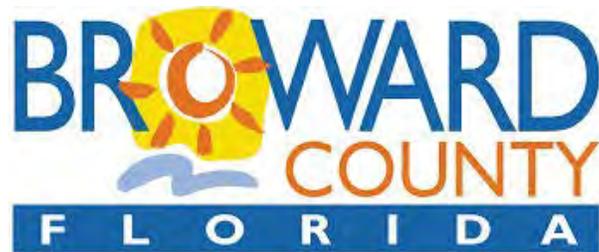


Funded Through: DEP AGREEMENT NO. CM238

Working Towards Resilient Coastal Communities

City of Hollywood **Vulnerability to Sea Level Rise Assessment Report**



Prepared on: April 14

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City of Hollywood Vulnerability to Sea Level Rise Assessment Report for CM238

Working Towards Resilient Coastal Communities



This report was funded in part, through a grant agreement from the Florida Department of Environmental Protection, Florida Coastal Management Program, by a grant provided by the Office of Ocean and Coastal Resource Management under the Coastal Zone Management Act of 1972, as amended, National Oceanic and Atmospheric Administration Award No. # *NA11NOS4190073*. The views, statements, findings, conclusions and recommendations expressed herein are those of the author(s) and do not necessarily reflect the views of the State of Florida, NOAA or any of their subagencies.

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Report Summary

The City of Hollywood Vulnerability Report

Introduction

In the past century, sea level rise in South Florida rose 8-10 inches. In the future, the rate of sea level rise is expected to accelerate due to processes associated with global climate change. Broward County is highly vulnerable to sea level rise (SLR) due to its low lying topography. As a result, inundation, episodic flooding, drainage issues in low-lying areas and saltwater intrusions are significant threats. This document contains the vulnerability assessment of major municipal infrastructure in the City of Hollywood during one and two foot SLR scenarios using a regional inundation digital elevation model (DEM) which incorporates 2007 LiDAR elevation data. Vulnerable areas are displayed by a grid with a 50 foot cell size, categorized as “possible” and “more likely”:

<p>LEGEND</p> <p> Possible</p> <p> More Likely</p>	<p>The individual colors are used to describe the uncertainty associated with the variability of the tidal data measurements and LiDAR elevation measurements. The purple areas have a 75-100% certainty of identifying elevations below the high tide and therefore are “More likely” to be vulnerable. Orange areas have a 25-74% certainty of being at elevations below the high tide and represent areas of “Possible” vulnerability.</p>
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Municipal Infrastructure Assessments

Mapping of different sea level rise scenarios can help to identify areas at potential risk and aid in planning for a sustainable community. This Geographic Information Systems (GIS) based study specifically assessed the following municipal infrastructure for the potential impacts of sea level rise:

1. Airports
2. Bridges
3. City Arterial Roads
4. City Hall
5. City Parks
6. County Parks
7. Community Redevelopment Areas (CRAs)
8. Evacuation Routes
9. Fire Rescue Stations
10. Hospitals
11. Law Enforcement Assets
12. Schools
13. Potable Water Treatment
14. Waste Water Treatment

This work was funded, in part, through a grant agreement from the Florida Department of Environmental Protection, Florida Coastal Management Program.

