

**Environmental Assessment for the Proposed Physical  
Design Testbed at Florida International University  
Miami, Florida**

**National Science Foundation**



**July 29, 2022**

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## Acronyms and Abbreviations

<b>Acronym</b>	<b>Definition</b>
BMP	Best Management Practice
CAA	Clean Air Act of 1970
CEQ	Council on Environmental Quality
C.F.R.	<i>Code of Federal Regulations</i>
CZMA	Coastal Zone Management Act
dB	Decibel(s)
dBA	A-weighted Decibel(s)
EA	Environmental Assessment
EJ	Environmental Justice
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIU	Florida International University
FPL	Florida Power and Light
FRP	Fiberglass Reinforced Plastic
FWCC	Fish and Wildlife Conservation Commission
GHG	Greenhouse Gas
m/s	Meter(s) per Second
MDWASD	Miami Dade Water and Sewer Department
mph	Mile(s) per Hour
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NHERI	Natural Hazards Engineering Research Infrastructure
NICHE	National Full-scale Testing Infrastructure for Community Hardening in Extreme Wind, Surge, and Wave Events
NHPA	National Historic Preservation Act of 1966
NSF	National Science Foundation
PDT	Physical Design Testbed

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ROI	Radius of Influence
SHPO	State Historic Preservation Officer
U.S.C.	<i>United States Code</i>
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WOW	Wall of Wind

# 1. Purpose and Need for the Proposed Action

The National Science Foundation (NSF), in consultation with the Florida International University (FIU), has prepared this Environmental Assessment (EA) to evaluate the potential effects of NSF's authorization of the use of NSF-awarded funds for the construction and operation of a Physical Design Testbed (PDT) on the FIU campus in Miami, Florida.

This EA was prepared in accordance with the following:

- National Environmental Policy Act of 1969 (NEPA) (*United States Code* [U.S.C.] Title 42, Sections (§§) 4321, *et seq.*)
- Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (*Code of Federal Regulations* [C.F.R.] Title 40, Parts 1500–1508); and NSF procedures for implementing NEPA and CEQ regulations (45 C.F.R. Part 640).
- Endangered Species Act (ESA) of 1973 (16 U.S.C. §§ 1531, *et seq.*)
- National Historic Preservation Act (NHPA) of 1966 (54 U.S.C. §§ 300101, *et seq.*)

The public is invited to comment on this EA.  
Comments may be submitted to Joy Pauschke, Ph.D., P.E., at [engineering@nsf.gov](mailto:engineering@nsf.gov)  
and will be accepted through August 31, 2022.

## 1.1 Project Background and Location

The PDT would be located north of the existing Natural Hazards Engineering Research Infrastructure<sup>[1]</sup> (NHERI) Wall of Wind (WOW) at the FIU Engineering Campus (Figure 1-1), which is less than a mile northeast of FIU's Main Campus. NHERI WOW allows researchers to perform destructive tests on structures in simulated Category 5 Hurricane on the Saffir-Simpson wind scale and simulated rain conditions (FIU, 2016). The WOW is powered by a combined 12-fan system that creates up to 157-mile-per-hour (mph) wind speeds along with a water spray system that simulates the effects of wind-driven rain. The PDT would simulate larger hurricane events as described in Section 1.2, *Purpose and Need*. Additional details of the PDT are provided in Section 2.1, *Proposed Action*.

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<sup>[1]</sup> NHERI is a distributed, multi-user, national network that provides the natural hazards engineering and social science community with state-of-the-art research infrastructure that is designed to help enhance community resilience.

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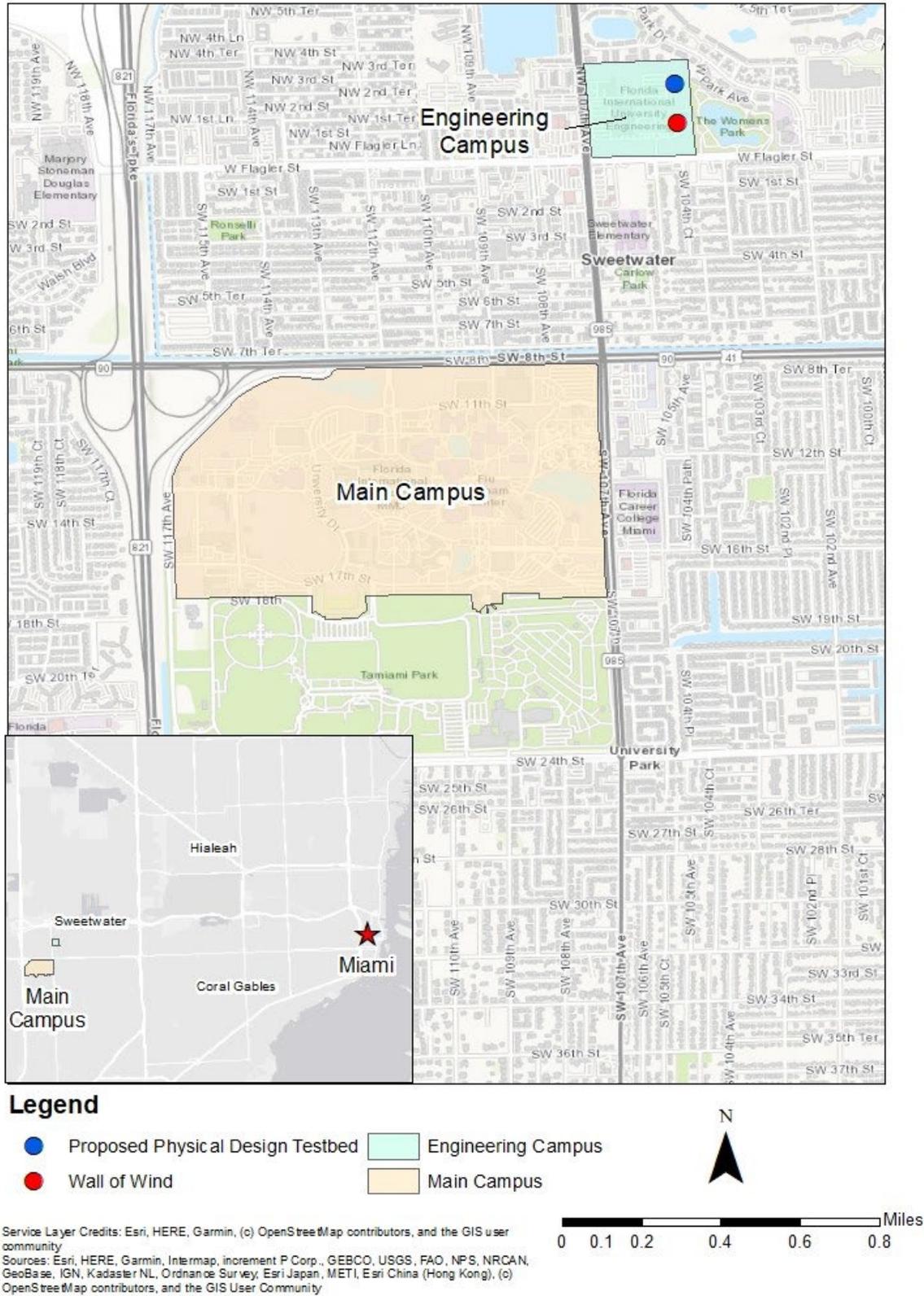


Figure 1-1. Location of Florida International University Main and Engineering Campus

## 1.2 Purpose and Need

In December 2021, NSF issued a Mid-scale Research Infrastructure-1 award (NSF award 2131961) to FIU to support the design of a National Full-scale Testing Infrastructure for Community Hardening in Extreme Wind, Surge, and Wave Events (NICHE). FIU has provided the following description for NICHE in its documentation submitted to NSF:

The proposed [Mid-scale Research Infrastructure] -- National Full-Scale Testing Infrastructure for Community Hardening in Extreme Wind, Surge and Wave Events, "NICHE" (NICHE) -- aims the simulation of severe natural hazards, i.e., high wind events (synoptic and non-synoptic), storm surge and waves, overland flow, and their interaction with the built environment. Currently, there is no experimental facility in the world with (near) full-scale combined capabilities. Moreover, (i) most existing facilities are able to simulate only one of the aforementioned natural hazards independently, and (ii) in those facilities where these hazards can be simulated simultaneously, the facility dimensions and, therefore, the scale, are significantly reduced and simplified.

NICHE is envisioned to have integrated capabilities to simulate extreme event conditions (up to ~95 m/s winds across range of flow types ... and ~2.3 m waves) in a controlled laboratory environment large enough to test full-size structures and even support scaled modeling of entire communities.<sup>[2]</sup>

To aid in the design of the full-scale NICHE, FIU intends to seek NSF's approval to use NICHE funds to construct a prototype smaller-scale PDT. The purpose of the PDT is to inform the design of NICHE by providing proof-of-concept and validation of empirical models. The PDT is needed to test and prove a subset of eventual full-scale NICHE equipment, demonstrate the physics of full-scale NICHE conditions, and answer key scientific, technical, and operational questions relating to the feasibility of a full-scale NICHE.

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<sup>[2]</sup> NSF Award Search: Award # 2131961 - Mid-scale RI-1 (M1:DP): National Full-Scale Testing Infrastructure for Community Hardening in Extreme Wind, Surge, and Wave Events (NICHE) ([https://nsf.gov/awardsearch/showAward?AWD\\_ID=2131961](https://nsf.gov/awardsearch/showAward?AWD_ID=2131961))

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## 2. Description of the Proposed Action and Alternatives

### 2.1 Proposed Action

The Proposed Action is for NSF to authorize the use of NSF-awarded funds for the construction and operation of a PDT on the FIU campus in Miami, Florida. Under the Proposed Action, FIU would construct a PDT to experimentally simulate the impact of large hurricane events using extreme winds combined with storm surge and wave actions on different types of civil infrastructure. The proposed NICHE infrastructure would consist of an 8,500-square-foot light industrial building approximately 170 feet in length and 50 feet in width.

Equipment inside the PDT would include a fan system for wind speeds up to 213 mph and a 12-foot-wide by 9-foot-high fiberglass reinforced plastic (FRP) water channel. Electricity for the facility would be provided by Florida Power and Light (FPL); generators or other diesel-powered equipment would not be needed. Water and sewer for the facility would be provided by Miami Dade Water and Sewer Department (MDWASD) and storage tanks would be used to facilitate water recycling as much as possible. The FIU engineering campus has sufficient parking for the expected users of the proposed PDT facility. Site access would be controlled by use of a security fence. The building would also include skylights and ventilators, 660 square feet of air-conditioned interior office space, and two bathrooms.

FIU may determine that the wave simulations could be conducted in a facility at another university and the PDT at FIU could consist of a smaller facility containing only wind simulation equipment. It is assumed that only small-scale modifications would be required at the other university. Therefore, only effects associated with the FIU component are considered in this EA. If substantial modifications would be needed at an existing wave facility, additional NEPA review may be required.

### 2.2 No Action Alternative

Under the No Action Alternative, NSF would not authorize the use of NSF-awarded funds for the construction and operation of the PDT at FIU. At this time, it would be speculative to decide whether a lack of NSF funding would result in the PDT not being built or whether FIU would seek alternate sources of funding. This alternative would not fulfill the purpose of the Proposed Action or meet the need to test and prove a subset of eventual full-scale NICHE equipment, demonstrate the physics of full-scale NICHE conditions, and answer key scientific, technical, and operational questions relating to the feasibility of a full-scale NICHE as described in Section 1.2, *Purpose and Need*. For the analysis in Section 3, *Affected Environment and Environmental Consequences*, NSF assumes that under the No Action Alternative, the PDT would not be constructed.

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### 3. Affected Environment and Environmental Consequences

This section provides an overview of the existing environmental conditions at the proposed project site (the affected environment) and identifies the anticipated effects of the Proposed Action on each resource (environmental consequences). The analysis of resource impacts focuses on environmental issues proportionate to the degree of potential impact within the region of influence (ROI) or the area in which project-related impacts could occur for each resource. This EA also considers the potential direct, indirect, and cumulative impacts associated with the Proposed Action and No Action Alternative and identifies mitigation measures or best management practices (BMPs) that would be implemented to avoid or minimize potential impacts, if relevant. Direct impacts are those that would occur as a direct result of the Proposed Action. Indirect impacts are those that are caused by the Proposed Action but would occur later in time and/or farther away in distance. Cumulative impacts consider the incremental impact of the Proposed Project in combination with past, present, and reasonably foreseeable future projects. For this assessment, reasonably foreseeable future actions include the following:

- Expansion of the Engineering Center Building in accordance with FIU's master plan for the site (FIU, 2022).

The environmental effects of the No Action Alternative were also evaluated based on a comparison to the baseline conditions presented in this section.

#### 3.1 Evaluated Resources

The following resources were identified as potentially affected by the Proposed Action and require evaluation in this EA:

- Noise (refer to Section 3.2)
- Water Resources (refer to Section 3.3)

In accordance with CEQ's directives to focus NEPA analyses on environmental resource areas in which there is the potential for significant impact and where the analyses are expected to provide useful information to the decision maker (40 C.F.R. §1502.2), some resource areas were eliminated from detailed study in this EA. The rationale for their elimination is summarized as follows:

- **Air Quality and Greenhouse Gases:** The Clean Air Act of 1970 (CAA) requires the U.S. Environmental Protection Agency (EPA) to identify National Ambient Air Quality Standards (NAAQS) necessary to protect the public health and welfare. The Proposed Action may involve short-term greenhouse gas (GHG) emissions associated with construction; however, the Proposed Action is in Miami-Dade County, which is in full attainment for all NAAQS criteria pollutants (EPA, 2022). Therefore, the CAA conformity analysis is not required and there is limited likelihood for the Proposed Action to cause a violation in CAA NAAQS.
- **Climate Change:** Executive Order (EO) 13990, "Protecting Public Health and Environment and Restoring Science to Tackle the Climate Crisis," and EO 14008, "Tackling the Climate Crisis at Home and Abroad," requires federal agencies to consider the impacts of climate change on their actions. The potential GHG emissions under the operation of the PDT are expected to be similar to the WOW's current conditions. Power for the operation of equipment at the PDT would be supplied by FPL and there would be no generators or other diesel-powered equipment; however, there may be short-term

GHG emissions and use of generators or other diesel-powered equipment during construction. Some of the energy needs would be offset by the solar canopy described in the following Utilities section. Additionally, the research from the PDT would add to the research on the effects of climate change and may improve climate resiliency.

- **Utilities:** The PDT would tie into FIU's existing utility systems for electric power, including renewable energy; water; sewage treatment; and stormwater management. The stormwater management system consists of exfiltration trenches, onsite dry retention areas, drainage swales, overland flow, and positive drainage pipe system. Construction and operation of the PDT is not expected to impact the capacity of the local major service providers (FPL or MDWASD). Additionally, some of the energy for the engineering campus is supplied by a solar canopy over the 400-space parking area west of the WOW, which provides 14 megawatts of power (Microgrid Knowledge, 2021).
- **Children's Environmental Health and Safety Risk:** EO 13045, "Protection of Children from Environmental Health Risks and Safety Risks," directs federal agencies to identify and assess environmental health risks and safety risks that may disproportionately affect children. Children may be located in neighboring multi-family housing, but these children would not be allowed access to the facility. Therefore, the Proposed Action would not disproportionately affect children.
- **Environmental Justice (EJ):** EO 12898, "Federal Actions to Address Environmental Justice in Minority and Low-income Populations," requires federal agencies to consider disproportionate risk to minority and low-income communities. Additionally, EO 14008, "Tackling the Climate Crisis at Home and Abroad," directs agencies to consider disproportionate impacts on minority and low-income populations from climate change. Based on a search within a 5-mile buffer area surrounding FIU Engineering Center, the EPA EJSCREEN (Appendix B) indicated that the percentage of minority and low-income populations are higher than the state average. However, there are no potential significant effects from the proposed action; therefore, there are no potential disproportionate effects to minority and low-income populations. Furthermore, the experiments performed at the proposed PDT may help improve climate resiliency for all populations.
- **Biological Resources:** A site visit conducted on April 5, 2022, confirmed that the property on which the PDT would be located consists of a previously developed area, with minimal to no vegetation and no suitable wildlife habitat. A list of threatened and endangered species that may occur in, or be affected by, the Proposed Action was obtained by the U.S. Fish and Wildlife Service (USFWS) and is provided in Appendix A. Due to the disturbed/maintained nature of the site, there is no suitable habitat for listed plant species. Upon review of the terrestrial wildlife species, it was confirmed that there is no potential for the Proposed Action to affect these species due to the lack of suitable habitat (refer to Table 3-1).
- **Land Use:** Land use will not change with the construction or operation of the PDT and is consistent with the land use map, designations, policies, and procedures that the FIU master plan established at the project site. The FIU master plan is currently going through a revision and would incorporate the PDT (FIU, 2022).
- **Hazardous Materials and Solid Waste:** The PDT would be located within an existing brownfield area, as designated by the Florida Department of Environmental Protection. However, there are no active contamination sites at a higher elevation and within 0.5 mile of the Proposed Action from which contamination could potentially migrate to the area of Proposed Action through groundwater flow (Appendix C). Solid waste generated by the proposed facility is anticipated to be general waste similar to existing building facilities on campus and can be handled under the FIU's current waste disposal contract.

- **Socioeconomics:** The construction and operation of the PDT would have a beneficial effect, as local construction workers would be employed, and once operational, a few new hires, including a site operation manager and a post-doctoral faculty position, are expected for the PDT. These additional personnel would be minimal compared to the population of the region.
- **Visual Resources:** No sensitive viewsheds are located in the vicinity of FIU's Engineering Center. The changes in the visual environment at the Engineering Center at FIU would be minimal because the project would be constructed adjacent to the existing NHERI WOW and in a manner that is consistent with existing development at the site. Standard BMPs would be used to minimize the potential for dust during construction activities, which could indirectly impact views, and revegetation at the site would minimize the potential for dust after the construction period. Vegetation along the north and eastern property boundary provides a visual screen between the PDT and the neighboring communities.
- **Geology and Soils:** The construction of the PDT would require grading and excavation to level the building site, install the foundation, and accommodate required stormwater management. Because this involves a relatively small area, and because erosion control measures would keep water and sediments from moving offsite and impacting other areas, there are no identified impacts to geologic and soil resources.
- **Historic Architectural, Archaeological, and Cultural Resources:** There are no known cultural resources at the proposed PDT site, and the site is not located in an area of high potential for cultural resources. If buried cultural resources are identified during the construction process, construction activities will cease, and the Florida State Historic Preservation Officer will be notified. On April 19, 2022, NSF sent a letter to the Florida State Historic Preservation Officer (SHPO) to initiate Section 106 and to seek concurrence on the finding of no effects on historic properties listed, or eligible for listing, on the National Register of Historic Places. On May 19, 2022, Florida SHPO concurred with the findings (no effect on historic properties) and subsequently requested a special condition regarding unexpected discoveries during ground-disturbing activities. This correspondence is in Appendix D. The Miccosukee Tribe of Indians of Florida were identified as a Tribe that had a historic range in this part of Florida (most others were further north and in the pan handle). The Miccosukee Tribe of Indians of Florida were contacted twice by phone and did not respond.
- **Human Health and Safety:** The construction of the PDT would involve routine construction and workers would comply with all applicable health and safety regulations. During operation, the PDT employees would follow a health and safety plan that includes health and safety training and the use of personal protective equipment. The Proposed Action does not involve any special health and safety concerns; therefore, there are no health and safety impacts.
- **Transportation:** A short-term increase in traffic would occur due to construction on the PDT, but the increase would not be noticeable compared to the surrounding traffic conditions. Operation of the PDT would accommodate an existing user base and, therefore, no effects to traffic and transportation are anticipated.

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**Table 3-1. Habitat Requirements for Federally Listed Species**

Type	Species-Status <sup>[a]</sup>	Habitat	Habitat present?
Mammals	Florida Bonneted Bat ( <i>Eumops floridanus</i> )-E	Roosting habitat includes forests and other areas with tall, mature trees or other areas with suitable roost structures (buildings or bridges); foraging habitat in urban and residential areas, includes access to drinking water (open fresh water or wetlands) and relatively open areas to hunt (small patches of natural or semi-natural environment) (USFWS, 2020)	No, there are no tall trees in the study area. Any urban foraging bats would be active in the evening/nighttime and would not be in the area when the fans are operating during the day.
Mammals	Florida Panther ( <i>Felis concolor coryi</i> )-E	Habitat generalists that typically inhabit forests, wetlands, and grasslands. The most suitable habitat is in unfragmented blocks and large areas (USFWS, 2008)	No
Mammals	Puma/Mountain Lion ( <i>Felis concolor</i> )-SA/T	Same as previous	No
Birds	Bachman's Warbler ( <i>Vermivora bachmanii</i> )-E	Inhabit bottomland forests and swamps (USFWS, 2015)	No
Birds	Everglade Snail Kite ( <i>Rostrhamus sociabilis plumbeus</i> )-E	Inhabit shallow freshwater marshes and shallow grassy shorelines of lakes (USFWS, 2019)	No
Birds	Wood Stork ( <i>Mycteria americana</i> )-T	Nest in mixed hardwood swamps, sloughs, mangroves, and cypress domes/strands and forage in a variety of wetlands (Florida FWCC, 2022c)	No
Reptiles	American Alligator ( <i>Alligator mississippiensis</i> )-SA/T; American Crocodile ( <i>Crocodylus acutus</i> )-T	Semi-aquatic species that inhabit freshwater rivers, swamps, marshes, and lakes	No
Reptiles	Eastern Indigo Snake ( <i>Drymarchon corais couperi</i> )-T	Inhabit pine flatwoods, hardwood forests, moist hammocks and cypress swamps (Florida FWCC, 2022a)	No
Insects	Bartram's Hairstreak Butterfly ( <i>Strymon acis bartrami</i> )-E; Florida Leafwing Butterfly ( <i>Anaea troglodyte floridalis</i> )-E; Miami Blue Butterfly ( <i>Cyclargus thomasi bethunebakeri</i> )-E	Inhabit pine rockland habitat that is comprised of exposed limestone and hardwood hammocks (Florida FWCC, 2022b); Miami blue butterfly may also inhabit beachside scrub habitat (National Park Service, 2022)	No

<sup>[a]</sup> Status indicated as "E" for Endangered; "T" for Threatened; "SA/T" for Similarity of Appearance (Threatened)

## 3.2 Noise

The ROI for noise is the PDT footprint and the surrounding communities that could be affected by noise during construction and operation of the PDT.

### 3.2.1 Affected Environment

Noise, often defined as unwanted sound, is one of the most common environmental issues associated with human activities. Public annoyance is the most common impact associated with exposure to elevated noise.

