or entities

wishing to perform any disbursements, climate altering activities, weather modification, or geoeengineering, as discussed in this chapter.

Penalty. Any person, firm, corporation, agency or entity who knowingly violates this Title shall be fined not more than ten thousand dollars (\$10,000.00) or by imprisonment not exceeding one year, or by both. The continuance of any such violation shall be deemed a new violation for each day of such continuance. In addition, the City Attorney may institute an action to prevent, restrain, correct, or abate any violation of this Title and seek such relief by way of injunction or otherwise, as may be proper under the facts and circumstances of the case, in order to fully effectuate the purposes of this Title.

Administrative rules. The Director of Environmental Management may adopt administrative rules to implement this chapter, pursuant to Chapter xxx, Florida Revised Statutes.

Administrative enforcement. In lieu of or in addition to, enforcement by criminal prosecution, the Director of Environmental Management may enforce this chapter pursuant to section xxxx of this code, relating to administrative enforcement.

Severability. If any portion of this code, or its application to any person or circumstance, shall be held unconstitutional or invalid, the remainder of this code and the application of such portion to other persons or circumstances shall not be affected thereby.

Effective Date. This ordinance shall take effect 10 days after recorded with the Fort Lauderdale County Clerk.

APPROVED AS TO FORM AND LEGALITY:

City Attorney, City of Fort Lauderdale

ADOPTED this the _____ day of _____, 2014.

Mayor
JOHN P. "JACK" SEILER

ATTEST:

City Clerk
JONDA K. JOSEPH

WE HEREBY CERTIFY that the foregoing BILL NO. _____)

REFERENCES

ⁱ Broward County, Code of Ordinances, Title xxxx – *Environmental Protection*.

ⁱⁱ **“Section 4-2. Introduction, Consideration and Passage of Ordinances and Resolutions.**

1. Every proposed ordinance shall be initiated as a bill and shall be passed after two readings on separate days.
2. Except as otherwise provided by law, resolutions may be adopted on one reading.
3. Upon the request of three members of the council, a public hearing shall be held on any proposed ordinance or resolution.
4. Digests of all bills which pass first reading and the votes thereon shall be published once in a newspaper of general circulation in the county at least three (3) days before final reading.
5. After passage all bills shall be promptly advertised once by title only in a newspaper of general circulation in the county, with the ayes and noes.
6. Should the council find by a two-thirds vote of its entire membership the existence of an emergency threatening life, health, or property due to a public calamity, the council may waive all of the requirements of this section pertaining to procedure, except all votes shall be recorded. Every emergency ordinance, including any amendments made therein after its adoption, shall automatically stand repealed on the ninety-first (91st) day following the date on which it became effective. The council may prescribe by rule procedures for emergency meetings of its membership to be held by conference telephone or similar communication equipment in the event of public calamity.
7. Resolutions authorizing proceedings in eminent domain shall be adopted as provided by law.
8. Bills and resolutions may be passed on first reading by council members and passed on second reading by their successors.”

ⁱⁱⁱ **“Section 4-5. Codification of Ordinances.**

1. The council shall cause any codification of all of the ordinances of the county heretofore prepared and published to be revised and updated at least biennially.
2. Prior to passage of a bill providing for the adoption of a uniform code not less than three copies of the uniform code shall be filed for use and examination by the public in the office of the county clerk at least sixty (60) days prior to passage thereof.”

^{iv} “For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect the City of Fort Lauderdale’s natural beauty and all natural resources, including land, water, air, minerals and energy sources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State.”

^v “Each person has the right to a clean and healthful environment, as defined by laws relating to environmental quality, including control of pollution and conservation, protection and enhancement of

natural resources. Any person may enforce this right against any party, public or private, through appropriate legal proceedings, subject to reasonable limitations and regulation as provided by law.”

^{vi} See David Victor, et al., *Geoengineering: Workshop on Unilateral Planetary Scale Geoengineering* (Council on Foreign Relations, May 5, 2008), archived online at: <http://www.cfr.org/projects/world/geoengineering-workshop-on-unilateral-planetaryscale-geoengineering/pr1364>

See also David Victor, et al., *The Geoengineering Option: A Last Resort Against Global Warming* (Foreign Affairs Magazine. Council on Foreign Relations, March/April 2009), archived online at: <http://www.foreignaffairs.com/articles/64829/david-g-victor-mgranger-morgan-jay-apt-john-steinbruner-and-kat/the-geoengineering-option>

See also *Stop Emitting CO2 or Geoengineering Could Be Our Only Hope* (Royal Institute, August 28, 2009), archived online at: <http://royalsociety.org/Stop-emittingCO2-or-geoengineering-could-be-our-only-hope/>

See also *Geoengineering the Climate: Science Governance and Uncertainty* (Royal Society, September 1, 2009), archived online at: <http://royalsociety.org/policy/publications/2009/geoengineering-climate/>

See also *Geoengineering – Taking Control of Our Planet’s Climate* (Royal Institute, November 8-9, 2010), archived online at: <http://royalsociety.org/events/2010/geoengineering/>

See also Lee Lane, et al., *Workshop Report on Managing Solar Radiation* (NASA, April 2007), archived online at: <http://event.arc.nasa.gov/main/home/reports/SolarRadiationCP.pdf>