Municipal Scale Inundation Maps

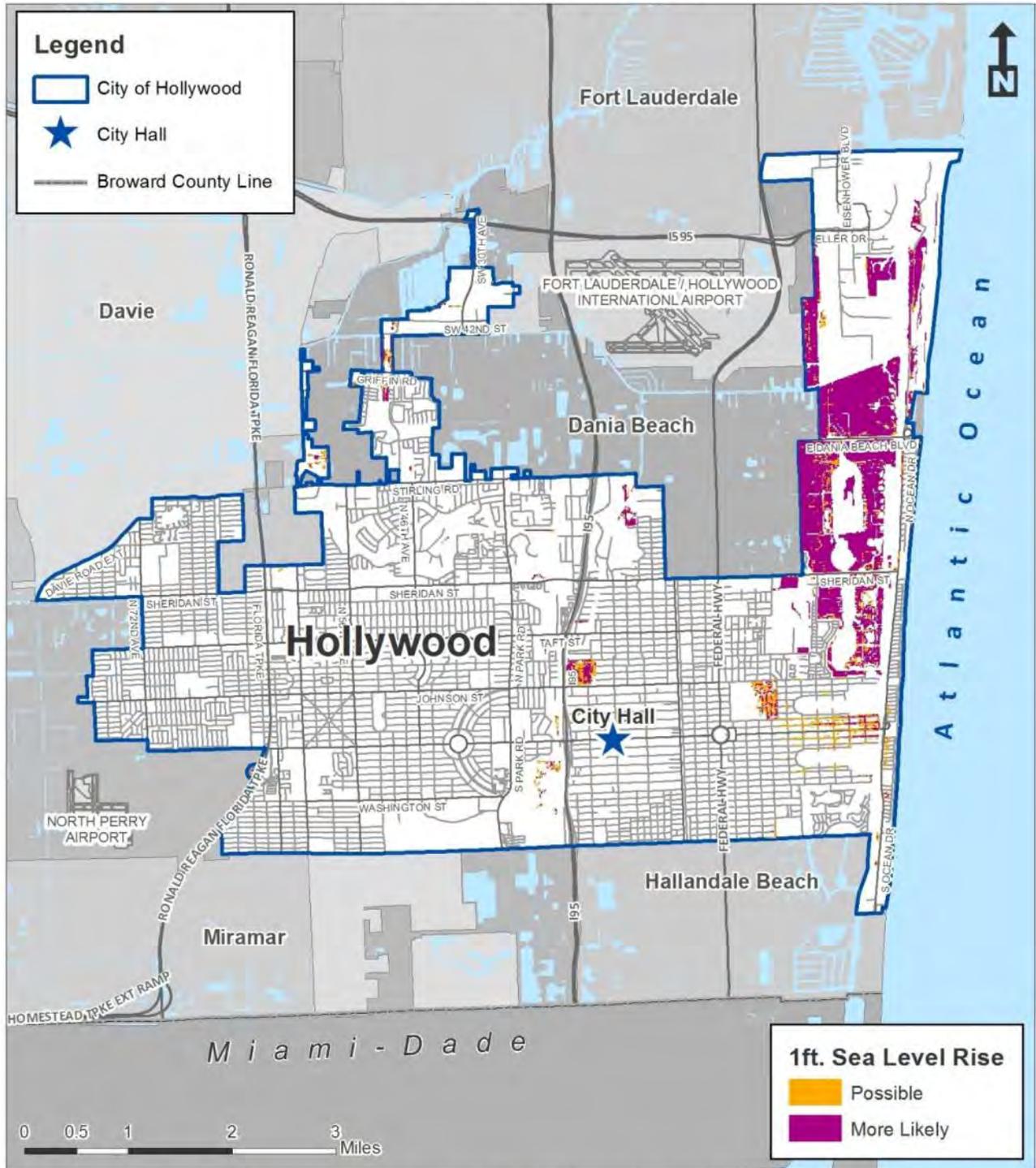
Municipal scale inundation maps provide at-a-glance overviews of areas within the City of Hollywood Municipal boundary that are low lying and likely to be vulnerable to flooding associated with sea level rise. The maps on the following pages show Hollywood overlaid with the inundation grid for a one and two foot sea level rise scenario. These maps primary purpose is to aid in the assessment of vulnerabilities to sea level rise.

The following table summarizes the area of land (in acres) affected during both the one and two foot scenarios, as shown in the municipal scale inundation maps. The table breaks down the vulnerable acres for each scenario into “more likely,” “possible,” and total. Additionally, the table shows the percentage of the total area of the city that is vulnerable. Note that percent values are rounded to the nearest two decimal places.

City of Hollywood Vulnerability to Sea Level Rise Table							
City of Hollywood	Total Area (Acres)	Area Vulnerable during One (1) Foot Scenario (Acres)		Total Area Vulnerable during One (1) Foot Scenario (Acres)	Acreage Vulnerable during Two (2) Foot Scenario (Acres)		Total Area Vulnerable during Two (2) Foot Scenario (Acres)
		More Likely	Possible		More Likely	Possible	
		18726.68	1111.99	246.87	1358.85	1660.11	445.17
		5.94%	1.32%	7.26%	8.86%	2.38%	11.24%