Sound is created by acoustic energy, which produces pressure waves that travel through air and are sensed by the eardrum. Since the range of sound pressure ratios varies greatly over many orders of magnitude, a base-10 logarithmic scale is used to express sound levels in dimensionless units of decibels (dB). Sound travels in waves and varying frequencies are associated with each sound event. The human ear does not respond equally to all frequencies. To obtain accurate measurements and descriptions of noise, given that noise is composed of many frequencies, the noise frequencies are filtered or weighted to most closely approximate the average frequency response of the human ear. This weighting is called the "A" scale on sound-level meters; this is the scale that is used for noise analyses. Decibel units described in this manner are referred to as A-weighted decibels, or dBA. Because sound intensity tends to fluctuate with time, a method is required to describe a noise source, such as a highway or airport, in a steady state condition.

Table 3-2 lists the relative A-weighted sound levels of common sounds measured in the environment and in industry for various noise sources.

**Table 3-2. Typical Sound Levels Measured in the Environment and Industry**

Noise Source at a Given Distance	A-Weighted Sound Level in Decibels (dBA)
Rock band	110
Jet flyover at 1,000 feet	105
Gas lawnmower at 3 feet	95
Garbage disposal at 3 feet	80
Vacuum cleaner at 10 feet	70
Heavy traffic at 300 feet	60
Quiet urban daytime	50
Quiet urban nighttime	40
Library	30
Quiet rural nighttime	25
Recording studio	15

Source: California Department of Transportation, 2013.

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Noise-sensitive land uses generally are defined as locations where people reside or where the presence of unwanted sound could adversely affect the designated use of the land. Typically, noise-sensitive land uses include residential areas, hospitals, places of worship, libraries, and schools as well as nature and wildlife preserves and parks.

The existing noise environment in the ROI primarily consists of occasional aircraft flying overhead, operations from the WOW and noise from traffic on the local roadways, which is a mix of automobiles and medium and heavy trucks. Noise-sensitive locations in the ROI include the multi-family residential area to the northeast of the proposed PDT site (refer to Figure 3-1). This residential area has a background noise level of around 50 dBA, corresponding to the sound level of quiet urban daytime (Table 3-2). A daytime noise measurement taken during the April 5, 2022 site visit confirmed this assessment (Noise Measurement Location 1, Figure 3-1). The Noise Control Act of 1972, as amended (42 U.S.C. §§ 4901 *et seq.*), requires facilities to maintain noise levels that do not jeopardize the health and safety of the public, and this requirement applies to construction noise. The Miami-Dade Noise Ordinance (Miami-Dade County, 2022) regulates noise in the county.

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**Legend**

- ⊕ Nearest Noise Sensitive Receptor
- Noise Measurement
- Proposed Physical Design Testbed
- Wall of Wind
- Engineering Center



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Figure 3-1. Proposed Physical Design Testbed at the FIU Campus**

### 3.2.2 Environmental Consequences

This section identifies the potential direct, indirect, and cumulative impact from noise that could result from the implementation of the Proposed Action or No Action Alternative. The impact thresholds related to noise are presented in Table 3-3.

**Table 3-3. Impact Thresholds for Noise**

Impact	Description
Negligible	The alternative would result in a non-perceptible noise increase.
Minor	The alternative would result in a barely perceptible noise increase.
Moderate	The alternative would result in a readily perceptible noise increase but generally would not affect daily activities and would not result in hearing damage.
Major	The alternative would result in a disruptive noise increase, which would significantly affect daily activities and may result in hearing damage.
Quality:	Beneficial – would have a positive effect Negative – would have an adverse effect
Duration:	Short-term – occurs only during the construction period Long-term – continues after the construction period

Equipment associated with the construction of the PDT would generate noise. Table 3-4 outlines the predicted noise level at 50 feet (dBA) for typical pieces of construction equipment that could be used for the construction of the PDT. Typical noise levels from these types of equipment have been measured and published in the Roadway Construction Noise Model prepared by the Federal Highway Administration in the Roadway Construction Noise Model User’s Guide (FHWA, 2006). Noise for any specific receptor would be dominated by the closest and loudest equipment.

**Table 3-4. Predicted Noise Levels for Construction Equipment**

Construction Equipment	Predicted Noise Level at 50 feet (dBA)
Dump Truck	76
Paver	77
Backhoe	78
Concrete Mixer Truck	78
Roller	80
Crane	81
Dozer	82
Jackhammer	89

Source: FHWA, 2006.

To estimate the potential noise impacts from the construction of the PDT, three representative construction equipment operating simultaneously were modeled: a jackhammer, a dozer, and a dump truck. Table 3-5 provides construction equipment noise levels at various distances using the Roadway Construction Noise Model. These estimated noise levels are conservative because the only sound-

buffering mechanism considered was distance from the source. Additional buffering that would be provided by vegetation, structures, atmospheric absorption, and terrain features was not considered in the evaluation.

**Table 3-5. Representative Equipment Noise Levels Versus Distance**

Distance from Sensitive Receptor (feet)	Equivalent Noise Level (dBA)
50	84
100	78
200	72
400	66
800	60
1,600	54
3,200	48

The main source of noise during the construction of the PDT would be the noise from construction equipment. As shown on Figure 3-1, the nearest noise receptor is approximately 100 feet from the proposed PDT location. Based on Table 3-5, the noise level at that location would be approximately 78 dBA, and as shown in Table 3-2, this level of noise is less than the noise produced by a gas lawnmower at 3 feet (95 dB). The construction of the PDT would result in readily perceptible noise increase; however, the construction would take place between the hours of 7 am and 8 pm, in accordance with the local noise ordinance, so it would generally not affect daily activities and would not result in hearing damage. The construction of the PDT would have a **moderate, negative, and short-term** noise impact on the neighboring community.

The main source of noise during operation of the PDT would be the fan system. The noise of the PDT would be similar to the noise during operation of the existing WOW facility. During the April 5, 2022 site visit, approximately 85 dB were measured downwind and just north of the WOW during operation of the fans (Noise Measurement Location 2, Figure 3-1). As shown in Table 3-2, this level of noise is less than the noise produced by a gas lawnmower at 3 feet (95 dB). During typical operation of the WOW, the fans are turned on for less than 15-minute increments during a 4-hour-period-per-day time span, either 8 a.m. to 12 p.m. or 12 p.m. to 4 p.m., depending on the time of the year.

Although the PDT would be closer to the residential neighborhood, it would produce similar, if not less, noise than the WOW and would operate under similar time periods. The PDT fans would also not be turned on at the same time as the WOW fans. The proposed fan technologies, which would reduce noise emissions, may be found in Appendix E. The PDT may result in a readily perceptible noise increase, but this increase generally would not affect daily activities and would not result in hearing damage. The operation of the PDT would have a **moderate, negative, and long-term** noise impact on the neighboring community.

There would be **no cumulative impacts** from noise when considering the proposed future activities near the site, due the quiet nature of operations the Engineering Center Building, and there would be no anticipated cumulative impact from construction.

There would be **no effect** from noise under the No Action Alternative.

### 3.3 Water Resources

Water resources include surface water and groundwater. The ROI for water resources is the C-4 Canal watershed.

#### 3.3.1 Affected Environment

The Proposed Action is located in the C-4 Canal watershed. The C-4 canal is located approximately 0.5 mile south of the site and drains east (approximately 11 miles) to Biscayne Bay (USGS, 2016).

The Proposed Action is located within Zone AH according to Federal Emergency Management Agency (FEMA) flood insurance rate map 12086C0288L (FEMA, 2009). EO11988, "Floodplain Management," directs federal agencies to take action to reduce the risk of flood loss; minimize the impacts of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains. Compliance with EO11988 is documented in Appendix F, Floodplain Management Compliance.

No wetlands are located in the project area according to the USFWS's National Wetlands Inventory (USFWS, 2022). This fact was confirmed during the April 5, 2022 site visit.

The groundwater system within the ROI consists of a shallow surficial aquifer system that includes the following aquifers with increasing depth: the Biscayne aquifer, gray limestone aquifer, and the confined Floridan aquifer system. These aquifers are separated by beds of sand, silt, and clay that restricted vertical movement of groundwater between the aquifers. The water table may often be found within a few feet of the ground surface in the Biscayne aquifer (USGS, 2016). The Safe Drinking Water Act (Public Law 93-523) requires protection of sole source aquifers such as the Biscayne aquifer.

#### 3.3.2 Environmental Consequences

This section identifies the potential direct, indirect, and cumulative impacts to water resources that could result from implementation of the Proposed Action and No Action Alternative. The impact thresholds related to water resources are presented in Table 3-6.

**Table 3-6. Impact Thresholds for Water Resources**

Impact	Description
Negligible	The alternative would either not affect water quality, or the change in water quality would be below or at the level of detection.
Minor	The alternative would result in a detectable change in water quality, but the impact would be small, localized, and of minimal consequence.
Moderate	The alternative would result in a measurable and consequential change in water quality.
Major	The alternative would result in a substantial change in water quality.
Quality:	Beneficial – would have a positive effect Negative – would have an adverse effect
Duration:	Short-term – occurs only during the construction period Long-term – continues after the construction period

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The construction of the PDT would result in an increase of impervious area of up to 8,500 square feet and require fill to meet minimum base flood elevations. The design of the facility would include stormwater retention and treatment to offset the increase in stormwater runoff from the increase in impervious area under the Environmental Resource Permitting process in accordance with the water quality requirements of the South Florida Water Management District (Chapter 62-330 Florida Administrative Code) and Miami Dade County Division of Environmental Resources Management. The stormwater system would also require compensation for loss in floodplain stormwater storage volume due to the fill. During construction of the PDT, the sediment and erosion control BMPs may include the use of silt fencing, sediment ponds, vehicle tracking controls, good housekeeping, inspection and maintenance schedules, and training. The impact to surface water during the construction and operation of the PDT would be **negligible**.

The PDT would not require the construction of any water wells because water would be supplied by MDWASD. During construction, temporary dewatering could be required, and a Miami Dade County Class 5 Dewatering Permit would be obtained, if necessary (Miami Dade County, 2021). The impact to groundwater would be **minor** during construction and operation of the Proposed Action.

There would be **no cumulative impacts** to water resources when considering the ongoing activities of the expansion of the Engineering Center Building, because the water, sewer, and stormwater systems would be upgraded to accommodate the building expansion.

There would be **no effects** to water resources under the No Action Alternative.

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## **4. Coordination with Other Agencies, Regulatory Processes, Public Involvement and Notifications**

### **4.1 National Environmental Policy Act Public Review**

In preparing this EA, NSF consulted with the SHPO regarding historic properties, obtained a federally listed species from USFWS, and performed a Coastal Zone Management Act (CZMA) consistency determination.

Pursuant to NEPA requirements for the public to be involved in federal agency decision making, hard copies of the EA were distributed to the following libraries and digitally available on NSF's website [www.nsf.gov/eng/infrastructure/environmental-assessment](http://www.nsf.gov/eng/infrastructure/environmental-assessment) for a 30-day public review and comment period.

1. Steve and Dorothea Green Library, 11200 SW 8th Street, Miami, FL 33199
2. Fairlawn Branch Library, 6376 SW 8th Street, Miami, FL 33144
3. International Mall Branch Library, 10315 NW 12 Street, Doral, FL 33172

### **4.2 National Historic Preservation Act Section 106 Consultation**

Section 106 of the NHPA, as amended, requires federal agencies to consider the effects of their projects on significant historic properties and to consult with the SHPO and consulting parties on any such effects. The implementing regulations for NHPA (36 C.F.R. Part 800) define historic properties as any prehistoric or historic district, site, building, structure, or object that is included in, or eligible for inclusion in, the National Register of Historic Places. As described in Section 3, the Proposed Action would have no effect on historic properties. If, during the comment period for this EA, NSF learns of any new information regarding potential historic properties, NSF will reopen consultation with the SHPO under Section 106 as appropriate. Refer to Appendix D for Florida SHPO correspondence.

### **4.3 Endangered Species Act Consultation**

The ESA requires federal agencies to ensure their actions do not jeopardize the continued existence of any federally listed endangered or threatened species or adversely modify any critical habitat of such species. Critical habitat is defined as a specific geographic area that contains features for the conservation of an endangered species and may require special management and protection. Federal agencies must consult with USFWS under Section 7 of the ESA regarding any action that may affect a listed species. As described in Section 3, the Proposed Action does not affect any listed species or critical habitat. Therefore, Section 7 consultation is not required.

### **4.4 Coastal Zone Management Act**

The CZMA establishes a national policy to preserve, protect, develop, restore, and enhance the resources of the nation's coastal zone. Federal agencies are responsible for making consistency determinations within coastal zone areas. The Proposed Action is located within Florida's coastal zone area. However, the Proposed Action would have no effect on coastal zone resources in Florida and would be consistent with

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the Florida Coastal Management Program. NSF submitted this determination to the Florida Department of Environmental Protection's Florida State Clearinghouse for review by relevant State agencies. Should any additional impacts or concerns be identified, NSF will conduct additional evaluation as appropriate. NSF's determination can be found in Appendix G, CZMA Documents.

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## 6. List of Preparers

The primary persons responsible for contributing to, preparing, and reviewing this report are listed in Table 6-1.

**Table 6-1. List of Preparers**

Name	Role	Education	Years of Experience
Michelle Rau, PMP	Program Manager	M.S., Business Administration B.S., Ecology and Evolutionary Biology	25
Madeline Almodovar	Project Manager	Master of Business Administration B.S., Industrial Biotechnology	16
Christina McDonough, P.E.	NEPA Lead	M.E., Environmental Engineering B.S.C.E., Civil Engineering	29
Emily Gulick, CEP-IT	Environmental Planner	B.A., Environmental Studies B.A., Geography	5
Keara Amble	NEPA Support	B.S., Environmental Management and Protection	2
Karen Sanders	Technical Editor	J.D., Law B.A., Anthropology	25

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# Appendix A

## USFWS Species List

Section 508 Accessibility Note: If you need additional assistance, please email us at [engineering@nsf.gov](mailto:engineering@nsf.gov).

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# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Florida Ecological Services Field Office  
FL



In Reply Refer To:

May 13, 2022

Project Code: 2022-0042519

Project Name: Proposed Funding of Testing Infrastructure for Community Hardening in Extreme Event

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

## To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may

affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

- USFWS National Wildlife Refuges and Fish Hatcheries
  - Migratory Birds
  - Wetlands
-

## **Official Species List**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Florida Ecological Services Field Office**  
, FL

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## Project Summary

Project Code: 2022-0042519

Event Code: None

Project Name: Proposed Funding of Testing Infrastructure for Community Hardening in Extreme Event

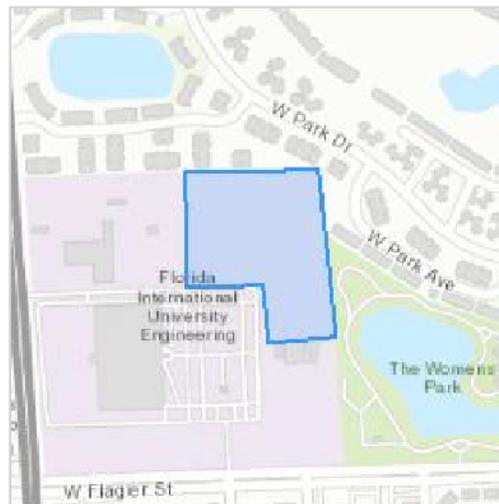
Project Type: New Constr - Above Ground

Project Description: NSF is considering a proposal from Florida International University (FIU) to construct a building to house wind and wave surge test instruments.

The building would be approximately 8,500 square feet (170'x50') and is located northeast corner of the FIU Engineering Campus.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@25.7714747,-80.36615486704804,14z>



Counties: Miami-Dade County, Florida

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## Endangered Species Act Species

There is a total of 35 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

NAME	STATUS
Florida Bonneted Bat <i>Eumops floridanus</i> There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/8630">https://ecos.fws.gov/ecp/species/8630</a>	Endangered
Florida Panther <i>Puma (=Felis) concolor coryi</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1763">https://ecos.fws.gov/ecp/species/1763</a>	Endangered
Puma (=mountain Lion) <i>Puma (=Felis) concolor (all subsp. except coryi)</i> Population: FL No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6049">https://ecos.fws.gov/ecp/species/6049</a>	Similarity of Appearance (Threatened)

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## Birds

NAME	STATUS
<p>Bachman's Warbler (=wood) <i>Vermivora bachmanii</i></p> <p>No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/3232">https://ecos.fws.gov/ecp/species/3232</a></p>	Endangered
<p>Everglade Snail Kite <i>Rostrhamus sociabilis plumbeus</i></p> <p>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/7713">https://ecos.fws.gov/ecp/species/7713</a></p>	Endangered
<p>Wood Stork <i>Mycteria americana</i></p> <p>Population: AL, FL, GA, MS, NC, SC</p> <p>No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8477">https://ecos.fws.gov/ecp/species/8477</a> General project design guidelines: <a href="https://ipac.ecosphere.fws.gov/project/4EQ4MVR56VCFDIJPB65ALPQ2NI/documents/generated/6954.pdf">https://ipac.ecosphere.fws.gov/project/4EQ4MVR56VCFDIJPB65ALPQ2NI/documents/generated/6954.pdf</a></p>	Threatened

## Reptiles

NAME	STATUS
<p>American Alligator <i>Alligator mississippiensis</i></p> <p>No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/776">https://ecos.fws.gov/ecp/species/776</a></p>	Similarity of Appearance (Threatened)
<p>American Crocodile <i>Crocodylus acutus</i></p> <p>Population: U.S.A. (FL)</p> <p>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/6604">https://ecos.fws.gov/ecp/species/6604</a></p>	Threatened
<p>Eastern Indigo Snake <i>Drymarchon corais couperi</i></p> <p>No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/646">https://ecos.fws.gov/ecp/species/646</a></p>	Threatened
<p>Hawksbill Sea Turtle <i>Eretmochelys imbricata</i></p> <p>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/3656">https://ecos.fws.gov/ecp/species/3656</a></p>	Endangered
<p>Leatherback Sea Turtle <i>Dermochelys coriacea</i></p> <p>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/1493">https://ecos.fws.gov/ecp/species/1493</a></p>	Endangered
<p>Loggerhead Sea Turtle <i>Caretta caretta</i></p> <p>Population: Northwest Atlantic Ocean DPS</p> <p>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/1110">https://ecos.fws.gov/ecp/species/1110</a></p>	Threatened

## Fishes

NAME	STATUS
<p>Gulf Sturgeon <i>Acipenser oxyrinchus (=oxyrhynchus) desotoi</i></p> <p>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available.            Species profile: <a href="https://ecos.fws.gov/ecp/species/651">https://ecos.fws.gov/ecp/species/651</a></p>	Threatened

## Insects

NAME	STATUS
<p>Bartram's Hairstreak Butterfly <i>Strymon acis bartrami</i></p> <p>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available.            Species profile: <a href="https://ecos.fws.gov/ecp/species/4837">https://ecos.fws.gov/ecp/species/4837</a></p>	Endangered
<p>Florida Leafwing Butterfly <i>Anaea troglodyta floridalis</i></p> <p>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available.            Species profile: <a href="https://ecos.fws.gov/ecp/species/6652">https://ecos.fws.gov/ecp/species/6652</a></p>	Endangered
<p>Miami Blue Butterfly <i>Cyclargus (=Hemiargus) thomasi bethunebakeri</i></p> <p>No critical habitat has been designated for this species.            Species profile: <a href="https://ecos.fws.gov/ecp/species/3797">https://ecos.fws.gov/ecp/species/3797</a></p>	Endangered
<p>Monarch Butterfly <i>Danaus plexippus</i></p> <p>No critical habitat has been designated for this species.            Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a></p>	Candidate

## Flowering Plants

NAME	STATUS
Beach Jacquemontia <i>Jacquemontia reclinata</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1277">https://ecos.fws.gov/ecp/species/1277</a>	Endangered
Blodgett's Silverbush <i>Argythamnia blodgettii</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6823">https://ecos.fws.gov/ecp/species/6823</a>	Threatened
Cape Sable Thoroughwort <i>Chromolaena frustrata</i> Population: There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/4733">https://ecos.fws.gov/ecp/species/4733</a>	Endangered
Carter's Mustard <i>Warea carteri</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/5583">https://ecos.fws.gov/ecp/species/5583</a>	Endangered
Carter's Small-flowered Flax <i>Linum carteri carteri</i> Population: There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/7208">https://ecos.fws.gov/ecp/species/7208</a>	Endangered
Crenulate Lead-plant <i>Amorpha crenulata</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6470">https://ecos.fws.gov/ecp/species/6470</a>	Endangered
Deltoid Spurge <i>Chamaesyce deltoidea ssp. deltoidea</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/199">https://ecos.fws.gov/ecp/species/199</a>	Endangered
Everglades Bully <i>Sideroxylon reclinatum ssp. austrofloridense</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4735">https://ecos.fws.gov/ecp/species/4735</a>	Threatened
Florida Brickell-bush <i>Brickellia mosieri</i> Population: There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/956">https://ecos.fws.gov/ecp/species/956</a>	Endangered
Florida Pineland Crabgrass <i>Digitaria pauciflora</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/3728">https://ecos.fws.gov/ecp/species/3728</a>	Threatened
Florida Prairie-clover <i>Dalea carthagenensis floridana</i>	Endangered

NAME	STATUS
Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2300">https://ecos.fws.gov/ecp/species/2300</a>	
<b>Florida Semaphore Cactus <i>Consolea corallicola</i></b> Population: There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/4356">https://ecos.fws.gov/ecp/species/4356</a>	Endangered
<b>Garber's Spurge <i>Chamaesyce garberi</i></b> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8229">https://ecos.fws.gov/ecp/species/8229</a>	Threatened
<b>Pineland Sandmat <i>Chamaesyce deltoidea pinetorum</i></b> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1914">https://ecos.fws.gov/ecp/species/1914</a>	Threatened
<b>Sand Flax <i>Linum arenicola</i></b> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4313">https://ecos.fws.gov/ecp/species/4313</a>	Endangered
<b>Small's Milkpea <i>Galactia smallii</i></b> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/3360">https://ecos.fws.gov/ecp/species/3360</a>	Endangered
<b>Tiny Polygala <i>Polygala smallii</i></b> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/996">https://ecos.fws.gov/ecp/species/996</a>	Endangered

## Ferns and Allies

NAME	STATUS
<b>Florida Bristle Fern <i>Trichomanes punctatum ssp. floridanum</i></b> Population: There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/8739">https://ecos.fws.gov/ecp/species/8739</a>	Endangered

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

# **USFWS National Wildlife Refuge Lands And Fish Hatcheries**

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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# Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

- 
1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

**The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<b>American Kestrel <i>Falco sparverius paulus</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9587">https://ecos.fws.gov/ecp/species/9587</a>	Breeds Apr 1 to Aug 31
<b>Great Blue Heron <i>Ardea herodias occidentalis</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Jan 1 to Dec 31
<b>Lesser Yellowlegs <i>Tringa flavipes</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9679">https://ecos.fws.gov/ecp/species/9679</a>	Breeds elsewhere

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NAME	BREEDING SEASON
<b>Mangrove Cuckoo</b> <i>Coccyzus minor</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 20 to Aug 20
<b>Prairie Warbler</b> <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
<b>Swallow-tailed Kite</b> <i>Elanoides forficatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8938">https://ecos.fws.gov/ecp/species/8938</a>	Breeds Mar 10 to Jun 30
<b>White-crowned Pigeon</b> <i>Patagioenas leucocephala</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/4047">https://ecos.fws.gov/ecp/species/4047</a>	Breeds May 1 to Sep 30

## Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .



Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

## **Migratory Birds FAQ**

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and

how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

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If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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## Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED.  
PLEASE VISIT [HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML](https://www.fws.gov/wetlands/data/mapper.html) OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

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## **IPaC User Contact Information**

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# **Appendix B**

## **EPA EJScreen**

Section 508 Accessibility Note: If you need additional assistance, please email us at [engineering@nsf.gov](mailto:engineering@nsf.gov).

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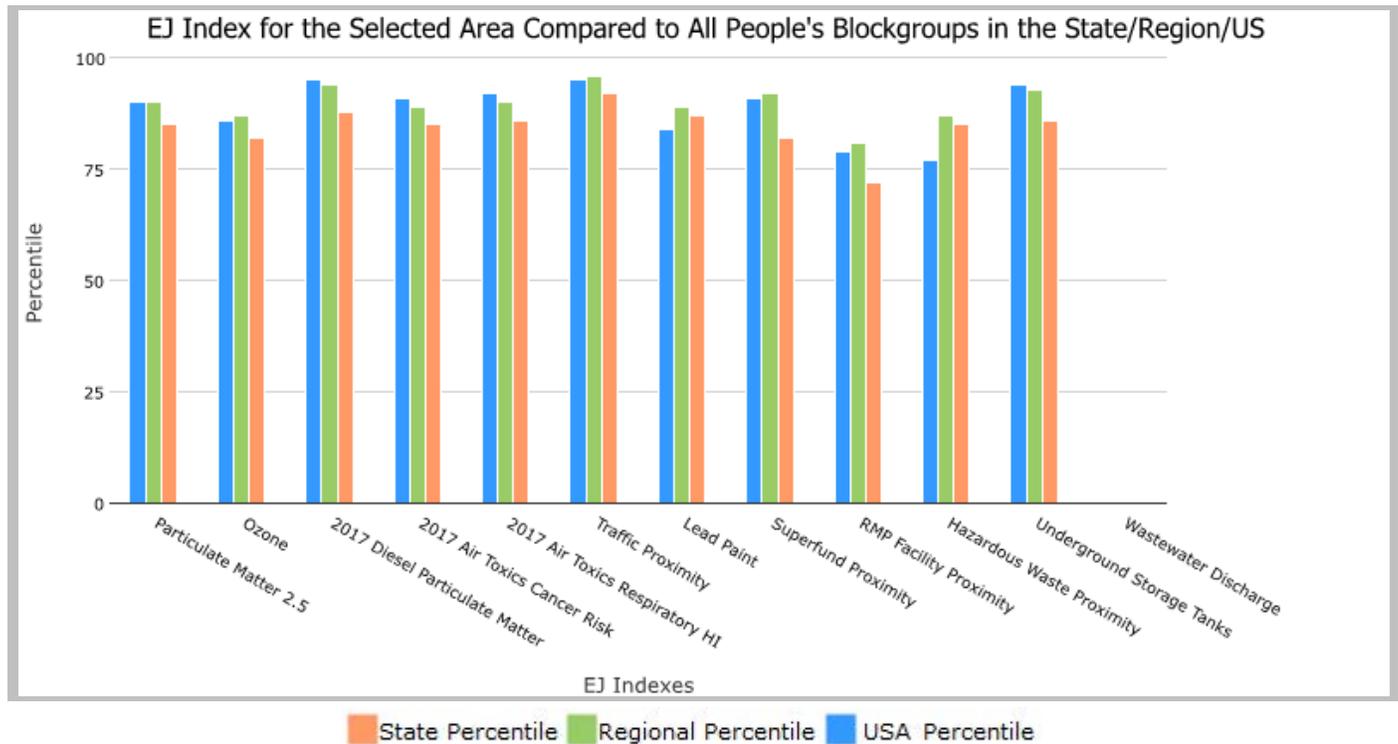
5 miles Ring Centered at 25.770011,-80.367742, FLORIDA, EPA Region 4

Approximate Population: 392,929

Input Area (sq. miles): 78.53

FIU Engineering Center (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
<b>Environmental Justice Indexes</b>			
EJ Index for Particulate Matter 2.5	85	90	90
EJ Index for Ozone	82	87	86
EJ Index for 2017 Diesel Particulate Matter*	88	94	95
EJ Index for 2017 Air Toxics Cancer Risk*	85	89	91
EJ Index for 2017 Air Toxics Respiratory HI*	86	90	92
EJ Index for Traffic Proximity	92	96	95
EJ Index for Lead Paint	87	89	84
EJ Index for Superfund Proximity	82	92	91
EJ Index for RMP Facility Proximity	72	81	79
EJ Index for Hazardous Waste Proximity	85	87	77
EJ Index for Underground Storage Tanks	86	93	94
EJ Index for Wastewater Discharge	N/A	N/A	N/A



This report shows the values for environmental and demographic indicators and EJSCEEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCEEN documentation for discussion of these issues before using reports.

# EJScreen Report (Version 2.0)

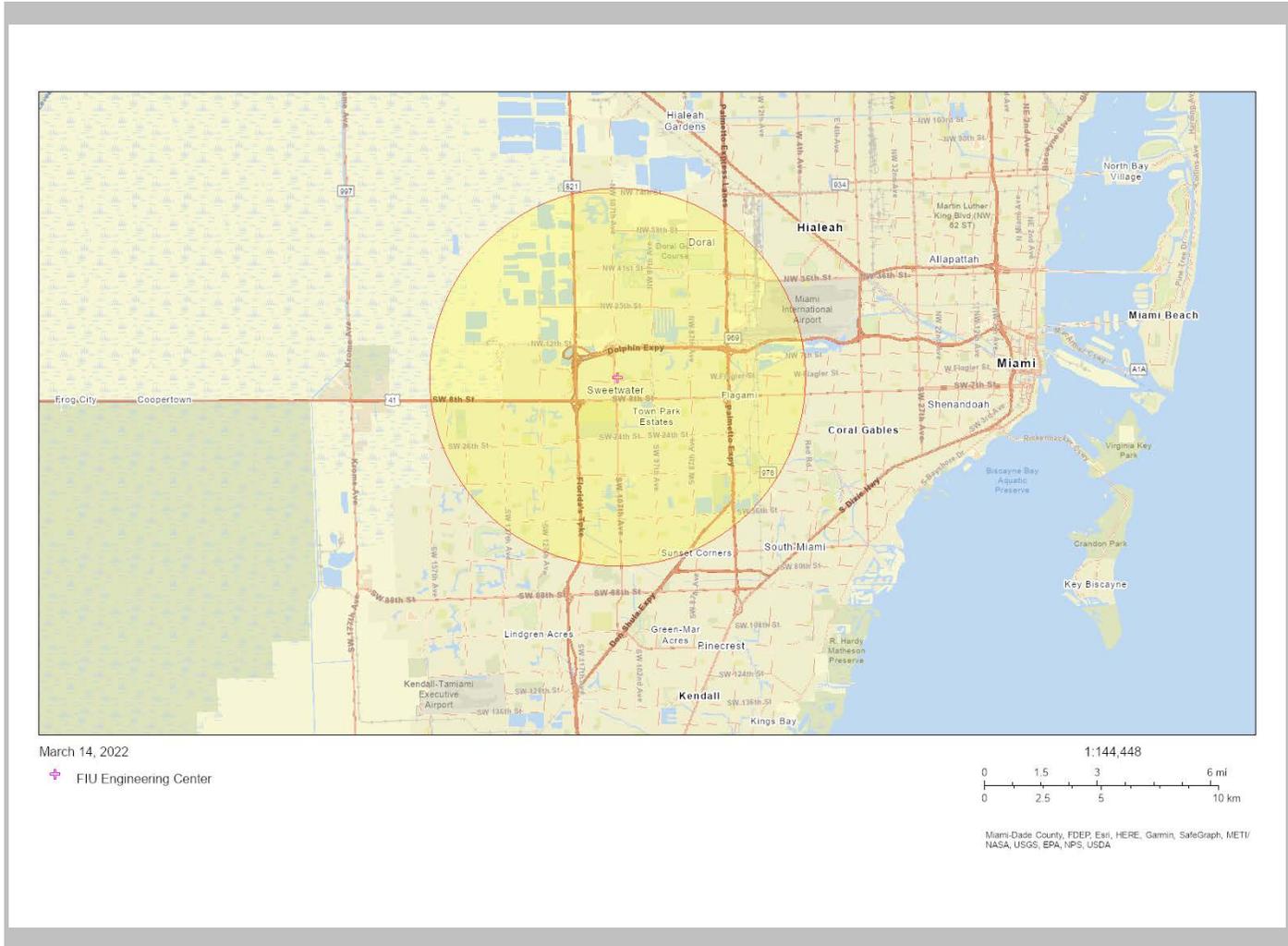


5 miles Ring Centered at 25.770011,-80.367742, FLORIDA, EPA Region 4

Approximate Population: 392,929

Input Area (sq. miles): 78.53

FIU Engineering Center (The study area contains 1 blockgroup(s) with zero population.)



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	2

## EJScreen Report (Version 2.0)



5 miles Ring Centered at 25.770011,-80.367742, FLORIDA, EPA Region 4

Approximate Population: 392,929

Input Area (sq. miles): 78.53

**FIU Engineering Center (The study area contains 1 blockgroup(s) with zero population.)**

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
<b>Pollution and Sources</b>							
Particulate Matter 2.5 ( $\mu\text{g}/\text{m}^3$ )	8.23	7.64	90	8.18	53	8.74	39
Ozone (ppb)	30	32.7	13	37.9	4	42.6	2
2017 Diesel Particulate Matter* ( $\mu\text{g}/\text{m}^3$ )	0.587	0.338	91	0.261	95-100th	0.295	90-95th
2017 Air Toxics Cancer Risk* (lifetime risk per million)	30	28	96	31	80-90th	29	80-90th
2017 Air Toxics Respiratory HI*	0.42	0.36	93	0.4	80-90th	0.36	80-90th
Traffic Proximity (daily traffic count/distance to road)	1500	630	90	430	94	710	88
Lead Paint (% Pre-1960 Housing)	0.17	0.11	77	0.15	70	0.28	49
Superfund Proximity (site count/km distance)	0.11	0.13	67	0.083	81	0.13	70
RMP Facility Proximity (facility count/km distance)	0.25	0.79	38	0.6	51	0.75	45
Hazardous Waste Proximity (facility count/km distance)	0.46	0.5	75	0.62	66	2.2	42
Underground Storage Tanks (count/km <sup>2</sup> )	8.3	6.2	75	3.5	88	3.9	86
Wastewater Discharge (toxicity-weighted concentration/m distance)	N/A	1	N/A	0.45	N/A	12	N/A
<b>Demographic Indicators</b>							
Demographic Index	64%	40%	83	37%	86	36%	85
People of Color	93%	46%	90	39%	93	40%	91
Low Income	36%	34%	58	35%	55	31%	64
Unemployment Rate	4%	6%	41	6%	42	5%	44
Linguistically Isolated	30%	7%	94	3%	97	5%	96
Less Than High School Education	18%	12%	78	13%	75	12%	77
Under Age 5	5%	5%	49	6%	44	6%	42
Over Age 64	19%	20%	60	17%	67	16%	69

\*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's 2017 Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

For additional information, see: [www.epa.gov/environmentaljustice](http://www.epa.gov/environmentaljustice)

EJScreen is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJScreen documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJScreen outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.



Location: User-specified point center at 25.770011, -80.367742  
 Ring (buffer): 5-miles radius  
 Description: FIU Engineering Center

Summary of ACS Estimates		2015 - 2019
Population		392,929
Population Density (per sq. mile)		5,645
People of Color Population		364,727
% People of Color Population		93%
Households		152,574
Housing Units		179,198
Housing Units Built Before 1950		5,631
Per Capita Income		26,715
Land Area (sq. miles) (Source: SF1)		69.60
% Land Area		94%
Water Area (sq. miles) (Source: SF1)		4.67
% Water Area		6%

	2015 - 2019 ACS Estimates	Percent	MOE (±)
<b>Population by Race</b>			
Total	392,929	100%	1,047
Population Reporting One Race	388,293	99%	2,549
White	365,349	93%	1,050
Black	9,497	2%	570
American Indian	351	0%	103
Asian	6,272	2%	301
Pacific Islander	30	0%	36
Some Other Race	6,794	2%	489
Population Reporting Two or More Races	4,635	1%	420
Total Hispanic Population	351,846	90%	1,050
Total Non-Hispanic Population	41,082		
White Alone	28,201	7%	413
Black Alone	5,530	1%	430
American Indian Alone	255	0%	103
Non-Hispanic Asian Alone	5,857	1%	301
Pacific Islander Alone	30	0%	36
Other Race Alone	208	0%	62
Two or More Races Alone	1,001	0%	267
<b>Population by Sex</b>			
Male	188,636	48%	960
Female	204,292	52%	644
<b>Population by Age</b>			
Age 0-4	19,466	5%	261
Age 0-17	67,707	17%	504
Age 18+	325,221	83%	681
Age 65+	73,120	19%	277

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race.

N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2015 - 2019

Location: User-specified point center at 25.770011, -80.367742

Ring (buffer): 5-miles radius

Description: FIU Engineering Center

	2015 - 2019 ACS Estimates	Percent	MOE (±)
<b>Population 25+ by Educational Attainment</b>			
Total	291,285	100%	849
Less than 9th Grade	23,832	8%	329
9th - 12th Grade, No Diploma	29,675	10%	585
High School Graduate	77,525	27%	380
Some College, No Degree	40,329	14%	399
Associate Degree	30,274	10%	347
Bachelor's Degree or more	89,649	31%	426
<b>Population Age 5+ Years by Ability to Speak English</b>			
Total	373,463	100%	972
Speak only English	37,086	10%	526
Non-English at Home <sup>1+2+3+4</sup>	336,376	90%	871
<sup>1</sup> Speak English "very well"	175,064	47%	750
<sup>2</sup> Speak English "well"	63,429	17%	447
<sup>3</sup> Speak English "not well"	58,897	16%	401
<sup>4</sup> Speak English "not at all"	38,986	10%	681
<sup>3+4</sup> Speak English "less than well"	97,883	26%	695
<sup>2+3+4</sup> Speak English "less than very well"	161,312	43%	721
<b>Linguistically Isolated Households*</b>			
Total	39,666	100%	231
Speak Spanish	39,073	99%	213
Speak Other Indo-European Languages	304	1%	88
Speak Asian-Pacific Island Languages	275	1%	42
Speak Other Languages	14	0%	19
<b>Households by Household Income</b>			
Household Income Base	152,574	100%	249
< \$15,000	19,826	13%	157
\$15,000 - \$25,000	15,314	10%	143
\$25,000 - \$50,000	33,680	22%	189
\$50,000 - \$75,000	27,886	18%	170
\$75,000 +	55,867	37%	335
<b>Occupied Housing Units by Tenure</b>			
Total	152,574	100%	249
Owner Occupied	74,952	49%	202
Renter Occupied	77,622	51%	240
<b>Employed Population Age 16+ Years</b>			
Total	333,803	100%	968
In Labor Force	204,126	61%	768
Civilian Unemployed in Labor Force	7,573	2%	199
Not In Labor Force	129,677	39%	968

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of anyrace.

N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)

\*Households in which no one 14 and over speaks English "very well" or speaks English only.

Location: User-specified point center at 25.770011, -80.367742

Ring (buffer): 5-miles radius

Description: FIU Engineering Center

	2015 - 2019 ACS Estimates	Percent	MOE (±)
<b>Population by Language Spoken at Home*</b>			
Total (persons age 5 and above)	377,660	100%	968
English	38,803	10%	711
Spanish	328,599	87%	935
French	937	0%	263
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	308	0%	75
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	4,155	1%	277
Chinese	1,617	0%	203
Japanese	N/A	N/A	N/A
Korean	219	0%	161
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	200	0%	67
Other Asian	852	0%	172
Tagalog	365	0%	103
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	636	0%	214
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	523	0%	271
Total Non-English	338,857	90%	1,201

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race.  
 N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2015 - 2019.  
 \*Population by Language Spoken at Home is available at the census tract summary level and up.

# Appendix C

## Environmental Data Resources Summary

Section 508 Accessibility Note: If you need additional assistance, please email us at [engineering@nsf.gov](mailto:engineering@nsf.gov).

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**FIU PDT**

10555 West Flagler Street  
Miami, FL 33172

Inquiry Number: 6931685.2s  
April 08, 2022

# EDR Summary Radius Map Report



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

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***Thank you for your business.***  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527-21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### TARGET PROPERTY INFORMATION

#### ADDRESS

10555 WEST FLAGLER STREET  
MIAMI, FL 33172

#### COORDINATES

Latitude (North): 25.7713890 - 25° 46' 17.00"  
Longitude (West): 80.3658330 - 80° 21' 56.99"  
Universal Transverse Mercator: Zone 17  
UTM X (Meters): 563590.2  
UTM Y (Meters): 2850358.5  
Elevation: 5 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: TP  
Source: U.S. Geological Survey

Target Property: NW  
Source: U.S. Geological Survey

### AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20151123  
Source: USDA

MAPPED SITES SUMMARY

Target Property Address:  
10555 WEST FLAGLER STREET  
MIAMI, FL 33172

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
<a href="#">A1</a>	HEMISPHERIC CENTER F	10555 W. FLAGLER STR	RCRA-VSQQ, PADS, FINDS		TP
<a href="#">A2</a>	HEMISPHERIC CENTER F	10555 W. FLAGLER STR	FTTS, HIST FTTS		TP
<a href="#">A3</a>	FIU - ENGINEERING CE	10555 W FLAGLER ST	ASBESTOS, TIER 2		TP
<a href="#">A4</a>	FLORIDA INTL UNIVERS	10555 W FLAGLER ST	UST, AST, FINDS, ECHO, Miami-Dade Co. GTO,...		TP
<a href="#">A5</a>	FLORIDA INTERNATIONA	10555 WEST FLAGLER S	TIER 2		TP
<a href="#">A6</a>	FIU SOLAR	10555 WEST FLAGLER S	FINDS		TP
<a href="#">Reg</a>	SWEETWATER E		BROWNFIELDS	Same	1 ft.
<a href="#">7</a>	FIU ENGINEERING CENT	10575 W FLAGLER ST	SWF/LF	Lower	1024, 0.194, SSW
<a href="#">B8</a>	SUNSHINE #54	10450 W FLAGLER ST	LUST, UST, Miami-Dade IW, DWM CONTAM, Enforcement,...	Lower	1102, 0.209, South
<a href="#">B9</a>	AMOCO SERVICE STATIO	10450 W FLAGLER ST	Miami-Dade Co. SPILL, RCRA NonGen / NLR	Lower	1102, 0.209, South
<a href="#">B10</a>	CLINICA DENTAL SWEET	10500 W FLAGLER ST	Miami-Dade IW	Lower	1112, 0.211, South
<a href="#">C11</a>	CEFERINO PADILLA, M.	10404 W FLAGLER ST (	Miami-Dade IW	Lower	1117, 0.212, South
<a href="#">C12</a>	LEAN KITCHEN CORP.	10404 W FLAGLER ST (	CLEANUP SITES, Miami-Dade Co. GTO, DWM CONTAM,...	Lower	1117, 0.212, South
<a href="#">C13</a>	TROPIC CLEANERS	10404 W FLAGLER ST	PRIORITYCLEANERS, RCRA NonGen / NLR, Miami-Dade...	Lower	1117, 0.212, South
<a href="#">C14</a>	MIAMI CARBAR TROPIC	10404 W FLAGLER ST (	Miami-Dade IW	Lower	1117, 0.212, South
<a href="#">C15</a>	ROLANDO SOMARRIBA, D	10404 W FLAGLER ST (	Miami-Dade IW	Lower	1117, 0.212, South
<a href="#">C16</a>	DR. HUGO SALGADO-LOV	10404 W FLAGLER ST (	Miami-Dade IW	Lower	1117, 0.212, South
<a href="#">D17</a>	GEORGES CLEANERS	10362 W FLAGLER ST	RCRA NonGen / NLR, FINDS, ECHO, Miami-Dade Co. AP,...	Lower	1118, 0.212, SSE
<a href="#">D18</a>	RAINBOW GROOMING & L	10360 W FLAGLER ST	Miami-Dade IW	Lower	1120, 0.212, SSE
<a href="#">D19</a>	UBA EXPRESS CARGO	10350 W FLAGLER ST	Miami-Dade IW	Lower	1131, 0.214, SSE
<a href="#">D20</a>	MELISSA MEDICAL CENT	10346 W FLAGLER ST	Miami-Dade IW	Lower	1136, 0.215, SSE
<a href="#">D21</a>	CLARKE MEDICAL SERVI	10344-46 W FLAGLER S	Miami-Dade IW	Lower	1139, 0.216, SSE
<a href="#">D22</a>	SPRINGER PHOTOGRAPHI	10338 W FLAGLER ST	Miami-Dade IW	Lower	1146, 0.217, SSE
<a href="#">D23</a>	ARTURO ESPINAL, M.D.	10326 W FLAGLER ST	Miami-Dade IW	Lower	1161, 0.220, SSE
<a href="#">D24</a>	BILTMORE DENTAL OFFI	10322 W FLAGLER ST	Miami-Dade IW	Lower	1167, 0.221, SSE
<a href="#">25</a>	ALEXANDER PAIN CLINI	80 NW 107 AVE	Miami-Dade IW	Higher	1300, 0.246, WSW
<a href="#">26</a>	DELAL, INC. (UNION 7	10690 W FLAGLER ST	LUST, UST, DWM CONTAM, Enforcement, Financial...	Lower	1455, 0.276, SW
<a href="#">27</a>	FONTAINEBLEAU MOBIL	10701 W FLAGLER ST	LUST, UST, Miami-Dade IW, DWM CONTAM, Enforcement,...	Higher	1493, 0.283, SW
<a href="#">E28</a>	FOUNTAINBLEAU CLEANE	10686 FONTAINEBLEAU	AIRS, CLEANUP SITES, DWM CONTAM	Higher	1895, 0.359, NW
<a href="#">E29</a>	OVERNITE TRANSPORTAT	NW 7TH ST & NW 106TH	LUST, TANKS, DWM CONTAM	Higher	1961, 0.371, NW
<a href="#">30</a>	FARM STORE #183	10198 W FLAGLER ST	LUST, UST, RCRA NonGen / NLR, FINDS, ECHO, DWM...	Lower	2000, 0.379, ESE
<a href="#">31</a>	MIAMI BEST CLEANERS	10686 NW 7TH ST	RCRA-VSQQ, PRIORITYCLEANERS, DRYCLEANERS, DWM...	Higher	2129, 0.403, NW