See also Vergano, Dan, *Can Geoengineering Put the Freeze on Global Warming?* (*USA Today*, February 25, 2011), archived online at: http://www.usatoday.com/tech/science/environment/2011-02-25geoengineering25_CV_N.htm

See also Kunzig, Robert. *Geoengineering: How To Cool Earth—At A Price* *Scientific American*. October 20, 2008), archived online at: <http://www.scientificamerican.com/article.cfm?id=geoengineering-how-to-cool-earth>

See also Erika Engelhaupt, *Engineering a Cooler Earth: Researchers brainstorm a radical ways to counter climate change* (*Science News*, June 5, 2010, pp 16-20) archived online

at: <http://www.scribd.com/doc/78635966/Engineering-a-Cooler-Earth> See also *The Regulation of Geoengineering* (UK House of Commons Science and Technology Committee, Fifth Report Session 2009-2010), archived online at: <http://www.publications.parliament.uk/pa/cm200910/cmselect/cmsstech/221/221.pdf> See also *Us House of Representatives and UK Parliament House of Commons Joint Statement on Geoengineering 2010*, archived online

at: <http://www.publications.parliament.uk/pa/cm200910/cmselect/cmsstech/221/22111.htm> See also J. J. Blackstock et al., *Climate Engineering Responses to Climate Emergencies* (Novim, 2009), archived online at: <http://arxiv.org/pdf/0907.5140>

^{vii} See *Task Force on Climate Remediation Research* (The Bipartisan Policy Center, October 2011), archived online at:

<http://www.bipartisanpolicy.org/sites/default/files/BPC%20Climate%20Remediation%20Final%20Report.pdf>

See also *International Consortium of NGOs Calls for Coordinated Action on Geoengineering Research* (Royal Institute, December 2, 2011), archived online at:

<http://royalsociety.org/news/srmgi-report-2011/>

See also Zabarenko, Deborah, *Geo-engineering: A Bad Idea Whose Time Has Come?* (Reuters, December 9, 2011), archived online at:

<http://www.reuters.com/article/2011/12/09/us-climate-geoengineeringidUSTRE7B81Y820111209>

^{viii} **See** *What In The World Are They Spraying?* (Truth Media Productions, 2010), archived online at: <http://www.youtube.com/watch?v=if0khstYDLA>

See also *Climate Change 2007: Working Group III: Mitigation of Climate Change*. IPCC Fourth Assessment Report: Climate Change 2007, (Intergovernmental Panel on Climate Change, 2007), archived online at:

http://www.ipcc.ch/publications_and_data/ar4/wg3/en/spmssp-c.html

("Geo-engineering options, such as ocean fertilization to remove CO₂ directly from the atmosphere, or blocking sunlight by bringing material into the upper atmosphere, remain largely speculative and unproven, and with the risk of unknown side-effects.")

^{ix} "19.530.030 -Administrative enforcement. In lieu of, or in addition to, enforcement by criminal prosecution, if the director of public works, the director of environmental management, the director of water supply, or the planning director determines that any persons are violating any provision of titles 8, 12, 14, 16, 18, 19 and 20 of this code, any rules adopted thereunder, or any permit issued thereto, the director may have the person served, by mail or personal delivery, with a notice of violation and order pursuant to this chapter and such administrative rules as the director may adopt.

A. Contents of the notice of violation. The notice shall include at least the following information:

1. Date of the notice;
2. The name and address of the person noticed;
3. The section number of the provision or rule, or the number of the permit which has been violated;
4. The nature of the violation; and
5. The location and time of the violation.

B. Contents of the order.

1. The order may require the person to do any or all of the following:

1. a. Cease and desist from the violation;
2. b. Correct the violation at the person's own expense before a date specified in the order;
3. c. Pay a civil fine not to exceed \$1,000.00 in the manner, at the place, and before the date specified in the order;
4. d. Pay a civil fine not to exceed \$1,000.00 per day for each day in which the violation persists, in the manner and at the time and place specified in the order; and
5. e. Pay a civil fine not to exceed one percent of the project cost as provided in Section 20.08.260.E.2 of this code.

2. The order shall advise the person that the order shall become final thirty days after the date of its mailing or delivery. The order shall also advise that the director's action may be appealed to the board of variances and appeals.

C. Effects of order; right to appeal. The provisions of the order issued by the director of public works, the director of environmental management, the director of water supply, or the planning director under this section shall become final thirty days after the date of the mailing or delivery of the order. The person may appeal the order to the board of variances and appeals as provided for in this article. However, an appeal to the board of variances and appeals shall not stay any provision of the order.

D. Collection of unpaid civil fines. In addition to any other procedures for the collection of civil fines available to the County by law or rules of the court, the County may add unpaid civil fines as herein defined to any County taxes, fees or charges except for residential water or sewer charges.

E. Judicial enforcement of order. The director of public works, the director of environmental management, the director of water supply, or the planning director may institute a civil action in any court of competent jurisdiction for the enforcement of any order issued pursuant to this section. Where the civil action has been instituted to enforce the civil fine imposed by said order, the director or agency need only show that the notice of violation and order were served, that a civil fine was imposed, the amount of the civil fine imposed, and that the fine imposed has not been appealed in a timely manner nor paid."