CITY OF HOLLYWOOD INUNDATION MAP

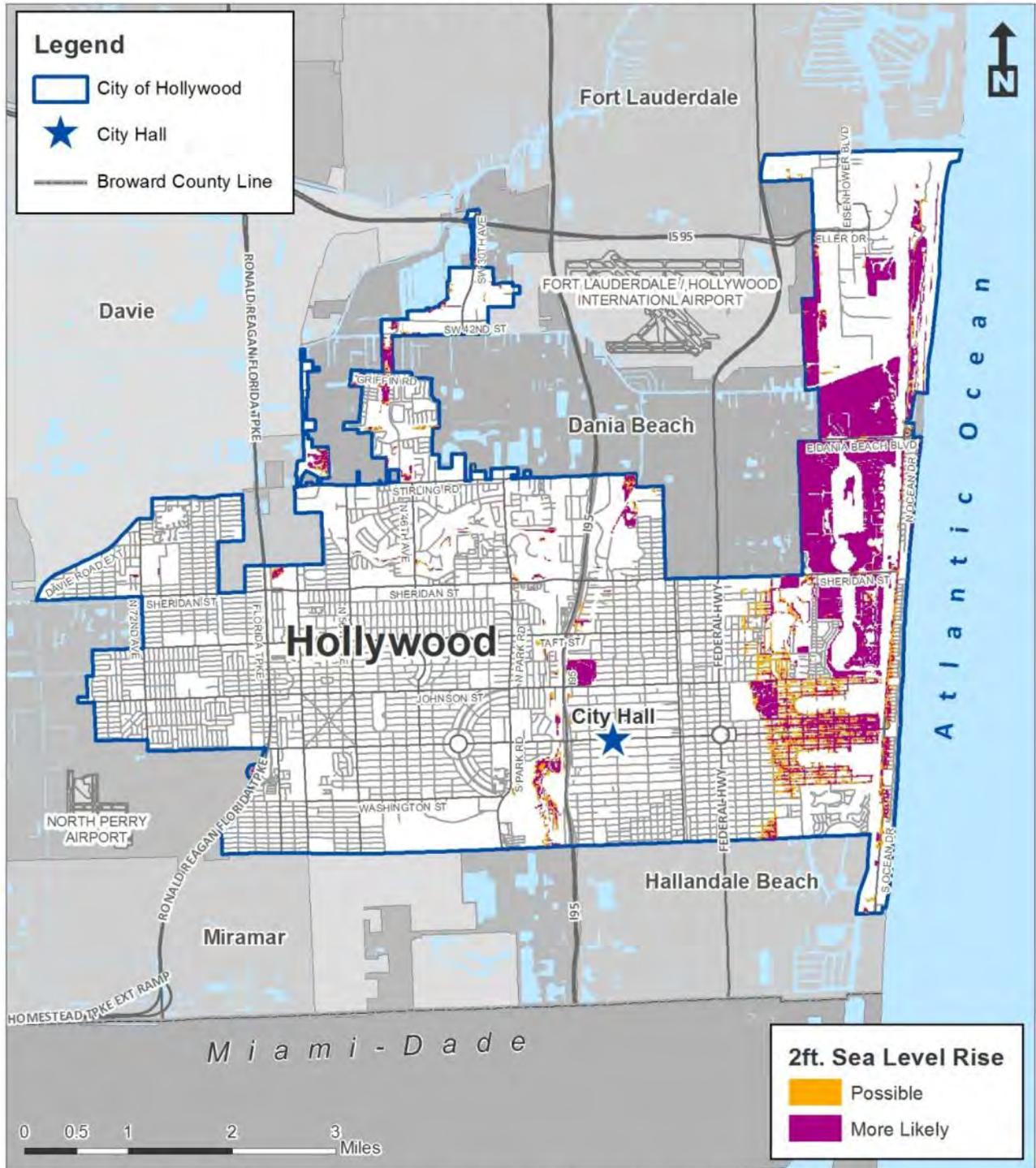
One Foot Sea Level Rise



This map is for conceptual purposes only and should not be used for legal boundary determinations.