# EXECUTIVE SUMMARY

## TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
HEMISPHERIC CENTER F 10555 W. FLAGLER STR MIAMI, FL 33174	RCRA-VSQG EPA ID:: FLD984223883	FLD984223883
	PADS EPAID:: FLD984223883	
	FINDS Registry ID:: 110017861919	
HEMISPHERIC CENTER F 10555 W. FLAGLER STR MIAMI, FL 33174	FTTS Database: FTTS INSP, Date of Government Version: 04/09/2009	N/A
	HIST FTTS Database: HIST FTTS INSP, Date of Government Version: 10/19/2006	
FIU - ENGINEERING CE 10555 W FLAGLER ST MIAMI, FL 33174	ASBESTOS TIER 2 Facility Id: 6789334	N/A
FLORIDA INTL UNIVERS 10555 W FLAGLER ST MIAMI, FL 33174	UST Database: Miami-Dade Co. Tanks, Date of Government Version: 05/10/2020 Database: UST, Date of Government Version: 11/16/2021 Tank Status: B Facility-Site Id: 8839884 Facility Status: OPEN Permit Status: FACILITY NO LONGER NEEDS A PERMIT OR CLOSED Facility ID: 199909011843271	N/A
	AST Database: AST, Date of Government Version: 11/16/2021 Facility-Site Id: 8839884 Facility Status: OPEN Facility Status: OPEN	
	FINDS Registry ID:: 110007456500	
	ECHO Registry ID: 110007456500	
	Miami-Dade Co. GTO Facility Id: 1999030911443950 Permit Status: NOTIFIED OF PERMIT REQUIREMENT/IN PROCESS	
	Miami-Dade IW Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021 Permit Status: PERMIT ISSUED Facility ID: 199909112292590	
	Enforcement Database: Enforcement Miami-Dade, Date of Government Version: 11/22/2021	

## EXECUTIVE SUMMARY

Facility Status: Closed  
Folio Num: 3040050010230

Financial Assurance  
Database: Financial Assurance 3, Date of Government Version: 02/02/2022  
Facility Status: OPEN  
Facility ID: 8839884

NPDES  
Status: A  
Facility ID: FLR20DP98

FLORIDA INTERNATIONA  
10555 WEST FLAGLER S  
MIAMI, FL 33199

TIER 2  
Facility Id: 3990644  
Facility Id: 4114057  
Facility Id: 5394753  
Facility Id: 5007645  
Facility Id: 5860611  
*\*Additional key fields are available in the Map Findings section*

N/A

FIU SOLAR  
10555 WEST FLAGLER S  
MIAMI, FL 32174

FINDS  
Registry ID:: 110070397250

N/A

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property. Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

### STANDARD ENVIRONMENTAL RECORDS

#### ***Lists of state and tribal landfills and solid waste disposal facilities***

SWF/LF: A review of the SWF/LF list, as provided by EDR, has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
FIU ENGINEERING CENT Database: SWF/LF, Date of Government Version: 01/10/2022	10575 W FLAGLER ST	SSW 1/8 - 1/4 (0.194 mi.)	7	10

## EXECUTIVE SUMMARY

Facility-Site Id: 103978  
 Class Status: INACTIVE (I)

### ***Lists of state and tribal leaking storage tanks***

LUST: A review of the LUST list, as provided by EDR, and dated 11/03/2021 has revealed that there are 5 LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>FONTAINEBLEAU MOBIL</i></b> Discharge Cleanup Status: NFA - NFA COMPLETE Facility Status: OPEN Facility-Site Id: 8505259	<b><i>10701 W FLAGLER ST</i></b>	<b><i>SW 1/4 - 1/2 (0.283 mi.)</i></b>	<b><i>27</i></b>	<b><i>16</i></b>
<b><i>OVERNITE TRANSPORTAT</i></b> Discharge Cleanup Status: NFA - NFA COMPLETE Facility Status: CLOSED Facility-Site Id: 9807356	<b><i>NW 7TH ST &amp; NW 106TH</i></b>	<b><i>NW 1/4 - 1/2 (0.371 mi.)</i></b>	<b><i>E29</i></b>	<b><i>17</i></b>

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>SUNSHINE #54</i></b> Discharge Cleanup Status: NFA - NFA COMPLETE Discharge Cleanup Status: NREQ - CLEANUP NOT REQUIRED Facility Status: OPEN Facility-Site Id: 8503827	<b><i>10450 W FLAGLER ST</i></b>	<b><i>S 1/8 - 1/4 (0.209 mi.)</i></b>	<b><i>B8</i></b>	<b><i>10</i></b>
<b><i>DELAL, INC. (UNION 7</i></b> Discharge Cleanup Status: SRCR - SRCR COMPLETE Facility Status: CLOSED Facility-Site Id: 8841202	<b><i>10690 W FLAGLER ST</i></b>	<b><i>SW 1/4 - 1/2 (0.276 mi.)</i></b>	<b><i>26</i></b>	<b><i>15</i></b>
<b><i>FARM STORE #183</i></b> Discharge Cleanup Status: NFA - NFA COMPLETE Facility Status: OPEN Facility-Site Id: 8943655	<b><i>10198 W FLAGLER ST</i></b>	<b><i>ESE 1/4 - 1/2 (0.379 mi.)</i></b>	<b><i>30</i></b>	<b><i>18</i></b>

### ***Lists of state and tribal registered storage tanks***

UST: A review of the UST list, as provided by EDR, has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>SUNSHINE #54</i></b> Database: Miami-Dade Co. Tanks, Date of Government Version: 05/10/2020 Database: UST, Date of Government Version: 11/16/2021 Tank Status: B Tank Status: U Facility-Site Id: 8503827	<b><i>10450 W FLAGLER ST</i></b>	<b><i>S 1/8 - 1/4 (0.209 mi.)</i></b>	<b><i>B8</i></b>	<b><i>10</i></b>

## EXECUTIVE SUMMARY

Facility Status: OPEN  
Permit Status: FACILITY NO LONGER NEEDS A PERMIT OR CLOSED  
Facility ID: 8503827  
Facility ID: 199909011832494

### ***Lists of state and tribal brownfield sites***

BROWNFIELDS: A review of the BROWNFIELDS list, as provided by EDR, has revealed that there is 1 BROWNFIELDS site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
SWEETWATER E Database: BROWNFIELDS AREAS, Date of Government Version: 10/04/2021		0 - 1/8 (0.000 mi.)	0	10

### **ADDITIONAL ENVIRONMENTAL RECORDS**

#### ***Local Lists of Hazardous waste / Contaminated Sites***

PRIORITYCLEANERS: A review of the PRIORITYCLEANERS list, as provided by EDR, and dated 07/14/2021 has revealed that there are 2 PRIORITYCLEANERS sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>MIAMI BEST CLEANERS</b> Facility-Site Id: 9500298	<b>10686 NW 7TH ST</b>	<b>NW 1/4 - 1/2 (0.403 mi.)</b>	<b>31</b>	<b>19</b>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>TROPIC CLEANERS</b> Facility-Site Id: 9502139	<b>10404 W FLAGLER ST</b>	<b>S 1/8 - 1/4 (0.212 mi.)</b>	<b>C13</b>	<b>12</b>

#### ***Other Ascertainable Records***

RCRA NonGen / NLR: A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 02/28/2022 has revealed that there are 3 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>AMOCO SERVICE STATIO</b> EPA ID:: FLD984213579	<b>10450 W FLAGLER ST</b>	<b>S 1/8 - 1/4 (0.209 mi.)</b>	<b>B9</b>	<b>11</b>
<b>TROPIC CLEANERS</b>	<b>10404 W FLAGLER ST</b>	<b>S 1/8 - 1/4 (0.212 mi.)</b>	<b>C13</b>	<b>12</b>

## EXECUTIVE SUMMARY

EPA ID:: FLD981748627

**GEORGES CLEANERS**

**10362 W FLAGLER ST**

**SSE 1/8 - 1/4 (0.212 mi.) D17**

**13**

EPA ID:: FLD020557302

Miami-Dade IW: A review of the Miami-Dade IW list, as provided by EDR, has revealed that there are 15 Miami-Dade IW sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ALEXANDER PAIN CLINI Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021 Permit Status: PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID: 1999091113424150	80 NW 107 AVE	WSW 1/8 - 1/4 (0.246 mi.)	25	15
<b>Lower Elevation</b>	<b>Address</b>	<b>Direction / Distance</b>	<b>Map ID</b>	<b>Page</b>
<b>SUNSHINE #54</b> Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021 Permit Status: PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID: 1999091111234290	<b>10450 W FLAGLER ST</b>	<b>S 1/8 - 1/4 (0.209 mi.)</b>	<b>B8</b>	<b>10</b>
CLINICA DENTAL SWEET Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021 Permit Status: PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID: 2006030911551700	10500 W FLAGLER ST	S 1/8 - 1/4 (0.211 mi.)	B10	11
CEFERINO PADILLA, M. Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021 Permit Status: PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID: 1999091113152110	10404 W FLAGLER ST (	S 1/8 - 1/4 (0.212 mi.)	C11	11
MIAMI CARBAR TROPIC Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021 Permit Status: PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID: 1999091111303440	10404 W FLAGLER ST (	S 1/8 - 1/4 (0.212 mi.)	C14	13
ROLANDO SOMARRIBA, D Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021 Permit Status: PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID: 1999091113020110	10404 W FLAGLER ST (	S 1/8 - 1/4 (0.212 mi.)	C15	13
DR. HUGO SALGADO-LOV Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021 Permit Status: PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID: 1999091109530380	10404 W FLAGLER ST (	S 1/8 - 1/4 (0.212 mi.)	C16	13
<b>GEORGES CLEANERS</b> Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021 Permit Status: PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID: 1999091111273830	<b>10362 W FLAGLER ST</b>	<b>SSE 1/8 - 1/4 (0.212 mi.)</b>	<b>D17</b>	<b>13</b>
RAINBOW GROOMING & L Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021 Permit Status: PERMIT ISSUED Facility ID: 1999091109295960	10360 W FLAGLER ST	SSE 1/8 - 1/4 (0.212 mi.)	D18	14
UBA EXPRESS CARGO Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021	10350 W FLAGLER ST	SSE 1/8 - 1/4 (0.214 mi.)	D19	14

## EXECUTIVE SUMMARY

Permit Status: PERMIT ISSUED				
Facility ID: 2013011411165710				
MELISSA MEDICAL CENT	10346 W FLAGLER ST	SSE 1/8 - 1/4 (0.215 mi.)	D20	14
Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021				
Permit Status: PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN				
Facility ID: 2005072515084390				
CLARKE MEDICAL SERVI	10344-46 W FLAGLER S	SSE 1/8 - 1/4 (0.216 mi.)	D21	14
Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021				
Permit Status: PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN				
Facility ID: 2004041508493320				
SPRINGER PHOTOGRAPHI	10338 W FLAGLER ST	SSE 1/8 - 1/4 (0.217 mi.)	D22	15
Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021				
Permit Status: PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN				
Facility ID: 1999091112291760				
ARTURO ESPINAL, M.D.	10326 W FLAGLER ST	SSE 1/8 - 1/4 (0.220 mi.)	D23	15
Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021				
Permit Status: PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN				
Facility ID: 2005072515041580				
BILTMORE DENTAL OFFI	10322 W FLAGLER ST	SSE 1/8 - 1/4 (0.221 mi.)	D24	15
Database: Miami-Dade Co. IW5, Date of Government Version: 11/22/2021				
Permit Status: PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN				
Facility ID: 2005072515000670				

DRYCLEANERS: A review of the DRYCLEANERS list, as provided by EDR, and dated 10/18/2021 has revealed that there are 2 DRYCLEANERS sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>TROPIC CLEANERS</b>	<b>10404 W FLAGLER ST</b>	<b>S 1/8 - 1/4 (0.212 mi.)</b>	<b>C13</b>	<b>12</b>
Facility Status: CLOSED				
Facility-Site Id: 9502139				
<b>GEORGES CLEANERS</b>	<b>10362 W FLAGLER ST</b>	<b>SSE 1/8 - 1/4 (0.212 mi.)</b>	<b>D17</b>	<b>13</b>
Facility Status: CLOSED				
Facility-Site Id: 9500246				

DWM CONTAM: A review of the DWM CONTAM list, as provided by EDR, and dated 11/30/2021 has revealed that there are 9 DWM CONTAM sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>FONTAINEBLEAU MOBIL</b>	<b>10701 W FLAGLER ST</b>	<b>SW 1/4 - 1/2 (0.283 mi.)</b>	<b>27</b>	<b>16</b>
Program Site Id: 8505259				
<b>FOUNTAINBLEAU CLEANE</b>	<b>10686 FONTAINEBLEAU</b>	<b>NW 1/4 - 1/2 (0.359 mi.)</b>	<b>E28</b>	<b>17</b>
Program Site Id: ERIC_4314				
<b>OVERNITE TRANSPORTAT</b>	<b>NW 7TH ST &amp; NW 106TH</b>	<b>NW 1/4 - 1/2 (0.371 mi.)</b>	<b>E29</b>	<b>17</b>
Program Site Id: 9807356				
<b>MIAMI BEST CLEANERS</b>	<b>10686 NW 7TH ST</b>	<b>NW 1/4 - 1/2 (0.403 mi.)</b>	<b>31</b>	<b>19</b>

## EXECUTIVE SUMMARY

Program Site Id: ERIC\_14094

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>SUNSHINE #54</b> Program Site Id: 8503827	<b>10450 W FLAGLER ST</b>	<b>S 1/8 - 1/4 (0.209 mi.)</b>	<b>B8</b>	<b>10</b>
<b>LEAN KITCHEN CORP.</b> Program Site Id: ERIC_4412	<b>10404 W FLAGLER ST (</b>	<b>S 1/8 - 1/4 (0.212 mi.)</b>	<b>C12</b>	<b>12</b>
<b>TROPIC CLEANERS</b> Program Site Id: ERIC_14093	<b>10404 W FLAGLER ST</b>	<b>S 1/8 - 1/4 (0.212 mi.)</b>	<b>C13</b>	<b>12</b>
<b>DELAL, INC. (UNION 7</b> Program Site Id: 8841202	<b>10690 W FLAGLER ST</b>	<b>SW 1/4 - 1/2 (0.276 mi.)</b>	<b>26</b>	<b>15</b>
<b>FARM STORE #183</b> Program Site Id: 8943655	<b>10198 W FLAGLER ST</b>	<b>ESE 1/4 - 1/2 (0.379 mi.)</b>	<b>30</b>	<b>18</b>

RESP PARTY: A review of the RESP PARTY list, as provided by EDR, and dated 12/01/2021 has revealed that there are 2 RESP PARTY sites within approximately 0.5 miles of the target property.

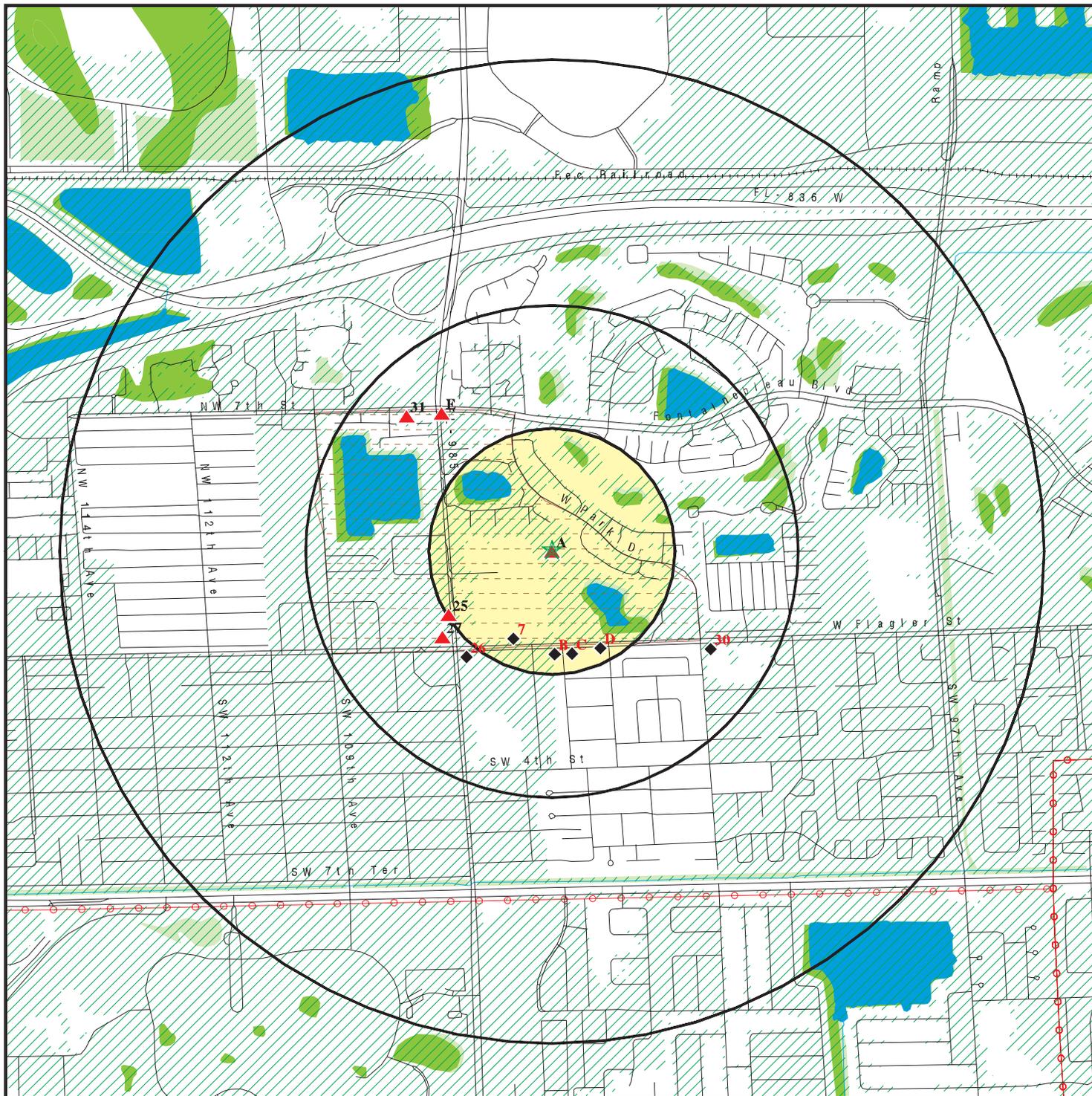
<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>MIAMI BEST CLEANERS</b> Site Status: CLOSED	<b>10686 NW 7TH ST</b>	<b>NW 1/4 - 1/2 (0.403 mi.)</b>	<b>31</b>	<b>19</b>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>TROPIC CLEANERS</b> Site Status: CLOSED	<b>10404 W FLAGLER ST</b>	<b>S 1/8 - 1/4 (0.212 mi.)</b>	<b>C13</b>	<b>12</b>

Count: 1 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
MIAMI	S113898922	FLORIDA INTERNATIONAL UNIVERSITY	UNIV PARK BLDG. W2	33199	SWF/LF

# OVERVIEW MAP - 6931685.2S



★ Target Property

▲ Sites at elevations higher than or equal to the target property

◆ Sites at elevations lower than the target property

▲ Manufactured Gas Plants

■ National Priority List Sites

■ Dept. Defense Sites

■ Indian Reservations BIA

■ FL Brownfield

■ Power transmission lines

■ Special Flood Hazard Area (1%)

■ 0.2% Annual Chance Flood Hazard

■ National Wetland Inventory

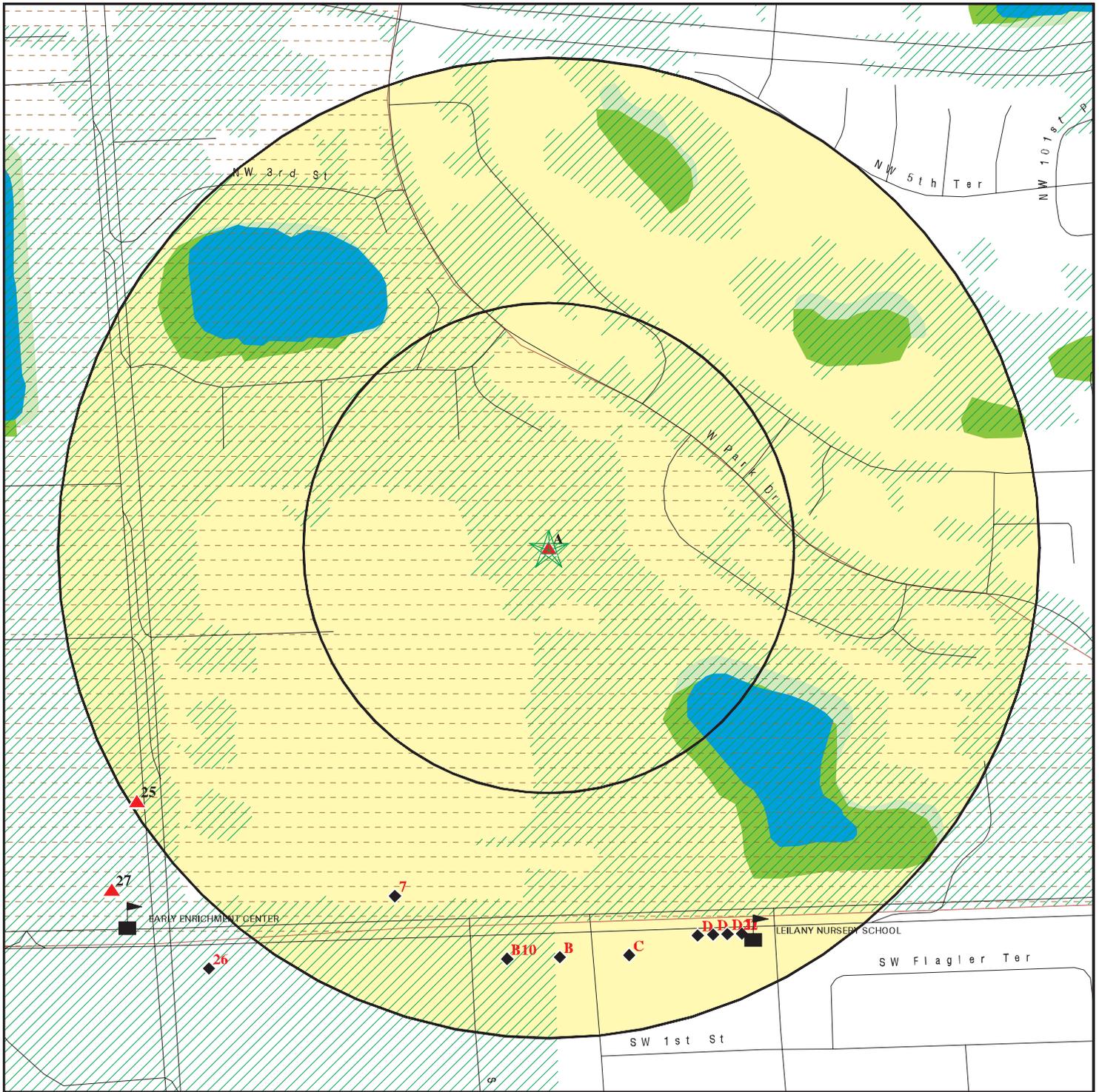
■ State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: FIU PDT  
 ADDRESS: 10555 West Flagler Street  
 Miami FL 33172  
 LAT/LONG: 25.771389 / 80.365833