CITY OF HOLLYWOOD INUNDATION MAP

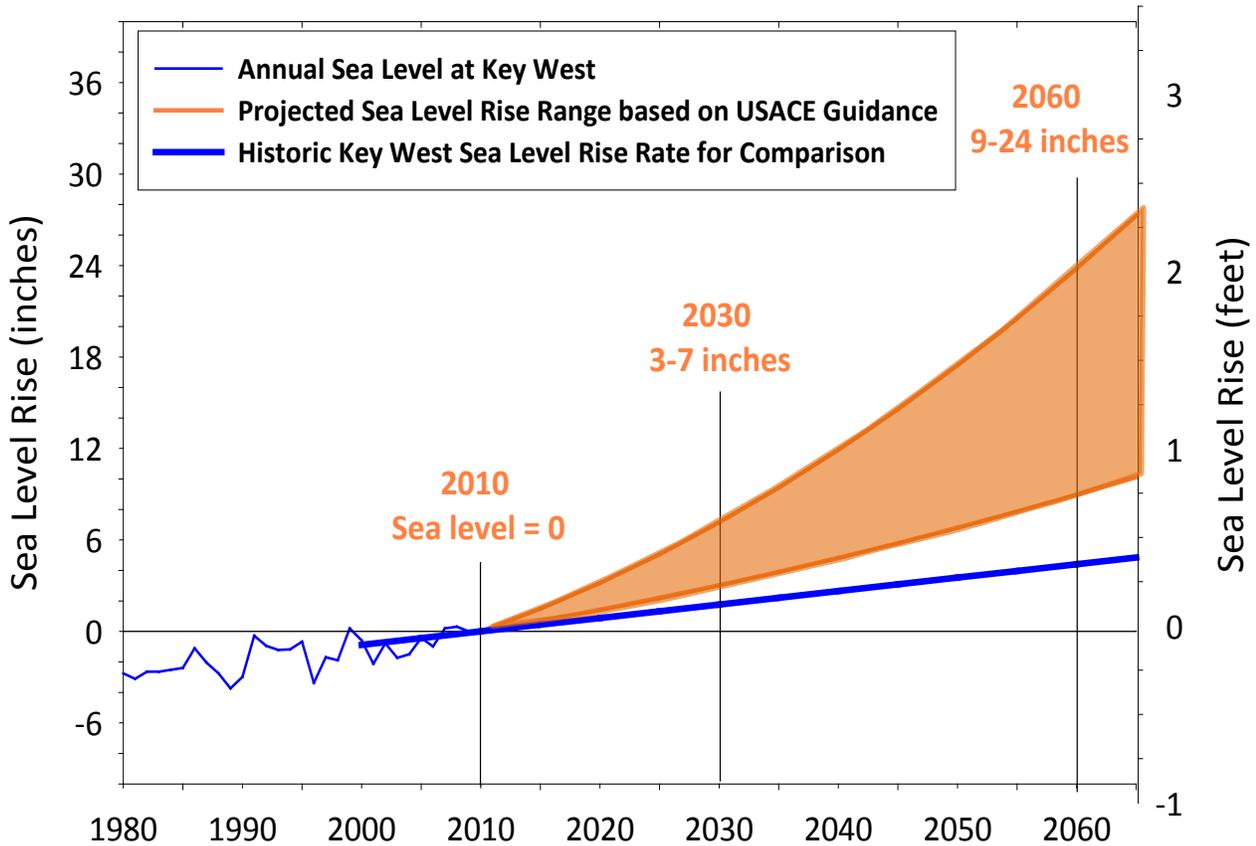
Two Foot Sea Level Rise



This map is for conceptual purposes only and should not be used for legal boundary determinations.

Unified Sea Level Rise Projection

The Southeast Florida Regional Climate Change Compact, collaboration among Monroe, Miami-Dade, Broward and Palm Beach Counties, convened a group of scientists and local experts to develop the Unified Southeast Florida Sea Level Rise Projection. This projection allows us to assign timeframes to the given sea level rise scenarios with a one foot sea level rise projected to occur between 2040-2070 and a two foot rise likely to occur between 2060 – 2115.



Unified Southeast Florida Sea Level Rise Projection for Regional Planning Purposes - This projection uses historic tidal information from Key West and was calculated by Kristopher Esterson from the United States Army Corps of Engineers using USACE Guidance (USACE 2009) intermediate and high curves to represent the lower and upper bound for projected sea level rise in Southeast Florida. Sea level measured in Key West over the past several decades is shown. The rate of sea level rise from Key West over the period of 1913 to 1999 is extrapolated to show how the historic rate compares to projected rates.

Vulnerability Assessment Methodology

Municipal infrastructure (fire rescue stations, schools, city owned arterial roads, etc.) was overlaid with the sea level rise inundation grid to review which infrastructure may be located at or below projected sea levels during a one or two foot scenario. This process was expedited with the creation of a python script that quickly locates infrastructure which may be vulnerable during a given sea level rise scenario. Each location was reviewed visually for confirmation. The report uses inundation maps developed in collaboration with the Southeast Florida Regional Climate Change Compact with vulnerability methods and oversight by the GIS Section of the Planning and Redevelopment Division. All measurements of area and length are based on GIS datasets of the county and depend on these for accuracy. Additionally, measurements and percent values given in this report are rounded, which may contribute to minor inconsistencies.

Results

The following findings pertain to the vulnerability assessments performed for each of the City of Hollywood municipal infrastructure in the list. Detailed maps and tables follow.

1. Airports:
There are no airports in the City of Hollywood.
2. Bridges:
Included is a graphic that provides the location of all 34 bridges located in the City of Hollywood overlaid by the inundation grid. The idea is to provide at-a-glance overviews of the vulnerability of bridges with the understanding that most navigable bridges are located on tidally influenced water bodies. Sea level will reduce the clearance under these bridges thereby reducing the number and size of craft that can pass under them.
3. City Arterial Roads:
A total of seven segments of arterial roads maintained by the City of Hollywood were found to be potentially vulnerable to sea level rise. Four segments have areas located at or below projected sea levels during the one foot scenario. Seven segments showed vulnerabilities during the two foot scenario. N 14th Ave, from Hollywood Blvd. to Sheridan St., may have up to 90% of the road length located at or below projected sea levels during the two foot scenario. Included is an overview map of the City of Hollywood with the location of all seven vulnerable arterial road segments up to a two foot sea level rise scenario, a table to assess each vulnerable segment, and large-scale maps of all vulnerable segments during the one and two foot scenarios.
4. City Hall:
The City of Hollywood city hall showed no vulnerability to sea level rise during the one and two foot scenarios.