CLIENT: Jacobs  
 CONTACT: Christina Mcdonough  
 INQUIRY #: 6931685.2s  
 DATE: April 08, 2022 9:33 am

# DETAIL MAP - 6931685.2S



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ⚡ Manufactured Gas Plants
- ⚠ Sensitive Receptors
- 🏠 National Priority List Sites
- 🏢 Dept. Defense Sites

- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- FL Brownfield

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

<p>SITE NAME: FIU PDT          ADDRESS: 10555 West Flagler Street          Miami FL 33172          LAT/LONG: 25.771389 / 80.365833</p>	<p>CLIENT: Jacobs          CONTACT: Christina Mcdonough          INQUIRY #: 6931685.2s          DATE: April 08, 2022 9:34 am</p>
--	--

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b>STANDARD ENVIRONMENTAL RECORDS</b>								
<b><i>Lists of Federal NPL (Superfund) sites</i></b>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<b><i>Lists of Federal Delisted NPL sites</i></b>								
Delisted NPL	1.000		0	0	0	0	NR	0
<b><i>Lists of Federal sites subject to CERCLA removals and CERCLA orders</i></b>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<b><i>Lists of Federal CERCLA sites with NFRAP</i></b>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<b><i>Lists of Federal RCRA facilities undergoing Corrective Action</i></b>								
CORRACTS	1.000		0	0	0	0	NR	0
<b><i>Lists of Federal RCRA TSD facilities</i></b>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<b><i>Lists of Federal RCRA generators</i></b>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250	1	0	0	NR	NR	NR	1
<b><i>Federal institutional controls / engineering controls registries</i></b>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
<b><i>Federal ERNS list</i></b>								
ERNS	TP		NR	NR	NR	NR	NR	0
<b><i>Lists of state- and tribal hazardous waste facilities</i></b>								
SHWS	1.000		0	0	0	0	NR	0
<b><i>Lists of state and tribal landfills and solid waste disposal facilities</i></b>								
SWF/LF	0.500		0	1	0	NR	NR	1
<b><i>Lists of state and tribal leaking storage tanks</i></b>								
LUST	0.500		0	1	4	NR	NR	5

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LAST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
<b><i>Lists of state and tribal registered storage tanks</i></b>								
FF TANKS	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250	1	0	1	NR	NR	NR	2
AST	0.250	1	0	0	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
TANKS	0.250		0	0	NR	NR	NR	0
<b><i>State and tribal institutional control / engineering control registries</i></b>								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
<b><i>Lists of state and tribal voluntary cleanup sites</i></b>								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
<b><i>Lists of state and tribal brownfield sites</i></b>								
BROWNFIELDS	0.500		1	0	0	NR	NR	1
<b><u>ADDITIONAL ENVIRONMENTAL RECORDS</u></b>								
<b><i>Local Brownfield lists</i></b>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<b><i>Local Lists of Landfill / Solid Waste Disposal Sites</i></b>								
SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
<b><i>Local Lists of Hazardous waste / Contaminated Sites</i></b>								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
PRIORITYCLEANERS	0.500		0	1	1	NR	NR	2
FI Sites	1.000		0	0	0	0	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
AQUEOUS FOAM	TP		NR	NR	NR	NR	NR	0
<b><i>Local Land Records</i></b>								
LIENS 2	TP		NR	NR	NR	NR	NR	0
<b><i>Records of Emergency Release Reports</i></b>								
HMIRS	TP		NR	NR	NR	NR	NR	0

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SPILLS	TP		NR	NR	NR	NR	NR	0
Miami-Dade Co. SPILL	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
SPILLS 80	TP		NR	NR	NR	NR	NR	0
<b>Other Ascertainable Records</b>								
RCRA NonGen / NLR	0.250		0	3	NR	NR	NR	3
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP	1	NR	NR	NR	NR	NR	1
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP	1	NR	NR	NR	NR	NR	1
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP	1	NR	NR	NR	NR	NR	1
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP	3	NR	NR	NR	NR	NR	3
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP	1	NR	NR	NR	NR	NR	1
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
ASBESTOS	TP	1	NR	NR	NR	NR	NR	1
CLEANUP SITES	TP		NR	NR	NR	NR	NR	0
Miami-Dade Co. AP	TP		NR	NR	NR	NR	NR	0
Miami-Dade Co. GTO	TP	1	NR	NR	NR	NR	NR	1
Miami-Dade Co. MOP	TP		NR	NR	NR	NR	NR	0
Miami-Dade Co. MRE	TP		NR	NR	NR	NR	NR	0
Miami-Dade Co. HWS	0.250		0	0	NR	NR	NR	0



MAP FINDINGS

Map ID Direction Distance Elevation		Database(s)	EDR ID Number EPA ID Number
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<b>A1</b>	<b>HEMISPHERIC CENTER FOR ENVIRONMENTAL</b>	<b>RCRA-VSQG</b>	<b>1015757387</b>
Target	<b>10555 W. FLAGLER STREET</b>	<b>PADS</b>	<b>FLD984223883</b>
Property	<b>MIAMI, FL 33174</b>	<b>FINDS</b>	

[Click here for full text details](#)

**Actual:**  
5 ft.

**RCRA-VSQG**  
EPA Id FLD984223883

**PADS**  
EPAID: FLD984223883

**FINDS**  
Registry ID: 110017861919

<b>A2</b>	<b>HEMISPHERIC CENTER FOR ENVIRONMENTAL</b>	<b>FTTS</b>	<b>1007464504</b>
Target	<b>10555 W. FLAGLER STREET</b>	<b>HIST FTTS</b>	<b>N/A</b>
Property	<b>MIAMI, FL 33174</b>		

[Click here for full text details](#)

**Actual:**  
5 ft.

<b>A3</b>	<b>FIU - ENGINEERING CENTER</b>	<b>ASBESTOS</b>	<b>S121149733</b>
Target	<b>10555 W FLAGLER ST</b>	<b>TIER 2</b>	<b>N/A</b>
Property	<b>MIAMI, FL 33174</b>		

[Click here for full text details](#)

**Actual:**  
5 ft.

**TIER 2**  
Facility Id 6789334

<b>A4</b>	<b>FLORIDA INTL UNIVERSITY CEAS</b>	<b>UST</b>	<b>1000993922</b>
Target	<b>10555 W FLAGLER ST</b>	<b>AST</b>	<b>N/A</b>
Property	<b>MIAMI, FL 33174</b>	<b>FINDS</b>	

[Click here for full text details](#)

**Actual:**  
5 ft.

**ECHO**  
**Miami-Dade Co. GTO**  
**Miami-Dade IW**  
**Enforcement**  
**Financial Assurance**  
**NPDES**

**UST**  
Facility Status OPEN  
Facility-Site Id 8839884  
Facility ID 199909011843271  
Permit Status FACILITY NO LONGER NEEDS A PERMIT OR CLOSED

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**AST**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FLORIDA INTL UNIVERSITY CEAS (Continued)**

1000993922

Facility Status OPEN  
Facility-Site Id 8839884  
Facility Status OPEN

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**FINDS**

Registry ID: 110007456500

**ECHO**

Registry ID 110007456500

**Miami-Dade Co. GTO**

Facility Id 1999030911443950  
Permit Status NOTIFIED OF PERMIT REQUIREMENT/IN PROCESS

**Miami-Dade IW**

Permit Status PERMIT ISSUED  
Facility ID 1999091112292590

**Enforcement**

Facility Status Closed  
Folio Num 3040050010230

**Financial Assurance**

Facility Status OPEN  
Facility ID 8839884

**NPDES**

Facility ID FLR20DP98  
Status A

A5  
Target  
Property

**FLORIDA INTERNATIONAL UNIVERSITY - ENGINEERING CAM**  
**10555 WEST FLAGLER STREET**  
**MIAMI, FL 33199**

TIER 2 S107718428  
N/A

Actual:  
5 ft.

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**TIER 2**

Facility Id 3990644  
Facility Id 4114057  
Facility Id 5394753  
Facility Id 5007645  
Facility Id 5860611  
Facility Id 4554652

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
--	------	-------------	--------------------------------

<b>A6</b> Target Property	<b>FIU SOLAR</b> <b>10555 WEST FLAGLER STREET</b> <b>MIAMI, FL 32174</b>	<b>FINDS</b>	<b>1024608889</b> <b>N/A</b>
---------------------------------	--	--------------	---------------------------------

**Actual:**  
**5 ft.**

[Click here for full text details](#)

**FINDS**  
Registry ID: 110070397250

---

<b>&lt; 1/8</b> <b>1 ft.</b>	<b>SWEETWATER E</b> <b>SWEETWATER, FL</b>	<b>BROWNFIELDS</b>	<b>S109332440</b> <b>N/A</b>
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[Click here for full text details](#)

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<b>7</b> <b>SSW</b> <b>1/8-1/4</b> <b>0.194 mi.</b> <b>1024 ft.</b>	<b>FIU ENGINEERING CENTER</b> <b>10575 W FLAGLER ST</b> <b>MIAMI, FL 33174</b>	<b>SWF/LF</b>	<b>S120835014</b> <b>N/A</b>
---	--	---------------	---------------------------------

**Relative:**  
**Lower**

[Click here for full text details](#)

**SWF/LF**  
Facility-Site Id 103978  
Class Status INACTIVE (I)

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<b>B8</b> <b>South</b> <b>1/8-1/4</b> <b>0.209 mi.</b> <b>1102 ft.</b>	<b>SUNSHINE #54</b> <b>10450 W FLAGLER ST</b> <b>MIAMI, FL 33174</b>	<b>LUST</b> <b>UST</b> <b>Miami-Dade IW</b> <b>DWM CONTAM</b> <b>Enforcement</b> <b>Financial Assurance</b>	<b>U003741213</b> <b>N/A</b>
--	--	--	---------------------------------

**Relative:**  
**Lower**

[Click here for full text details](#)

**LUST**  
Facility Status OPEN  
Facility-Site Id 8503827  
Discharge Cleanup Status NFA - NFA COMPLETE  
Discharge Cleanup Status NREQ - CLEANUP NOT REQUIRED

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**UST**  
Facility Status OPEN  
Facility-Site Id 8503827  
Facility ID 8503827  
Facility ID 199909011832494  
Permit Status FACILITY NO LONGER NEEDS A PERMIT OR CLOSED

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**Miami-Dade IW**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SUNSHINE #54 (Continued)**

U003741213

Permit Status PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN  
Facility ID 199909111234290

**DWM CONTAM**

Program Site Id 8503827

**Enforcement**

Facility Status Closed  
Folio Num 2540050030040

**Financial Assurance**

Facility Status OPEN  
Facility ID 8503827

B9  
South  
1/8-1/4  
0.209 mi.  
1102 ft.

**AMOCO SERVICE STATION #4372**  
10450 W FLAGLER ST  
MIAMI, FL 33174

Miami-Dade Co. SPILL 1000702894  
RCRA NonGen / NLR FLD984213579

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Relative:  
Lower

Miami-Dade Co. SPILL  
Facility ID 000582

RCRA NonGen / NLR  
EPA Id FLD984213579

B10  
South  
1/8-1/4  
0.211 mi.  
1112 ft.

**CLINICA DENTAL SWEETWATER-CARLOS M.CARDENAS D.D.S.**  
10500 W FLAGLER ST  
SWEETWATER, FL 33174

Miami-Dade IW S107796426  
N/A

[Click here for full text details](#)

Relative:  
Lower

Miami-Dade IW  
Permit Status PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN  
Facility ID 2006030911551700

C11  
South  
1/8-1/4  
0.212 mi.  
1117 ft.

**CEFERINO PADILLA, M.D.**  
10404 W FLAGLER ST (BAY 15)  
MIAMI, FL 33174

Miami-Dade IW S104290160  
N/A

[Click here for full text details](#)

Relative:  
Lower

Miami-Dade IW  
Permit Status PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN  
Facility ID 1999091113152110

MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

**C12**  
South  
1/8-1/4  
0.212 mi.  
1117 ft.

**LEAN KITCHEN CORP.**  
10404 W FLAGLER ST (#19)  
SWEETWATER, FL 33174

**CLEANUP SITES**  
Miami-Dade Co. GTO  
DWM CONTAM  
Enforcement

**S104246956**  
N/A

[Click here for full text details](#)

Relative:  
Lower

**CLEANUP SITES**  
DEP Cleanup Site Key 69327740

**Miami-Dade Co. GTO**  
Facility Id 1999030910243540  
Permit Status NOTIFIED OF PERMIT REQUIREMENT/IN PROCESS

**DWM CONTAM**  
Program Site Id ERIC\_4412

**Enforcement**  
Facility Status Closed  
Folio Num 2540050450010

**C13**  
South  
1/8-1/4  
0.212 mi.  
1117 ft.

**TROPIC CLEANERS**  
10404 W FLAGLER ST  
MIAMI, FL 33174

**PRIORITYCLEANERS**  
RCRA NonGen / NLR  
Miami-Dade Co. GTO  
DRYCLEANERS  
DWM CONTAM  
RESP PARTY

**1000299007**  
FLD981748627

[Click here for full text details](#)

Relative:  
Lower

**PRIORITYCLEANERS**  
Facility-Site Id 9502139

**RCRA NonGen / NLR**  
EPA Id FLD981748627

**Miami-Dade Co. GTO**  
Facility Id 1999030910235550  
Permit Status NOTIFIED OF PERMIT REQUIREMENT/IN PROCESS

**DRYCLEANERS**  
Facility-Site Id 9502139  
Facility Status CLOSED

**DWM CONTAM**  
Program Site Id ERIC\_14093

**RESP PARTY**  
Site Status CLOSED

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
C14 South 1/8-1/4 0.212 mi. 1117 ft.	<b>MIAMI CARBAR TROPIC CLEANERS</b> 10404 W FLAGLER ST (BAY 1-2) MIAMI, FL 33174  <a href="#">Click here for full text details</a>	Miami-Dade IW	S104285962 N/A
Relative: Lower	<b>Miami-Dade IW</b> Permit Status PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID 1999091111303440		
C15 South 1/8-1/4 0.212 mi. 1117 ft.	<b>ROLANDO SOMARRIBA, DDS</b> 10404 W FLAGLER ST (BAY 8) MIAMI, FL 33174  <a href="#">Click here for full text details</a>	Miami-Dade IW	S104289177 N/A
Relative: Lower	<b>Miami-Dade IW</b> Permit Status PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID 1999091113020110		
C16 South 1/8-1/4 0.212 mi. 1117 ft.	<b>DR. HUGO SALGADO-LOVO, M.D.</b> 10404 W FLAGLER ST (BAY 13) MIAMI, FL 33174  <a href="#">Click here for full text details</a>	Miami-Dade IW	S104290159 N/A
Relative: Lower	<b>Miami-Dade IW</b> Permit Status PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID 1999091109530380		
D17 SSE 1/8-1/4 0.212 mi. 1118 ft.	<b>GEORGES CLEANERS</b> 10362 W FLAGLER ST MIAMI, FL 33174  <a href="#">Click here for full text details</a>	RCRA NonGen / NLR FINDS ECHO Miami-Dade Co. AP Miami-Dade IW DRYCLEANERS	1000357385 FLD020557302
Relative: Lower	<b>RCRA NonGen / NLR</b> EPA Id FLD020557302  <b>FINDS</b> Registry ID: 110008322877  <b>ECHO</b> Registry ID 110008322877  <b>Miami-Dade Co. AP</b> Permit Status PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility Id 1999042113291020  <b>Miami-Dade IW</b>		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
	<b>GEORGES CLEANERS (Continued)</b> Permit Status PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID 199909111273830		<b>1000357385</b>
	<b>DRYCLEANERS</b> Facility-Site Id 9500246 Facility Status CLOSED		
<b>D18</b> <b>SSE</b> 1/8-1/4 0.212 mi. 1120 ft.	<b>RAINBOW GROOMING &amp; LAY'S PET SHOP, INC.</b> 10360 W FLAGLER ST SWEETWATER, FL 33174  <a href="#">Click here for full text details</a>	<b>Miami-Dade IW</b>	<b>S103446888</b> N/A
<b>Relative:</b> <b>Lower</b>	<b>Miami-Dade IW</b> Permit Status PERMIT ISSUED Facility ID 1999091109295960		
<b>D19</b> <b>SSE</b> 1/8-1/4 0.214 mi. 1131 ft.	<b>UBA EXPRESS CARGO</b> 10350 W FLAGLER ST MIAMI, FL 33174  <a href="#">Click here for full text details</a>	<b>Miami-Dade IW</b>	<b>S117357209</b> N/A
<b>Relative:</b> <b>Lower</b>	<b>Miami-Dade IW</b> Permit Status PERMIT ISSUED Facility ID 2013011411165710		
<b>D20</b> <b>SSE</b> 1/8-1/4 0.215 mi. 1136 ft.	<b>MELISSA MEDICAL CENTER CORP.</b> 10346 W FLAGLER ST MIAMI, FL 33174  <a href="#">Click here for full text details</a>	<b>Miami-Dade IW</b>	<b>S107549912</b> N/A
<b>Relative:</b> <b>Lower</b>	<b>Miami-Dade IW</b> Permit Status PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID 2005072515084390		
<b>D21</b> <b>SSE</b> 1/8-1/4 0.216 mi. 1139 ft.	<b>CLARKE MEDICAL SERVICES, INC.</b> 10344-46 W FLAGLER ST MIAMI, FL 33174  <a href="#">Click here for full text details</a>	<b>Miami-Dade IW</b>	<b>S106911676</b> N/A
<b>Relative:</b> <b>Lower</b>	<b>Miami-Dade IW</b> Permit Status PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID 2004041508493320		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
D22 SSE 1/8-1/4 0.217 mi. 1146 ft.	<b>SPRINGER PHOTOGRAPHIC</b> 10338 W FLAGLER ST MIAMI, FL 33174  <a href="#">Click here for full text details</a>	Miami-Dade IW	S104288438 N/A
Relative: Lower	<b>Miami-Dade IW</b> Permit Status PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID 1999091112291760		
D23 SSE 1/8-1/4 0.220 mi. 1161 ft.	<b>ARTURO ESPINAL, M.D.</b> 10326 W FLAGLER ST MIAMI, FL 33174  <a href="#">Click here for full text details</a>	Miami-Dade IW	S107549844 N/A
Relative: Lower	<b>Miami-Dade IW</b> Permit Status PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID 2005072515041580		
D24 SSE 1/8-1/4 0.221 mi. 1167 ft.	<b>BILTMORE DENTAL OFFICE</b> 10322 W FLAGLER ST SWEETWATER, FL 33174  <a href="#">Click here for full text details</a>	Miami-Dade IW	S107549918 N/A
Relative: Lower	<b>Miami-Dade IW</b> Permit Status PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID 2005072515000670		
25 WSW 1/8-1/4 0.246 mi. 1300 ft.	<b>ALEXANDER PAIN CLINIC</b> 80 NW 107 AVE MIAMI, FL 33174  <a href="#">Click here for full text details</a>	Miami-Dade IW	S104290407 N/A
Relative: Higher	<b>Miami-Dade IW</b> Permit Status PERMIT NO LONGER NEEDED/CLOSED/WITHDRAWN Facility ID 1999091113424150		
26 SW 1/4-1/2 0.276 mi. 1455 ft.	<b>DELAL, INC. (UNION 76-FLAGLER)</b> 10690 W FLAGLER ST MIAMI, FL 33174  <a href="#">Click here for full text details</a>	LUST UST DWM CONTAM Enforcement Financial Assurance	U003742313 N/A
Relative: Lower	<b>LUST</b> Facility Status CLOSED Facility-Site Id 8841202 Discharge Cleanup Status SRCR - SRCR COMPLETE		

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**DELAL, INC. (UNION 76-FLAGLER) (Continued)**

U003742313

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**UST**

Facility Status CLOSED  
Facility-Site Id 8841202  
Facility ID 199909011841495  
Permit Status FACILITY NO LONGER NEEDS A PERMIT OR CLOSED

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**DWM CONTAM**

Program Site Id 8841202

**Enforcement**

Facility Status Closed  
Folio Num 2540050010450

**Financial Assurance**

Facility Status CLOSED  
Facility ID 8841202

27  
SW  
1/4-1/2  
0.283 mi.  
1493 ft.

**FONTAINEBLEAU MOBIL**  
10701 W FLAGLER ST  
MIAMI, FL 33174

[Click here for full text details](#)

Relative:  
Higher

**LUST** U003743620  
**UST** N/A  
Miami-Dade IW  
DWM CONTAM  
Enforcement  
Financial Assurance

**LUST**

Facility Status OPEN  
Facility-Site Id 8505259  
Discharge Cleanup Status NFA - NFA COMPLETE

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**UST**

Facility Status OPEN  
Facility-Site Id 8505259  
Facility ID 199909011835284  
Permit Status FACILITY NO LONGER NEEDS A PERMIT OR CLOSED

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**Miami-Dade IW**

Permit Status PERMIT ISSUED  
Facility ID 1999091109582610

**DWM CONTAM**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FONTAINEBLEAU MOBIL (Continued)**

U003743620

Program Site Id 8505259

**Enforcement**

Facility Status Closed  
Folio Num 3040060270030

**Financial Assurance**

Facility Status OPEN  
Facility ID 8505259

E28  
NW  
1/4-1/2  
0.359 mi.  
1895 ft.