5. City Parks:

A total of 18 city parks in the City of Hollywood were found to be potentially vulnerable to sea level rise. Ten parks were found to be vulnerable during the one foot scenario, and 18 during the two foot scenario. Six parks have over 50% of their area located at or below projected sea levels during the two foot scenario. Included in this report is an overview map of the City of Hollywood with the locations of all 18 vulnerable city parks up to a two foot scenario, a table to assess each vulnerable park, and large-scale maps of selected vulnerable parks during the one and two foot scenarios.

6. County Parks:

All three county parks in the City of Hollywood have areas with elevation located at or below projected sea levels during both the one and two foot scenarios. The West Lake/Anne Kolb Nature Center has an estimated 69% of area vulnerable during the one foot sea level rise scenario. An estimated 72% of the park is vulnerable during the two foot scenario. Note that part of the West Lake / Anne Kolb Nature Center is located in the City of Dania Beach. Included is an overview map of the City of Hollywood with the locations of all three vulnerable county parks, a table to assess each vulnerable park, and large-scale maps of all vulnerable parks during the one and two foot scenarios.

7. Community Redevelopment Areas (CRA)

The Hollywood Central and Hollywood Beach CRAs both have areas located at or below projected sea level during the one and two foot scenarios. Included is an overview map of the City of Hollywood with the locations of the vulnerable CRAs, a table to assess each vulnerable CRA, and large-scale maps of the vulnerable CRAs during the one and two foot scenario.

8. Evacuation Routes:

A total of four evacuation routes in the City of Hollywood are found to be potentially vulnerable to sea level rise. Included is an overview map of the City of Hollywood with the locations of vulnerable evacuation routes up to a two foot scenario, and a table to assess each vulnerable evacuation route.

9. Fire Rescue Stations:

Fire Rescue Stations and streets within a 1000-foot radius of aforementioned stations were analyzed for potential vulnerability to one and two foot scenarios of sea level rise. Inundated streets are likely to cause access issues. Of the seven fire rescue stations within the City of Hollywood, Fire Rescue 40 was found to have potential vulnerabilities to sea level rise. Included is an overview map of the City of Hollywood with the location of the vulnerable fire rescue station, a table to assess the vulnerable station, and large-scale maps of the vulnerable station during the one and two foot scenarios.

10. Hospitals:

No hospital building footprints in the City of Hollywood showed potential vulnerability to sea level rise during the one or two foot scenarios.

11. Law Enforcement Assets:

No law enforcement assets maintained by the City of Hollywood showed potential vulnerability to sea level rise during the one or two foot scenarios.

12. Schools:

No school building footprints in the City of Hollywood showed potential vulnerability to sea level rise during the one or two foot scenarios. Some school properties were marginally affected around property edges. Vulnerable areas were predominantly near existing drainage facilities; however, this report only assessed school building footprints.

13. Potable Water Treatment:

No potable water treatment plants in the City of Hollywood showed potential vulnerability to sea level rise during the one and two foot scenarios.

14. Waste Water Treatment:

There is one waste water treatment plant (WWTP) located in the City of Hollywood, the Hollywood South Regional WWTP. Up to 5% of the plant's parcel area may be vulnerable during the two foot scenario. The plant is not likely to be vulnerable during the one foot scenario. Included is an overview map of the City of Hollywood with the location of the vulnerable WWTP, a table to assess the plant's vulnerability, and large-scale maps of the plant during the one and two foot scenarios.

Conclusion

The information contained in this report is intended to be used for planning purposes to begin to identify and address municipal infrastructure at risk. Understanding that a one foot rise could occur in the next 30 years, adaptation strategies should be developed for locations identified as vulnerable in the first scenario. In addition to the vulnerability of infrastructure identified to lie at or below projected sea levels up to a two foot scenario; the municipality may also be at risk due to secondary threats such as flooding events and ponding, storm drainage, erosion, bridge clearance, etc. Sea level may continue to rise beyond two feet. The Hollywood municipal authorities should begin the development of policies to address these risks and institutionalize the consideration of climate issues for adaptation strategies.

Definitions

ArcGIS: Software for working with maps and geographic information.

Arterial Roads: A major or main road, but not a highway.

DEM: Digital Elevation Model – A digital model or 3D representation of a terrain’s surface using topographic information.

Geographic Information Systems (GIS): A system designed to capture, store, manipulate, analyze, manage, and present all types of geographical data.

LiDAR: A remote sensing technology whereby elevation is measured by illuminating a target with a laser and analyzing the reflected light.

PPA: Priority Planning Areas – Identifies areas influenced by tidal water bodies at increased risk of inundation under a 2 foot sea level rise scenario, projected to occur as soon as 2060.

Python Script: A widely-used general purpose programming language. It is used in ArcGIS to automate processes whereby new geographic information is created from existing data.

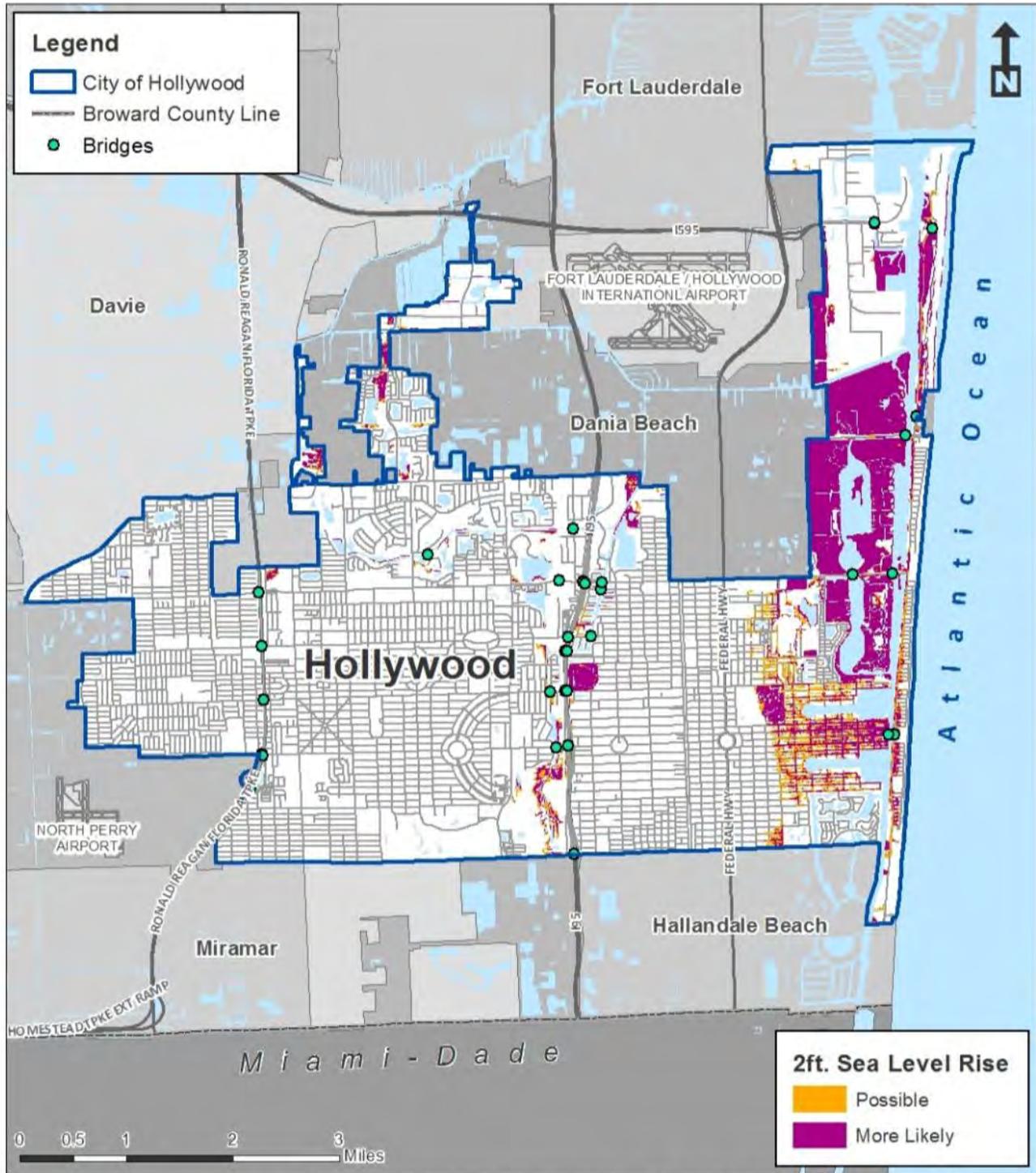
SLR: sea level rise grid

- “More Likely”: areas that have a 75-100% certainty of identifying elevations below the high tide and therefore are “More likely” to be vulnerable
- “Possible”: Orange areas have a 25-74% certainty of being at elevations below the high tide and represent areas of “Possible” vulnerability.