**FOUNTAINBLEAU CLEANERS INC**  
10686 FONTAINEBLEAU BLVD  
MIAMI, FL 33172

AIRES  
CLEANUP SITES  
DWM CONTAM

S118559880  
N/A

[Click here for full text details](#)

Relative:  
Higher

**AIRES**

Facility Id 250867  
Facility Status A

**CLEANUP SITES**

DEP Cleanup Site Key 69327470

**DWM CONTAM**

Program Site Id ERIC\_4314

E29  
NW  
1/4-1/2  
0.371 mi.  
1961 ft.

**OVERNITE TRANSPORTATION TRUCK ACCIDENT**  
NW 7TH ST & NW 106TH AVE  
MIAMI, FL 33172

LUST  
TANKS  
DWM CONTAM

U004010072  
N/A

[Click here for full text details](#)

Relative:  
Higher

**LUST**

Facility Status CLOSED  
Facility-Site Id 9807356  
Discharge Cleanup Status NFA - NFA COMPLETE

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**TANKS**

Facility Status CLOSED  
Facility ID 9807356

**DWM CONTAM**

Program Site Id 9807356

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

30  
ESE  
1/4-1/2  
0.379 mi.  
2000 ft.

FARM STORE #183  
10198 W FLAGLER ST  
MIAMI, FL 33174

[Click here for full text details](#)

Relative:  
Lower

LUST 1000701486  
UST FLD984185116  
RCRA NonGen / NLR  
FINDS  
ECHO  
DWM CONTAM  
Enforcement  
Financial Assurance

**LUST**

Facility Status OPEN  
Facility-Site Id 8943655  
Discharge Cleanup Status NFA - NFA COMPLETE

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**UST**

Facility Status OPEN  
Facility-Site Id 8943655  
Facility ID 199909011843225  
Permit Status FACILITY NO LONGER NEEDS A PERMIT OR CLOSED

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**RCRA NonGen / NLR**

EPA Id FLD984185116

**FINDS**

Registry ID: 110007440698

**ECHO**

Registry ID 110007440698

**DWM CONTAM**

Program Site Id 8943655

**Enforcement**

Facility Status Closed  
Folio Num 3040050480020

**Financial Assurance**

Facility Status OPEN  
Facility ID 8943655

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

31  
NW  
1/4-1/2  
0.403 mi.  
2129 ft.

**MIAMI BEST CLEANERS**  
10686 NW 7TH ST  
MIAMI, FL 33172

[Click here for full text details](#)

Relative:  
Higher

**RCRA-VSQG**  
EPA Id FLD981758352

**PRIORITYCLEANERS**  
Facility-Site Id 9500298

**DRYCLEANERS**  
Facility-Site Id 9500298  
Facility Status OPEN

**DWM CONTAM**  
Program Site Id ERIC\_14094

**RESP PARTY**  
Site Status CLOSED

**RCRA-VSQG** 1000395770  
**PRIORITYCLEANERS** FLD981758352  
**DRYCLEANERS**  
**DWM CONTAM**  
**RESP PARTY**

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
FL	AIRS	Permitted Facilities Listing	Department of Environmental Protection	01/26/2021	01/28/2021	02/03/2021
FL	AQUEOUS FOAM	Former Fire Training Facility Assessments Listing	Department of Environmental Protection	06/03/2021	06/09/2021	10/28/2021
FL	ASBESTOS	Asbestos Notification Listing	Department of Environmental Protection	11/11/2021	11/12/2021	01/31/2022
FL	AST	Storage Tank Facility Information	Department of Environmental Protection	11/16/2021	11/16/2021	02/04/2022
FL	BROWNFIELDS	Brownfields Sites Database	Department of Environmental Protection	10/27/2021	12/21/2021	03/09/2022
FL	BROWNFIELDS AREAS	Brownfields Areas Database	Department of Environmental Protection	10/04/2021	12/21/2021	03/09/2022
FL	BSRA	Brownfield Site Rehabilitation Agreements Listing	Department of Environmental Protection	04/23/2021	06/24/2021	09/21/2021
FL	CLEANUP SITES	DEP Cleanup Sites - Contamination Locator Map Listing	Department of Environmental Protection	11/17/2021	11/19/2021	02/07/2022
FL	DEDB	Ethylene Dibromide Database Results	Department of Environmental Protection	12/08/2021	12/09/2021	02/25/2022
FL	DRYCLEANERS	Drycleaning Facilities	Department of Environmental Protection	10/18/2021	10/19/2021	01/11/2022
FL	DWM CONTAM	DWM CONTAMINATED SITES	Department of Environmental Protection	11/30/2021	01/04/2022	03/21/2022
FL	ENG CONTROLS	Institutional Controls Registry	Department of Environmental Protection	12/08/2021	12/22/2021	03/09/2022
FL	FF TANKS	Federal Facilities Listing	Department of Environmental Protection	12/20/2021	12/20/2021	03/08/2022
FL	FL Cattle Dip. Vats	Cattle Dipping Vats	Department of Environmental Protection	09/27/2019	01/10/2020	02/11/2020
FL	FL SITES	Sites List	Department of Environmental Protection	12/31/1989	05/09/1994	08/04/1994
FL	Financial Assurance 1	Financial Assurance Information Listing	Department of Environmental Protection	07/12/2021	10/26/2021	01/14/2022
FL	Financial Assurance 2	Financial Assurance Information Listing	Department of Environmental Protection	10/28/2021	10/29/2021	01/18/2022
FL	Financial Assurance 3	Financial Assurance Information Listing	Department of Environmental Protection	02/02/2022	02/03/2022	02/07/2022
FL	HW GEN	Hazardous Waste Generators	Department of Environmental Protection	08/11/2021	12/17/2021	03/08/2022
FL	Inst Control	Institutional Controls Registry	Department of Environmental Protection	12/08/2021	12/22/2021	03/09/2022
FL	LAST	Leaking Aboveground Storage Tank Listing	Department of Environmental Protection	01/24/2022	01/25/2022	02/09/2022
FL	LUST	Petroleum Contamination Detail Report	Department of Environmental Protection	11/03/2021	11/05/2021	01/25/2022
FL	PFAS	PFOS and PFOA stand for perfluorooctane sulfonate and perflu	Department of Environmental Protection	10/28/2021	10/29/2021	11/09/2021
FL	PRIORITYCLEANERS	Priority Ranking List	Department of Environmental Protection	07/14/2021	08/10/2021	11/03/2021
FL	RESP PARTY	Responsible Party Sites Listing	Department of Environmental Protection	12/01/2021	12/22/2021	03/09/2022
FL	RGA HWS	Recovered Government Archive State Hazardous Waste Facilitie	Department of Environmental Protection		07/01/2013	12/30/2013
FL	RGA LF	Recovered Government Archive Solid Waste Facilities List	Department of Environmental Protection		07/01/2013	01/10/2014
FL	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan	Department of Environmental Protection		07/01/2013	12/30/2013
FL	SHWS	Florida's State-Funded Action Sites	Department of Environmental Protection	10/21/2021	11/15/2021	02/04/2022
FL	SITE INV SITES	Site Investigation Section Sites Listing	Department of Environmental Protection	11/12/2021	11/15/2021	02/04/2022
FL	SPILLS	Oil and Hazardous Materials Incidents	Department of Environmental Protection	12/28/2021	12/28/2021	03/21/2022
FL	SPILLS 80	SPILLS80 data from FirstSearch	FirstSearch	09/01/2001	01/03/2013	03/06/2013
FL	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	12/10/2012	01/03/2013	03/04/2013
FL	SWF/LF	Solid Waste Facility Database	Department of Environmental Protection	01/10/2022	01/11/2022	03/28/2022
FL	SWRCY	Recycling Centers	Department of Environmental Protection	12/03/2018	01/15/2019	03/14/2019
FL	TANKS	Storage Tank Facility List	Department of Environmental Protection	11/16/2021	11/16/2021	02/04/2022
FL	TIER 2	Tier 2 Facility Listing	Department of Environmental Protection	12/31/2020	06/21/2021	09/14/2021
FL	UIC	Underground Injection Wells Database Listing	Department of Environmental Protection	01/20/2022	01/20/2022	01/27/2022
FL	UST	Storage Tank Facility Information	Department of Environmental Protection	11/16/2021	11/16/2021	02/04/2022
FL	VCP	Voluntary Cleanup Sites	Department of Environmental Protection	04/27/2021	05/14/2021	07/27/2021
FL	WASTEWATER	Wastewater Facility Regulation Database	Department of Environmental Protection	11/01/2021	11/03/2021	01/25/2022
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	ABANDONED MINES	Abandoned Mines	Department of Interior	12/14/2021	12/15/2021	03/10/2022
US	BRS	Biennial Reporting System	EPANTIS	12/31/2019	03/02/2022	03/25/2022
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2020	11/30/2021	02/22/2022
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	12/31/2021	01/14/2022	03/25/2022

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	CORRACTS	Corrective Action Report	EPA	02/28/2022	03/02/2022	03/17/2022
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/06/2021	05/21/2021	08/11/2021
US	DOD	Department of Defense Sites	USGS	06/07/2021	07/13/2021	03/09/2022
US	DOT OPS	Incident and Accident Data	Department of Transportation, Office of Pipeli	01/02/2020	01/28/2020	04/17/2020
US	Delisted NPL	National Priority List Deletions	EPA	01/25/2022	02/03/2022	02/22/2022
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	01/01/2022	01/04/2022	01/10/2022
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	12/31/2021	03/01/2022	03/10/2022
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	05/25/2021	06/24/2021	09/20/2021
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FEMA UST	Underground Storage Tank Listing	FEMA	10/14/2021	11/05/2021	02/01/2022
US	FINDS	Facility Index System/Facility Registry System	EPA	11/04/2021	11/22/2021	02/25/2022
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	10/26/2021	11/16/2021	02/08/2022
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	11/15/2021	11/15/2021	02/01/2022
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	07/26/2021	07/27/2021	10/22/2021
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	12/15/2021	12/16/2021	03/10/2022
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Services, Indian	04/01/2014	08/06/2014	01/29/2015
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	04/28/2021	06/11/2021	09/07/2021
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	05/28/2021	06/22/2021	09/20/2021
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	10/12/2021	11/15/2021	02/08/2022
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	10/14/2021	11/15/2021	02/08/2022
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	05/28/2021	06/22/2021	09/20/2021
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	04/06/2021	06/11/2021	09/07/2021
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	10/12/2021	11/15/2021	02/08/2022
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisitng	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	01/25/2022	02/03/2022	02/22/2022

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	01/25/2022	02/03/2022	02/22/2022
US	LUCIS	Land Use Control Information System	Department of the Navy	11/15/2021	11/16/2021	02/08/2022
US	MINES MRDS	Mineral Resources Data System	USGS	04/06/2018	10/21/2019	10/24/2019
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	03/21/2022	03/22/2022	03/25/2022
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	07/29/2021	08/24/2021	11/19/2021
US	NPL	National Priority List	EPA	01/25/2022	02/03/2022	02/22/2022
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	PADS	PCB Activity Database System	EPA	01/20/2022	01/20/2022	03/25/2022
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	PCS	Permit Compliance System	EPA, Office of Water	07/14/2011	08/05/2011	09/29/2011
US	PCS ENF	Enforcement data	EPA	12/31/2014	02/05/2015	03/06/2015
US	PCS INACTIVE	Listing of Inactive PCS Permits	EPA	11/05/2014	01/06/2015	05/06/2015
US	PRP	Potentially Responsible Parties	EPA	01/25/2022	02/03/2022	02/25/2022
US	Proposed NPL	Proposed National Priority List Sites	EPA	01/25/2022	02/03/2022	02/22/2022
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	02/28/2022	03/02/2022	03/17/2022
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	02/28/2022	03/02/2022	03/17/2022
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	02/28/2022	03/02/2022	03/17/2022
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	02/28/2022	03/02/2022	03/17/2022
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	02/28/2022	03/02/2022	03/17/2022
US	RMP	Risk Management Plans	Environmental Protection Agency	10/20/2021	11/05/2021	11/12/2021
US	ROD	Records Of Decision	EPA	01/25/2022	02/03/2022	02/22/2022
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	01/01/2017	02/03/2017	04/07/2017
US	SEMS	Superfund Enterprise Management System	EPA	01/25/2022	02/03/2022	02/22/2022
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	01/25/2022	02/03/2022	02/22/2022
US	SSTS	Section 7 Tracking Systems	EPA	10/18/2021	10/20/2021	01/10/2022
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2018	08/14/2020	11/04/2020
US	TSCA	Toxic Substances Control Act	EPA	12/31/2016	06/17/2020	09/10/2020
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	08/30/2019	11/15/2019	01/28/2020
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	02/23/2022	03/10/2022	03/10/2022
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	11/16/2021	11/18/2021	02/08/2022
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	11/19/2021	11/19/2021	02/14/2022
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	12/13/2021	12/17/2021	03/17/2022
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	11/16/2021	11/18/2021	02/08/2022
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	11/19/2021	11/19/2021	02/14/2022
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	11/02/2021	11/22/2021	02/14/2022
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	05/06/2020	05/27/2020	08/13/2020
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	UXO	Unexploded Ordnance Sites	Department of Defense	12/31/2020	01/11/2022	02/14/2022

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CT	CT MANIFEST	Hazardous Waste Manifest Data	Department of Energy & Environmental Protecti	11/11/2021	11/12/2021	02/01/2022
NJ	NJ MANIFEST	Manifest Information	Department of Environmental Protection	12/31/2018	04/10/2019	05/16/2019
NY	NY MANIFEST	Facility and Manifest Data	Department of Environmental Conservation	01/01/2019	10/29/2021	01/19/2022
PA	PA MANIFEST	Manifest Information	Department of Environmental Protection	06/30/2018	07/19/2019	09/10/2019
RI	RI MANIFEST	Manifest information	Department of Environmental Management	12/31/2020	11/30/2021	02/18/2022
WI	WI MANIFEST	Manifest Information	Department of Natural Resources	05/31/2018	06/19/2019	09/03/2019
US	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.			
US	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services			
US	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health			
US	Public Schools	Sensitive Receptor: Public Schools	National Center for Education Statistics			
US	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics			
FL	Daycare Centers	Sensitive Receptor: Department of Children & Families	Provider Information			
US	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)			
US	NWI	National Wetlands Inventory	U.S. Fish and Wildlife Service			
FL	State Wetlands	Wetlands Inventory	Department of Environmental Protection			
US	Topographic Map		U.S. Geological Survey			
US	Oil/Gas Pipelines		Endeavor Business Media			
US	Electric Power Transmission Line Data		Endeavor Business Media			

### STREET AND ADDRESS INFORMATION

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## GEOCHECK<sup>®</sup> - PHYSICAL SETTING SOURCE ADDENDUM

### TARGET PROPERTY ADDRESS

FIU PDT  
10555 WEST FLAGLER STREET  
MIAMI, FL 33172

### TARGET PROPERTY COORDINATES

Latitude (North):	25.771389 - 25° 46' 17.00"
Longitude (West):	80.365833 - 80° 21' 57.00"
Universal Transverse Mercator:	Zone 17
UTM X (Meters):	563590.2
UTM Y (Meters):	2850358.5
Elevation:	5 ft. above sea level

### USGS TOPOGRAPHIC MAP

Target Property Map:	11496323 HIALEAH, FL
Version Date:	2018
Northwest Map:	11496325 HIALEAH SW, FL
Version Date:	2018

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.



# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

## **FEMA FLOOD ZONE**

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
12086C0288L	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
12086C0267L	FEMA FIRM Flood data
12086C0286L	FEMA FIRM Flood data
12086C0269L	FEMA FIRM Flood data

## **NATIONAL WETLAND INVENTORY**

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
HIALEAH	YES - refer to the Overview Map and Detail Map

## HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

### ***Site-Specific Hydrogeological Data\*:***

Search Radius:	1.25 miles
Status:	Not found

## **AQUIFLOW®**

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
A3	1/8 - 1/4 Mile SSW	NW
1G	1/8 - 1/4 Mile SSW	NW

For additional site information, refer to Physical Setting Source Map Findings.

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

### GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

#### **ROCK STRATIGRAPHIC UNIT**

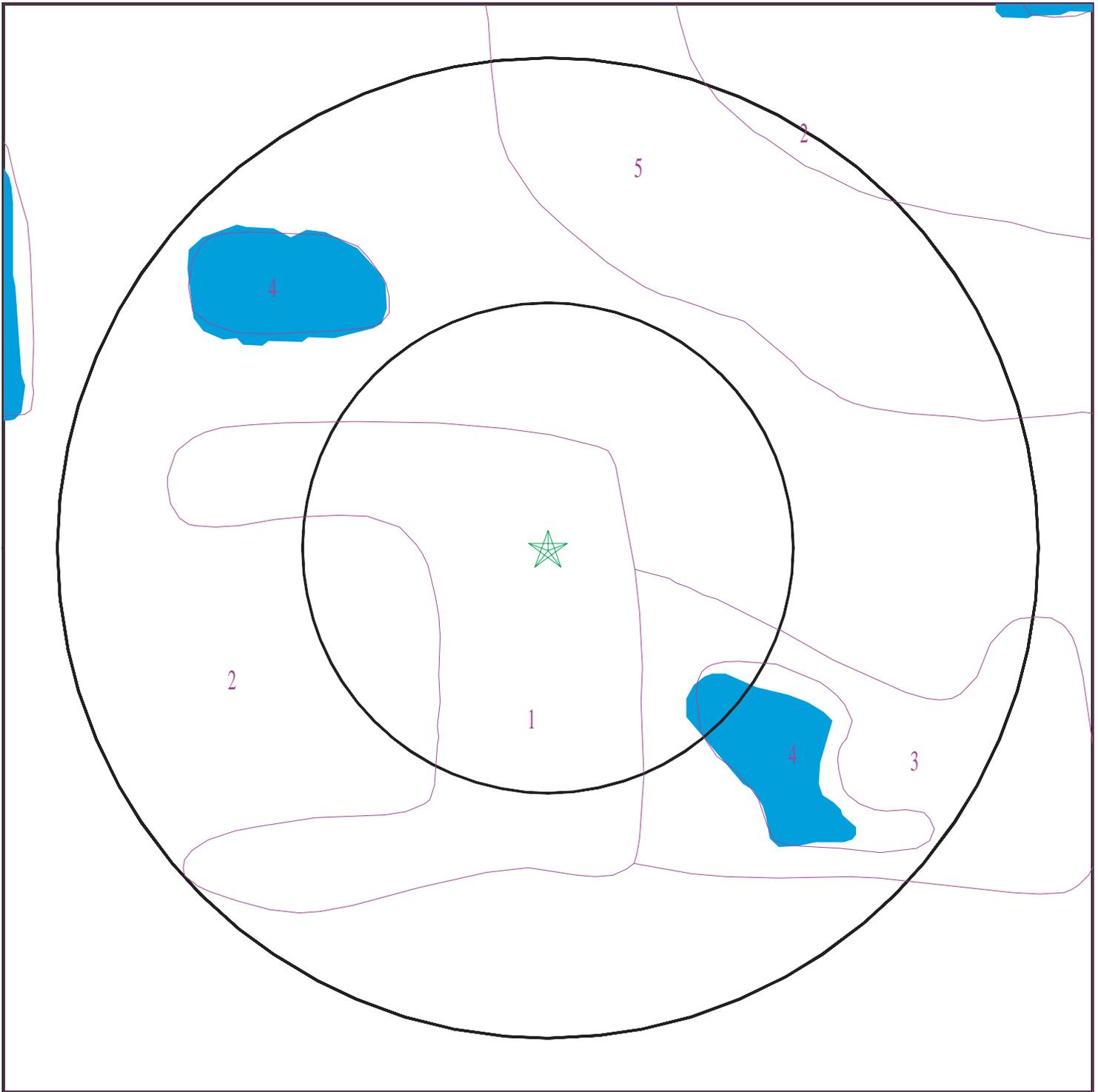
Era: Cenozoic  
System: Quaternary  
Series: Pleistocene  
Code: Qp (*decoded above as Era, System & Series*)

#### **GEOLOGIC AGE IDENTIFICATION**

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

# SSURGO SOIL MAP - 6931685.2s



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water



SITE NAME: FIU PDT  
ADDRESS: 10555 West Flagler Street  
Miami FL 33172  
LAT/LONG: 25.771389 / 80.365833

CLIENT: Jacobs  
CONTACT: Christina Mcdonough  
INQUIRY #: 6931685.2s  
DATE: April 08, 2022 9:34 am

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

### Soil Map ID: 1

Soil Component Name: Hallandale

Soil Surface Texture: fine sand

Hydrologic Group: Class B/D - Drained/undrained hydrology class of soils that can be drained and are classified.

Soil Drainage Class: Poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 31 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sand	Not reported	Not reported	Max: 141 Min: 14	Max: Min:
2	3 inches	16 inches	fine sand	Not reported	Not reported	Max: 141 Min: 14	Max: Min:
3	16 inches	16 inches	bedrock	Not reported	Not reported	Max: 141 Min: 14	Max: Min:

### Soil Map ID: 2

Soil Component Name: Urban land

Soil Surface Texture: variable

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	59 inches	variable	Not reported	Not reported	Max: Min:	Max: Min:

### Soil Map ID: 3

Soil Component Name: Water

Soil Surface Texture: variable

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

### Soil Map ID: 4

Soil Component Name: Water

Soil Surface Texture: water

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class:

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	0 inches	water	Not reported	Not reported	Max: Min:	Max: Min:

### Soil Map ID: 5

Soil Component Name: Udorthents

Soil Surface Texture: cobbly sand

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 92 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	29 inches	cobbly sand	Not reported	Not reported	Max: 141 Min: 14	Max: Min:
2	29 inches	50 inches	sand	Not reported	Not reported	Max: 141 Min: 14	Max: Min:
3	50 inches	50 inches	bedrock	Not reported	Not reported	Max: 141 Min: 14	Max: Min:

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

## WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

## FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
A5	USGS40000233465	1/8 - 1/4 Mile SW
15	USGS40000233528	1/2 - 1 Mile NNE

## FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

## STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	FLSO12000005866	0 - 1/8 Mile South
2	FLSO12000005836	1/8 - 1/4 Mile West
A4	FLSO12000041699	1/8 - 1/4 Mile South
6	FLSO12000021303	1/4 - 1/2 Mile SW
B7	FLSO12000043270	1/2 - 1 Mile West
B8	FLSO12000037527	1/2 - 1 Mile West
9	FLSO12000037526	1/2 - 1 Mile West
10	FLSO12000010725	1/2 - 1 Mile East
C11	FLSO12000015039	1/2 - 1 Mile East
C12	FLSO12000002014	1/2 - 1 Mile East
13	FLSO12000043727	1/2 - 1 Mile NNW
D14	FLSO12000054729	1/2 - 1 Mile SW
D16	FLSO12000054794	1/2 - 1 Mile SW
E17	FLSO12000005827	1/2 - 1 Mile SSW
E18	FLSO12000005843	1/2 - 1 Mile SSW
19	FLSO12000031550	1/2 - 1 Mile West
F20	FLSO12000013738	1/2 - 1 Mile NE
F21	FLSO12000013737	1/2 - 1 Mile NE
22	FLSO12000036877	1/2 - 1 Mile SE

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
F23	FLSO12000013736	1/2 - 1 Mile NE
F24	FLSO12000013739	1/2 - 1 Mile NE
25	FLSO12000005844	1/2 - 1 Mile SW

# PHYSICAL SETTING SOURCE MAP - 6931685.2s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Sink holes
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells



SITE NAME: FIU PDT  
 ADDRESS: 10555 West Flagler Street  
 Miami FL 33172  
 LAT/LONG: 25.771389 / 80.365833

CLIENT: Jacobs  
 CONTACT: Christina Mcdonough  
 INQUIRY #: 6931685.2s  
 DATE: April 08, 2022 9:34 am

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID	Direction	Distance	Elevation	Database	EDR ID Number
1	South	0 - 1/8 Mile	Higher	FL WELLS	FLSO12000005866
		<a href="#">Click here for full text details</a>			
2	West	1/8 - 1/4 Mile	Higher	FL WELLS	FLSO12000005836
		<a href="#">Click here for full text details</a>			
A3	SSW	1/8 - 1/4 Mile	Higher	AQUIFLOW	452
		<a href="#">Click here for full text details</a>			
A4	South	1/8 - 1/4 Mile	Higher	FL WELLS	FLSO12000041699
		<a href="#">Click here for full text details</a>			
A5	SW	1/8 - 1/4 Mile	Higher	FED USGS	USGS40000233465
		<a href="#">Click here for full text details</a>			
6	SW	1/4 - 1/2 Mile	Higher	FL WELLS	FLSO12000021303
		<a href="#">Click here for full text details</a>			
B7	West	1/2 - 1 Mile	Higher	FL WELLS	FLSO12000043270
		<a href="#">Click here for full text details</a>			
B8	West	1/2 - 1 Mile	Higher	FL WELLS	FLSO12000037527
		<a href="#">Click here for full text details</a>			

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID	Direction	Distance	Elevation	Database	EDR ID Number
9	West	1/2 - 1 Mile	Higher	FL WELLS	FLSO12000037526
			<a href="#">Click here for full text details</a>		
10	East	1/2 - 1 Mile	Higher	FL WELLS	FLSO12000010725
			<a href="#">Click here for full text details</a>		
C11	East	1/2 - 1 Mile	Lower	FL WELLS	FLSO12000015039
			<a href="#">Click here for full text details</a>		
C12	East	1/2 - 1 Mile	Lower	FL WELLS	FLSO12000002014
			<a href="#">Click here for full text details</a>		
13	NNW	1/2 - 1 Mile	Higher	FL WELLS	FLSO12000043727
			<a href="#">Click here for full text details</a>		
D14	SW	1/2 - 1 Mile	Higher	FL WELLS	FLSO12000054729
			<a href="#">Click here for full text details</a>		
15	NNE	1/2 - 1 Mile	Higher	FED USGS	USGS40000233528
			<a href="#">Click here for full text details</a>		
D16	SW	1/2 - 1 Mile	Higher	FL WELLS	FLSO12000054794
			<a href="#">Click here for full text details</a>		
E17	SSW	1/2 - 1 Mile	Lower	FL WELLS	FLSO12000005827
			<a href="#">Click here for full text details</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
E18 SSW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	FL WELLS	FLSO12000005843
19 West 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	FL WELLS	FLSO12000031550
F20 NE 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	FL WELLS	FLSO12000013738
F21 NE 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	FL WELLS	FLSO12000013737
22 SE 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	FL WELLS	FLSO12000036877
F23 NE 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	FL WELLS	FLSO12000013736
F24 NE 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	FL WELLS	FLSO12000013739
25 SW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	FL WELLS	FLSO12000005844
1G SSW 1/8 - 1/4 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	452

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

## AREA RADON INFORMATION

State Database: FL Radon

### Radon Test Results

Zip	Total Buildings	% of sites > 4 pCi/L	Data Source
33172	139	24.5	Certified Residential Database
33172	34	14.7	Mandatory Non-Residential Database

Federal EPA Radon Zone for MIAMI-DADE County: 2

- Note: Zone 1 indoor average level > 4 pCi/L.  
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.  
 : Zone 3 indoor average level < 2 pCi/L.

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Federal Area Radon Information for MIAMI-DADE COUNTY, FL

Number of sites tested: 156

Area	Average Activity	% < 4 pCi/L	% 4-20 pCi/L	% > 20 pCi/L
Living Area	1.020 pCi/L	91%	9%	0%
Basement	0.910 pCi/L	100%	0%	0%

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Source: U.S. Geological Survey

## HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory

Source: Department of Environmental Protection

Telephone: 850-245-8238

## HYDROGEOLOGIC INFORMATION

AQUIFLOW<sup>R</sup> Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## LOCAL / REGIONAL WATER AGENCY RECORDS

### FEDERAL WATER WELLS

#### PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

#### PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

#### USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

## OTHER STATE DATABASE INFORMATION

### Public Water System (PWS) Wells (Non-Federal)

Department of Environmental Protection

Telephone: 850-245-8629

Statewide coverage of PWS Wells, excluding Federally owned facilities.

### Well Construction Permitting Database

Source: Northwest Florida Water Management District

Telephone: 850-539-5999

### Consumptive Use Permit Well Database

Source: St. Johns River Water Management District

Telephone: 386-329-4841

### DEP GWIS - Generalized Water Information System Well Data

Source: Department of Environmental Protection

Telephone: 850-245-8507

Data collected for the Watershed Monitoring Section of the Department of Environmental Protection.

### DOH and DEP Historic Study of Private Wells

Source: Department of Environmental Protection

Telephone: 850-559-0901

Historic database for private supply wells.

### Permitted Well Location Database

Source: South Florida Water Management District

Telephone: 561-682-6877

### Super Act Program Well Data

Source: Department of Health

Telephone: 850-245-4250

This table consists of data relating to all privately and publicly owned potable wells investigated as part of the SUPER Act program. The Florida Department of Health's SUPER Act Program (per Chapter 376.3071(4)(g), Florida Statutes), was given authority to provide field and laboratory services, toxicological risk assessments, investigations of drinking water contamination complaints and education of the public.

### Water Well Location Information

Source: Suwannee River Water Management District

Telephone: 386-796-7211

### Water Well Permit Database

Source: Southwest Water Management District

Telephone: 352-796-7211

### Oil and Gas Permit Database

Source: Department of Environmental Protection

Telephone: 850-245-3194

Locations of all permitted wells in the state of Florida.

### Florida Sinkholes

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## RADON

### State Database: FL Radon

Source: Department of Health  
Telephone: 850-245-4288  
Zip Code Based Radon Data

### Area Radon Information

Source: USGS  
Telephone: 703-356-4020  
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

### EPA Radon Zones

Source: EPA  
Telephone: 703-356-4020  
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

## OTHER

Airport Landing Facilities: Private and public use landing facilities  
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater  
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

### **STREET AND ADDRESS INFORMATION**

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# Appendix D

## Cultural Correspondence

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National Science Foundation  
Directorate for Engineering

**Mr. Timothy Parsons, Ph.D.**  
**State Historic Preservation Officer**

Director, Division of Historical Resources

500 South Bronough Street

R.A. Gray Building, Room 305

Tallahassee, FL 32399-0250

[C/O [CompliancePermits@dos.myflorida.com](mailto:CompliancePermits@dos.myflorida.com)]

**Subject: Section 106 consultation for NSF's proposed funding of a testbed building at Florida International University**

Dear Mr. Parsons,

The National Science Foundation (NSF) seeks to consult with the Florida State Historic Preservation Officer (SHPO) as it considers providing approval to Florida International University (FIU) to use federal funds to construct a physical design testbed (testbed) at their campus in Miami, an undertaking, in accordance with 36 C.F.R. 800.3 of the regulations of the Advisory Council on Historic Preservation.

The proposed testbed would be constructed north of the existing Wall of Wind on FIU's campus in Miami, Florida (see Figure 1). It would consist of an 8,500-square-foot light industrial (Class 1) building approximately 170 feet in length and 50 feet in width. The building would include skylights and ventilators, 660 square feet of air-conditioned interior office space, and two bathrooms. As the science needs are further developed and the design is refined, it is possible the facility design may have a slightly smaller footprint. The overall purpose of the testbed is to inform the design of a National Full-scale Testing Infrastructure for Community Hardening in Extreme Wind, Surge, and Wave Events (NICHE); the design effort for this has been funded by NSF via a Mid-Scale Research Infrastructure-1 award. NICHE will "provide a unique, national-scale, multi-user facility to experimentally test the impact of extreme winds combined with storm surge and wave actions on different types of civil infrastructure." The testbed would inform this design work and would contain either wind or wind and wave generating instruments.

### ***Area of Potential Effects***

We have identified the Area of Potential Effect (APE) for this proposed testbed as the area within the vicinity of the proposed testbed , which encompasses the proposed footprint of the testbed as well as any construction staging areas and utility work (see Figure 2). This area is a conservative estimate, since design drawings have not yet been developed for the testbed and the exact positioning of the testbed within this area is not yet defined; the actual area of direct ground disturbance would be much smaller than the approximately 2.1-acre area depicted.

### ***Basis for Determining No Historic Properties Affected***

FIU facilities staff, with experience in constructing projects in the area, indicated that they have not encountered historic properties during construction. To further identify any potential historic properties within the APE, we researched and contacted the following sources: the Florida Master Site File and the National Register of Historic Places.

The National Register of Historic Places contains 76 properties within Miami, Dade County, with no properties located within or near to the APE. The Florida Master Site File shows no historic properties located within the APE, and one unevaluated archaeological site located within a mile radius of the proposed testbed. Based on supplemental records provided by the Florida Master Site File, this archaeological site was documented as a prehistoric sand burial mound. The Florida Master Site Files are enclosed as a nonpublic attachment and include a figure that shows the proposed project location (marked as 10555 West Flagler Street) in relation to the archaeological site (marked as a DA number).

Based on the above, we have made a preliminary finding of **“No Historic Properties Affected,”** pursuant to 36 CFR 800.4(d)(1). We have not identified any known historic properties within the APE and, based on the above review, it appears that there is a low potential for archaeological resources to occur within the 170-by-50-foot footprint of the proposed testbed.

Concurrent with this letter, NSF is providing a notification of the project to the Miccosukee Tribe of Indians of Florida. If the Tribe is interested in consulting with NSF and identifies any potential historic properties within the APE, NSF will update

this consultation accordingly and continue to consult with your office on potential effects.

**Conclusion**

NSF is providing your office with the opportunity to respond to our proposed APE and our preliminary finding, in accordance with 36 CFR §800.4(d)(1)(i). If you concur, please let us know in writing, or sign on the line below and return a copy of this letter by email to Ms. Kristen Hamilton, at [krihamil@nsf.gov](mailto:krihamil@nsf.gov).

We appreciate your review and attention to this matter.

Sincerely,



Joy Pauschke, Ph.D., P.E.  
Program Director  
Division of Civil, Mechanical and Manufacturing Innovation (CMMI)  
Directorate for Engineering (ENG)  
National Science Foundation

Attachments:

- 1) Florida Master Site Files (nonpublic)

Concurrence:

---

State Historic Preservation Officer

Date

# Florida International University Map

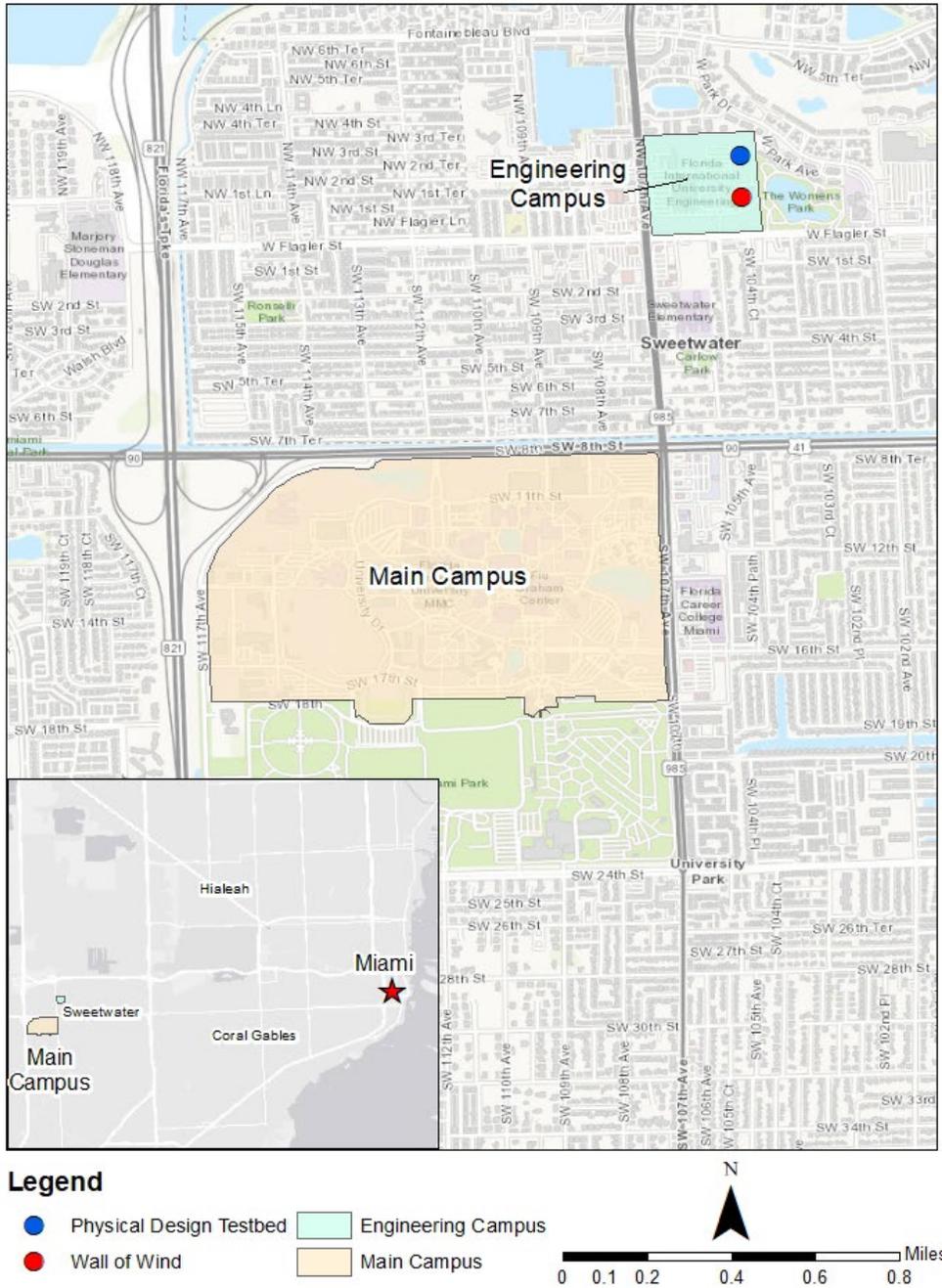
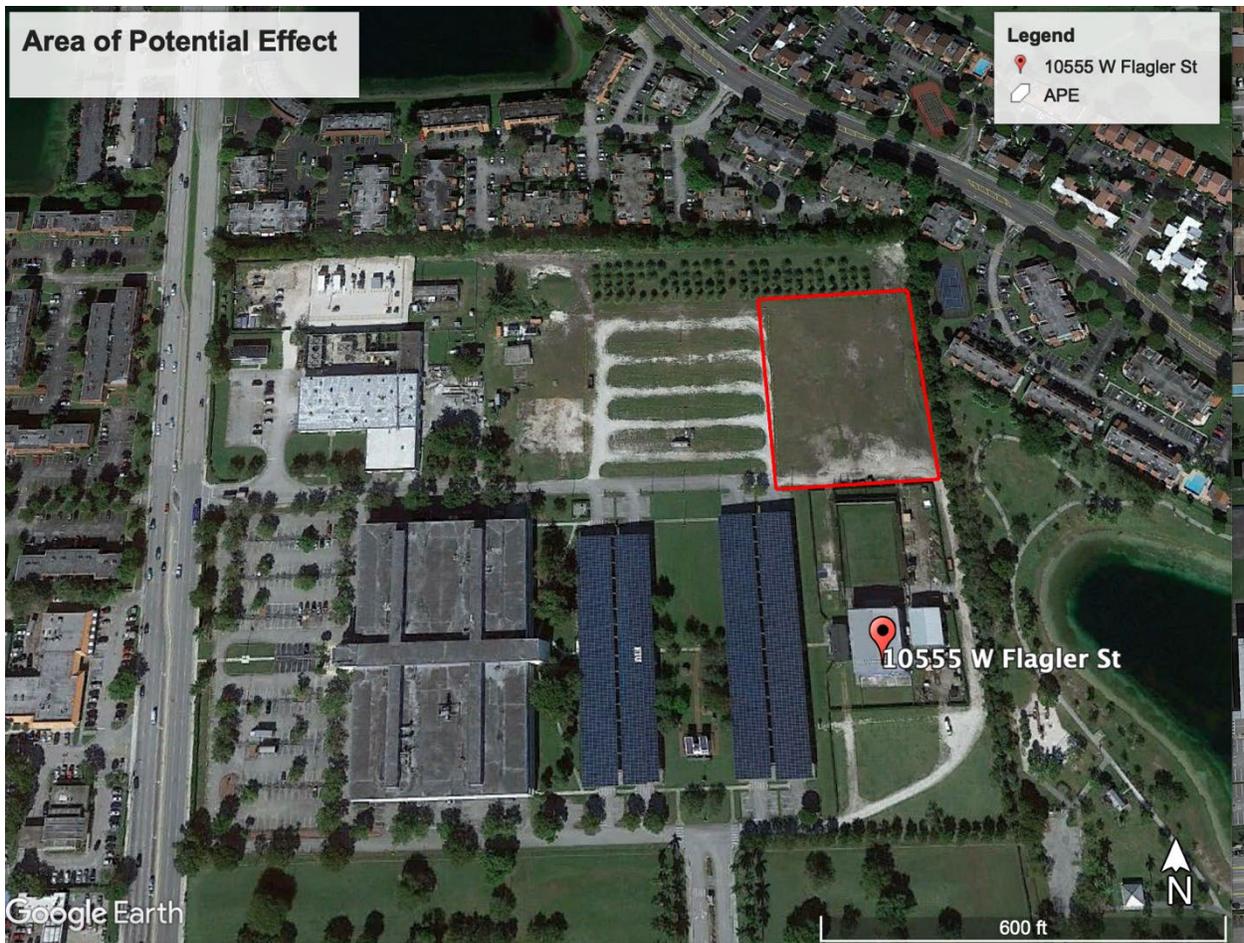


Figure 1. Location of Florida International University Main and Engineering Campus (figure prepared for NSF by Jacobs Engineering)



**Figure 2. Area of Potential Effects, marked in red; this encompasses an area of approximately 92,000 square feet (approximately 2.1 acres) within which the 8,500 square foot test bed would be located.**



## FLORIDA DEPARTMENT *of* STATE

**RON DESANTIS**  
Governor

**CORD BYRD**  
Secretary of State

Kristen Hamil  
Environmental Compliance Officer  
National Science Foundation  
2415 Eisenhower Avenue  
Alexandria, Virginia 22314

May 19, 2022

RE: DHR Project File No.: 2022-2815  
Project: *Testbed Building Florida International University, Wall of Wind*  
County: Dade

Ms. Hamil:

The Florida State Historic Preservation Officer reviewed the referenced project for possible effects on historic properties listed, or eligible for listing, in the *National Register of Historic Places*. The review was conducted in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, and its implementing regulations in *36 CFR Part 800: Protection of Historic Properties*.

It is the opinion of this office that the proposed project will have no effect on historic properties. However, due to ground disturbing activities, the following special condition regarding unexpected discoveries should be included during project activities:

- If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850)-245-6333. Project activities shall not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, *Florida Statutes*.

If you have any questions, please contact Alayna Gould, Historic Preservationist, by email at [Alayna.Gould@dos.myflorida.com](mailto:Alayna.Gould@dos.myflorida.com), or by telephone at 850-245-6343.

**Division of Historical Resources**  
**R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399**  
**850.245.6300 • 850.245.6436 (Fax) • FLHeritage.com**



Sincerely,

A handwritten signature in blue ink that reads "Kelly L. Chase" with the word "For" written in a smaller font below the main signature.

Timothy A Parsons, Ph.D.  
Director, Division of Historical Resources  
& State Historic Preservation Officer

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# Appendix E

## NICHE Fan Features

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Paul Vasilescu  
Aerolab

March 15, 2022

Re: Proposed Fan Technologies for NICHE

Aerolab will design, optimize, and fabricate a custom fan system for the NICHE based on existing technologies incorporated into previous Aerolab wind tunnel projects including the new Wright Brothers Wind Tunnel at MIT.

The proposed wind tunnel fan uses a variety of features to reduce audible noise. Aeroacoustic noise emissions can be reduced by:

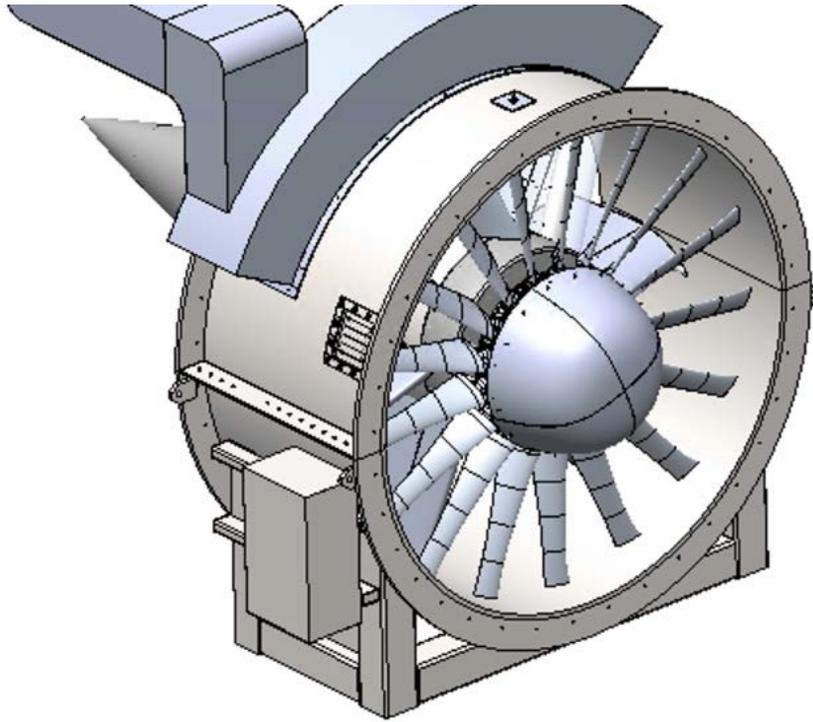
- A) Reducing acoustic energy being generated by the noise sources
- B) Absorbing or dampening noise that is being generated

Aerolab's approach utilizes both techniques in the proposed system with a strong emphasis on reducing acoustic energy generated by the fan.