Vulnerable Area: The phrase “Vulnerable Area” as used in this document refers to land elevation at or below a given sea level rise scenario (one to two foot) as determined by the unified sea level rise projection grid.

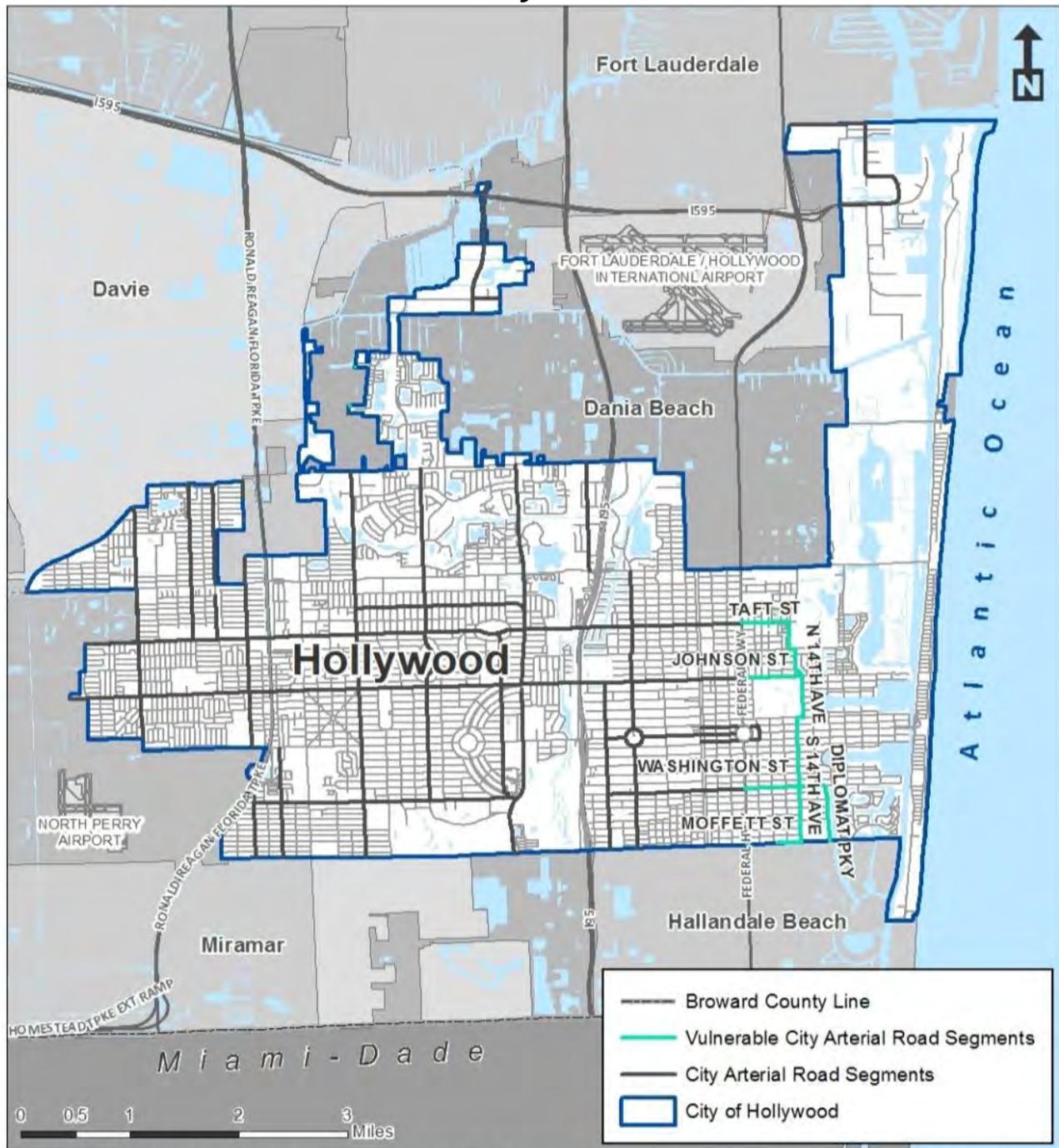
Bridges

Vulnerability Assessment



This map is for conceptual purposes only and should not be used for legal boundary determinations.

City Arterial Roads Vulnerability Assessment



This Map identifies areas at increased risk of inundation up to a two foot sea level rise scenario, projected to occur as soon as 2060.

This map is for conceptual purposes only and should not be used for legal boundary determinations.