The following features are included in the baseline fan:

- *Relatively low tip speed Mach number* – This feature has the single largest impact on noise. The theoretically optimal place to be is around Mach 0.3. Our baseline fan has a tip speed Mach number of ~0.27 at 120 MPH and ~0.45 at 200 MPH. Design space exists to further optimize the system to bring tip speed Mach number down further for the top end speed. Aerolab will conduct these during the contracted effort.
- *Uniform pressure rise* – This feature improves both noise and flow quality. The fan further has an optimized twist and chord distribution along the span to minimize span wise non-uniformities.
- *Optimal number of rotor blades and stator vanes* - The fan disk utilizes a relatively large number of rotor blades (17). The number of rotor blades (17) and the number of stator vanes (7) are both prime numbers which research and experiment have shown reduce aeroacoustic noise when appropriately chosen. The number of rotor blades and stator vanes combined with the operating RPM further define the blade pass frequency and harmonics of the system.
- *Stator sweep and lean* – These features substantially reduce the severity of the rotor wake interaction with the stator vane.
- *Boundary Layer Ingestion* – The blade tips include a reversed flare feature at the tip in order to increase the effective work being performed by the blades near the duct wall where the boundary layer is naturally its thickest and local velocity the slowest. The net effect is an improvement of streamwise velocity uniformity downstream of the fan, reduction in boundary layer thickness, and improvement in efficiency, which translates into a reduction of aeroacoustic noise.

A CAD rendering of the MIT fan system designed and built by Aerolab is provided in Fig 1 below. Photos of the same MIT fan is provided in Fig 2 and 3 below.



*Figure 1: Aerolab MIT Fan CAD Rendering*



*Figure 2: Aerolab MIT Fan During Assembly*



*Figure 3: Aerolab MIT Fan*

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# Appendix F

## Floodplain Management Compliance

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## Appendix F. Compliance of Proposed Physical Design Testbed at Florida International University with Executive Order 11988, “Floodplain Management”

The National Science Foundation (NSF), in consultation with the Florida International University (FIU), has prepared an environmental assessment (EA) to evaluate the potential effects of NSF’s proposed funding of the construction and operation of a Physical Design Testbed (PDT) on the FIU campus in Miami, Florida. The Proposed Action is for NSF to authorize the use of NSF-awarded funds for the construction and operation of the 8,500 square foot PDT facility north of the existing Wall of Wind facility at FIU’s Engineering Campus. The PDT would experimentally test the impact of large hurricane events, using extreme winds combined with storm surge and wave actions on different types of civil infrastructure. If constructed, the PDT would inform, test, and prove the design of an eventual National Full-scale Testing Infrastructure for Community Hardening in Extreme Wind, Surge, and Wave Events (NICHE). The Proposed Action is in compliance with Executive Order (EO) 11988, “Floodplain Management,” as documented by the following 8-step process:

- **Step 1: Determine if a Proposed Action (project) is in the floodplain.** As shown in the FEMA Flood Insurance Rate Map (FIRM) Number 12086C0288L (FEMA, 2009), the Project Area is within the FEMA 100-year floodzone (AH).
- **Step 2: Conduct early public review, including public notice.** Public notice (refer to Attachment 1) is provided along with the EA public notice on NSF’s website ([www.nsf.gov/eng/infrastructure/environmental-assessment](http://www.nsf.gov/eng/infrastructure/environmental-assessment)) and published in the following three newspapers: *The Miami Herald*, *El Nuevo Herald*, and *Miami Today*. Hard copies of the EA were made available to the public at the following three libraries: Steve and Dorothea Green Library, Fairlawn Branch Library, and International Mall Branch Library.
- **Step 3: Identify and evaluate practicable alternatives to locating in the floodplain.** The majority of FIU’s campus is located within the 100-year floodplain and there are no practicable locations outside the floodplain, as there is limited undeveloped space for a new development of this size on FIU’s property. The PDT is ideally situated adjacent to the current Wall of Wind Experimental facility, which would allow shared use of the debris field and other buffer areas. The No Action Alternative would not meet the need to provide a unique, national-scale, multi-user facility to experimentally test the impact of extreme winds combined with storm surge and wave actions on different types of civil infrastructure.
- **Step 4: Identify impacts of the Proposed Action (project).** The design of the stormwater management system for the PDT would ensure that there would be no significant impact to regulated floodplains.
- **Step 5: Minimize threats to life, property and to natural and beneficial floodplain values, and restore and preserve natural and beneficial floodplain values.** The PDT site would be graded to meet the minimum base flood elevations. The stormwater management system at the Engineering Campus would be upgraded to compensate for the PDT’s increase in impervious area and the net loss in floodplain storage volume as determined by the South Florida Water Resource Management District Environmental Resource Permitting process.
- **Step 6: Reevaluate alternatives.** No practicable alternatives have been identified.
- **Step 7: Present the findings and a public explanation.** The floodplains statement of findings will be incorporated into the Finding of No Significant Impact (FONSI). The FONSI will be published on NSF’s website ([www.nsf.gov/eng/infrastructure/environmental-assessment](http://www.nsf.gov/eng/infrastructure/environmental-assessment)).
- **Step 8: Implement the Proposed Action (project).** If the Proposed Action is implemented, FIU would have continuing responsibility to maintain the stormwater management system to remain in compliance with EO 11988.

## Appendix F. Compliance of Proposed Physical Design Testbed at Florida International University with Executive Order 11988, "Floodplain Management"

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### References

Federal Emergency Management Agency (FEMA). 2009. FEMA Flood Map Service Center: Search By Address: FIU. "Miami-Dade County Unincorporated Areas, Map Number 12086C0288L." September 11. <https://msc.fema.gov/portal/search?AddressQuery=FIU#searchresultsanchor>

**Attachment 1**  
**Public Notice**

## Public Advertisement

The National Science Foundation (NSF), in consultation with the Florida International University (FIU), has prepared an Environmental Assessment (EA) to evaluate the potential effects of NSF's authorization of the use of NSF-awarded funds for the construction and operation of a Physical Design Testbed (PDT) on the FIU campus in Miami, Florida.

The 8,500-square-foot PDT would experimentally test the impact of large hurricane events using extreme winds combined with storm surge and wave actions on different types of civil infrastructure. If constructed, the PDT would inform, test, and prove the design of an eventual National Full-scale Testing Infrastructure for Community Hardening in Extreme Wind, Surge, and Wave Events (NICHE).

The public is invited to review and comment on the EA during a minimum 30-day comment period from July 29, 2022 through August 31, 2022. The PDT is proposed to be constructed within the Federal Emergency Management Agency 100-year floodplain and will comply with Executive Order 11988, "Floodplain Management." Comments should be emailed to Joy Pauschke, Ph.D., P.E., National Science Foundation, Division of Civil, Mechanical and Manufacturing Innovation, at [engineering@nsf.gov](mailto:engineering@nsf.gov).

The EA is posted to the NSF website [www.nsf.gov/eng/infrastructure/environmental-assessment](http://www.nsf.gov/eng/infrastructure/environmental-assessment). Hard copies of the EA may be viewed at the following locations:

1. Steve and Dorothea Green Library, 11200 SW 8th Street, Miami, FL 33199; (305) 348-2451
2. Fairlawn Branch Library, 6376 SW 8th Street, Miami, FL 33144; (305) 261-1571
3. International Mall Branch Library, 10315 NW 12 Street, Doral, FL 33172; (305) 594-2514

Substantive comments will be addressed as appropriate in the final environmental review document(s), which will be posted to the above website.

# Appendix G

## Coastal Zone Management Act Documentation

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**Subject:** [EXTERNAL] - The Florida State Clearinghouse has received your electronic submission  
**Date:** Tuesday, June 21, 2022 at 3:07:28 PM Eastern Daylight Time  
**From:** State\_Clearinghouse  
**To:** Hamilton, Kristen

This email originated from outside of the National Science Foundation. Do not click links or open attachments unless you recognize the sender and know the content is safe.

The Florida State Clearinghouse has received your electronic submission.

If you have any questions, please contact the Clearinghouse Coordinator at (850) 717-9076.

Thank you.

Kae Craig  
Office of Intergovernmental Programs  
Florida Dept. Environmental Protection  
ph: 850-717-9045

[Dep Customer Survey](#)



National Science Foundation

June 21, 2022

Chris Stahl  
Clearinghouse Coordinator  
Florida State Clearinghouse  
Florida Department of Environmental Protection  
3900 Commonwealth Boulevard, M.S. 47  
Tallahassee, Florida 32399-3000

**Subject: Federal Agency Coastal Zone Management Act (CZMA) Negative Determination**

Dear Mr. Stahl:

This letter provides the State of Florida with the National Science Foundation's (NSF's) Negative Determination under Section 307 of the CZMA, 16 *United States Code* Section 1456, and Title 15 *Code of Federal Regulations* (CFR) Section 930.35. The information in this Negative Determination is also provided pursuant to 15 CFR Section 930.35.

**Overview**

NSF has prepared an Environmental Assessment (EA), in consultation with Florida International University (FIU), to evaluate the potential environmental effects of NSF's proposed funding of the construction and operation of a Physical Design Testbed (PDT) on the FIU campus in Miami, Florida. FIU would construct a PDT to experimentally simulate the impact of large hurricane events using extreme winds combined with storm surge and wave actions on different types of civil infrastructure. The proposed infrastructure would consist of an 8,500-square-foot light industrial building approximately 170 feet in length and 50 feet in width. NSF is the lead federal agency for this action.

Equipment inside the PDT would include a fan system for wind speeds up to 213 mph and a 12-foot-wide by 9-foot-high fiberglass reinforced plastic (FRP) water channel. Electricity for the facility would be provided by Florida Power and Light (FPL); generators or other diesel-powered equipment would not be needed. Water and sewer for the facility would be provided by Miami Dade Water and Sewer Department (MDWASD) and storage tanks would be used to facilitate water recycling as much as possible. The FIU engineering campus has sufficient parking for the expected users of the proposed PDT facility. Site access would be controlled by use of a security fence. The building would also include skylights and ventilators, 660 square feet of air-conditioned interior office space, and two bathrooms.

FIU may determine that the wave simulations could be conducted in a facility at another university and the PDT at FIU would then be de-scoped to contain only wind simulation equipment and would have a smaller footprint.

## **Purpose and Need**

In December 2021, NSF issued a Mid-scale Research Infrastructure-1 award to FIU to support the design of a National Full-scale Testing Infrastructure for Community Hardening in Extreme Wind, Surge, and Wave Events (NICHE). To aid the design of the full-scale NICHE, FIU intends to seek NSF's approval to use NICHE funds to construct a prototype smaller-scale PDT. The purpose of the PDT is to inform the design of NICHE by providing proof-of-concept and validation of empirical models. The PDT is needed to test and prove a subset of eventual full-scale NICHE equipment, demonstrate the physics of full-scale NICHE conditions, and answer key scientific, technical, and operational questions relating to the feasibility of a full-scale NICHE.

## **Federal Review**

After review of the Florida Coastal Management Program and its enforceable policies, NSF decided that this activity would not have an effect on the state of Florida coastal zone or its resources. See the attached table for an explanation of this determination.

Should you have any questions please feel free to contact me at [krihamil@nsf.gov](mailto:krihamil@nsf.gov).

Sincerely,

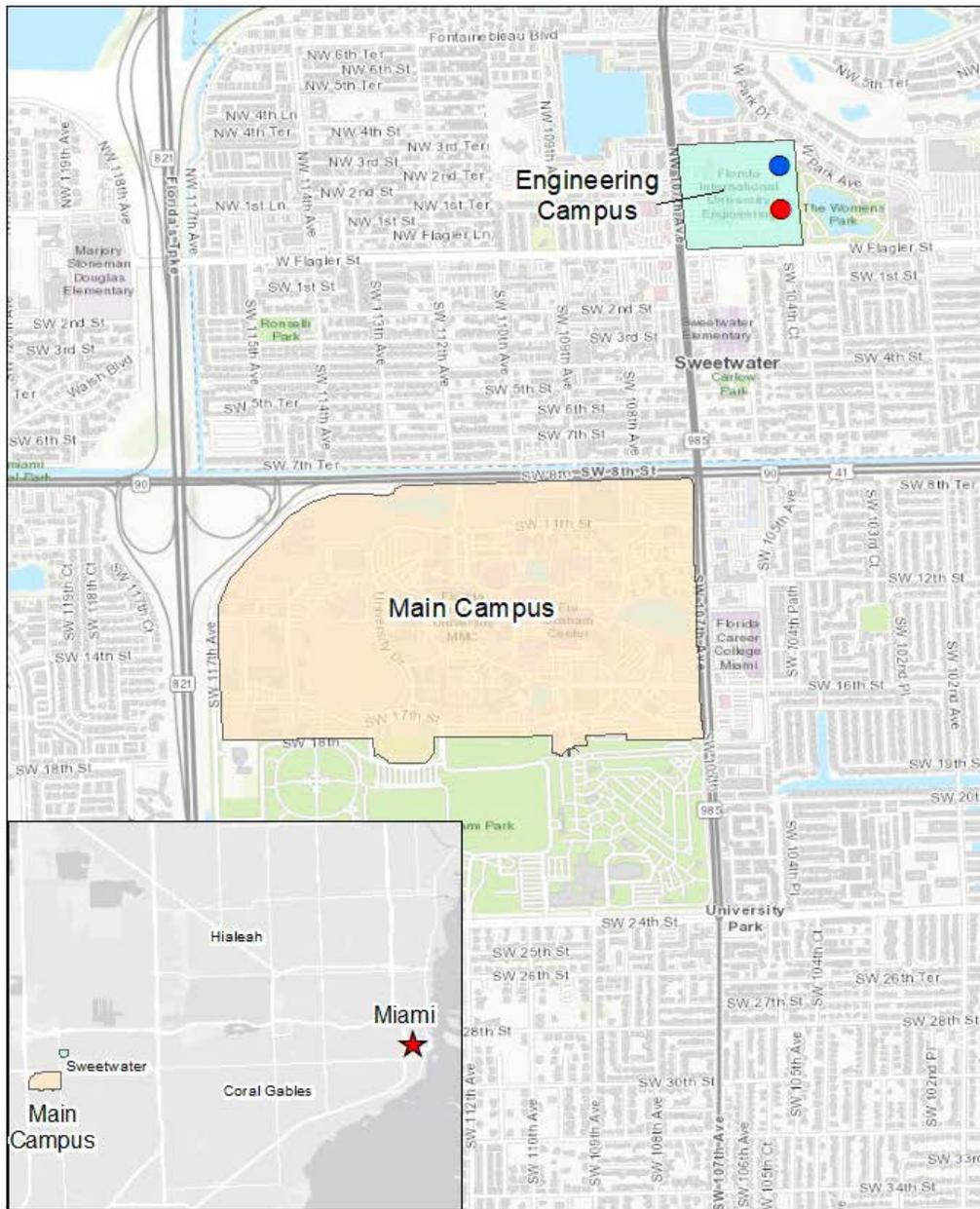


Kristen Hamilton  
Environmental Compliance Officer  
Office of the General Counsel  
National Science Foundation  
2415 Eisenhower Avenue  
Alexandria, VA 22314

Enclosures:

Figure 1. Proposed Physical Testbed Location

Table 1 Florida Coastal Management Program Consistency Review



**Legend**

- Proposed Physical Design Testbed
- Wall of Wind
- Engineering Campus
- Main Campus

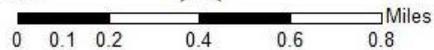


FIGURE 1. Location of Florida International University Main and Engineering Campus and Proposed Physical Design Testbed

TABLE 1

**Florida Coastal Management Program Consistency Review***Environmental Assessment for the Proposed Physical Design Testbed at Florida International University Miami, Florida*

<b>Statute</b>	<b>Consistency</b>	<b>Scope</b>
Chapter 161 <i>Beach and Shore Preservation</i>	The Proposed Action would not involve construction on State beaches and would not adversely affect beach and shore management.	Authorizes the Bureau of Beaches and Coastal Systems within DEP to regulate construction on, or seaward of, the state's beaches.
Chapter 163 <i>Part II Growth Policy; County and Municipal Planning; Land Development Regulation</i>	The Proposed Action would not impede the local government's planning efforts. The proposed funding would provide for a research facility that would be co-located with existing academic buildings on FIU's Engineering Campus. FIU's Master Plan is currently going through a revision and would incorporate the Proposed Action.	Requires local governments to prepare, adopt, and implement comprehensive plans that encourage the most appropriate use of land and natural resources in a manner consistent with the public interest.
Chapter 186 <i>State and Regional Planning</i>	The Proposed Action would not impede state- or regional-level planning efforts. The proposed funding would provide for a research facility that would be co-located with existing academic buildings on FIU's Engineering Campus. FIU's Master Plan is currently going through a revision and would incorporate the Proposed Action.	Details state-level planning efforts. Requires the development of special statewide plans governing water use, land development, and transportation.
Chapter 252 <i>Emergency Management</i>	The Proposed Action would not increase the state's vulnerability to natural disasters. Emergency response and evacuation procedures would not be impacted by the Proposed Action. The Proposed Action would support research on the impact of hurricane events on different types of civil infrastructure.	Provides for planning and implementation of the state's response to, efforts to recover from, and the mitigation of natural and man-made disasters.
Chapter 253 <i>State Lands</i>	The project site is within the FIU's Engineering Campus. The FIU campus land is leased to FIU by the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (Lease No. 2727). The proposed project is consistent with FIU's use of State Lands.	Addresses the state's administration of public lands and property of this state, and provides direction regarding the acquisition, disposal, and management of all state lands.
Chapter 258 <i>State Parks and Preserves</i>	The Proposed Action would not affect state parks and aquatic preserves.	Addresses administration and management of state parks and preserves.
Chapter 259 <i>Land Acquisition for Conservation or Recreation</i>	The project does not involve the acquisition of property.	Authorizes acquisition of environmentally endangered lands and outdoor recreation lands.
Chapter 260 <i>Florida Greenways and Trails Act</i>	The Proposed Action does not involve the use or creation of recreational trails and would not impact existing trails.	Authorizes acquisition of land to create a recreational trails system and to facilitate management of the system.
Chapter 267 <i>Historical Resources</i>	The Florida State Historic Preservation Office determined the Proposed Action would have no effect on cultural resources listed, or eligible for listing, in the National Register of Historic Places (DHR Project File No.: 2022-2815).	Addresses management and preservation of the state's archaeological and historical resources

TABLE 1

**Florida Coastal Management Program Consistency Review***Environmental Assessment for the Proposed Physical Design Testbed at Florida International University Miami, Florida*

<b>Statute</b>	<b>Consistency</b>	<b>Scope</b>
Chapter 288 <i>Commercial Development and Capital Improvements</i>	The Proposed Action would not affect future business opportunities on state lands, or the promotion of tourism in the region.	Provides the framework for promoting and developing the general business, trade, and tourism components of the state economy.
Chapter 334 <i>Transportation Administration</i>	The Proposed Action would not have an effect on transportation.	Addresses the state's policy concerning transportation administration.
Chapter 339 <i>Transportation Finance and Planning</i>	The Proposed Action would not have an effect on the finance and planning needs of the state's system.	Addresses the finance and planning needs of the state's transportation system.
Chapter 373 <i>Water Resources</i>	Wetlands would not be disturbed, as there are no wetlands within the footprint of the proposed action. The design of the facility would include stormwater retention and treatment to offset the increase in stormwater runoff from the increase in impervious area under the Environmental Resource Permitting process in accordance with the water quality requirements of the South Dade County Division of Environmental Resources Management. The Proposed Action is located within Zone AH according to Federal Emergency Management Agency (FEMA) flood insurance rate map 12086C0288L. The Proposed Action is in compliance with Executive Order 11988, "Floodplain Management."	Addresses the state's policy concerning water resources.
Chapter 375 <i>Multipurpose Outdoor Recreation; Land Acquisition, Management, and Conservation</i>	Opportunities for recreation on state lands will not be affected by the Proposed Action.	Develops comprehensive multipurpose outdoor recreation plan to document recreational supply and demand, describe current recreational opportunities, estimate need for additional recreational opportunities.
Chapter 376 <i>Pollutant Discharge Prevention and Removal</i>	Solid waste generated by the proposed facility would be similar to that generated by the existing facilities on campus and will be handled under FIU's waste disposal contract.	Regulates transfer, storage, and transportation of pollutants, and cleanup of pollutant discharges.
Chapter 377 <i>Energy Resource</i>	The proposed facility would tie into FIU's existing utility systems for electric power, including renewable energy; water; sewage treatment; and stormwater management. Construction and operation of the PDT is not expected to impact the capacity of the local major service providers (Florida Power and Light or Miami Dade Water and Sewer Department).	Addresses regulation, planning, and development of energy resources of the state.
Chapter 379 <i>Fish and Wildlife Conservation</i>	The facility that NSF would fund under the Proposed Action would be located within a developed urban area and there will be no impact to wildlife resources.	Addresses the management of the wildlife resources of the state.

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<b>Statute</b>	<b>Consistency</b>	<b>Scope</b>
Chapter 380 <i>Land and Water Management</i>	The facility that NSF would fund under the Proposed Action would be designed to meet water quality standards in order to secure the necessary regulatory permits.	Establishes land and water management policies to guide and coordinate local decisions relating to growth and development.
Chapter 381 <i>Public Health, General Provisions</i>	The Proposed Action would not affect public health facilities.	Establishes public policy concerning the state's public health system.
Chapter 388 <i>Mosquito Control</i>	The Proposed Action would not affect ecological systems and water quality of state waters regarding mosquito control.	Establishes public policy concerning environmental control in the state.
Chapter 553 <i>Building and Construction Standards</i>	Impacts to soils would not be significant. The proposed project involves a relatively small area and erosion control measures would keep water and sediments from moving offsite and impacting other areas.	Provides for the control and prevention of soil erosion, and for the prevention of floodwater and sediment damages.
Chapter 597 <i>Aquaculture</i>	The Proposed Action would not affect aquaculture efforts.	Enhance the growth of aquaculture, while protecting Florida's environment.

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