Prepared By: Hannes Ziegler
Environmental Protection and Growth Management Department
Natural Resources Planning and Management Division

Date: 11/20/2013
DEP Agreement No. CM238 DEP 55-236(08/11)

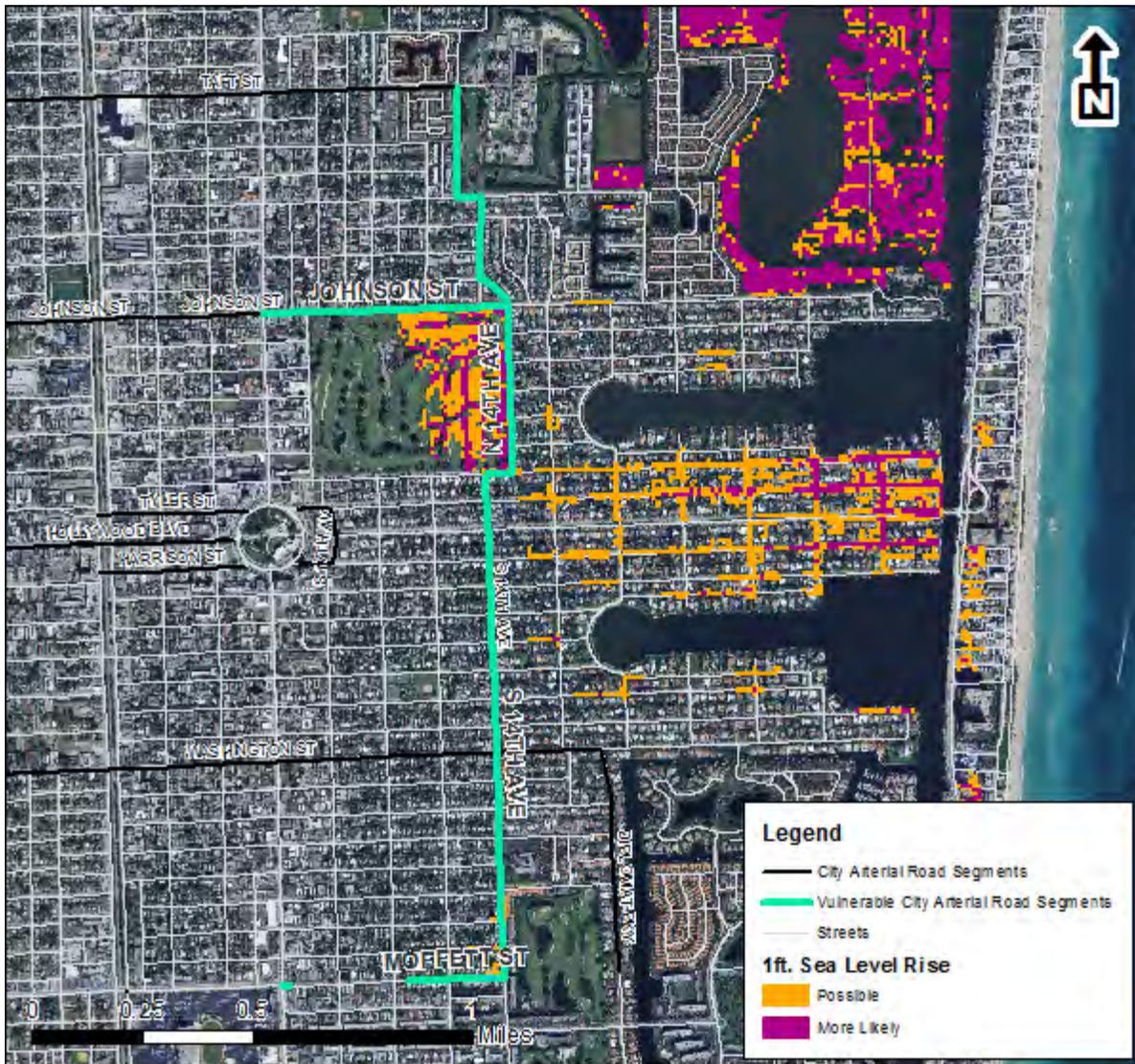
Table of Vulnerable City Arterial Roads

The following table lists all seven vulnerable segments of arterial roads maintained by the City of Hollywood. For each segment, the table provides the miles of vulnerable roadway and the total length with vulnerability expressed in percent during the one and two foot sea level rise scenarios. Note that the segment of N 14th Ave shown connects through a section of Polk St and Arthur St.

DIPLOMAT PKY, from Hollywood CL to Washington St			Total Miles
			0.51
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.00	0.00	0%
2 Foot	0.05	0.00	11%
JOHNSON ST, from US 1 to A1A			Total Miles
			0.56
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.07	0.00	12%
2 Foot	0.11	0.13	44%
MOFFETT ST, from US 1 to NE 14 Ave			Total Miles
			0.24
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.10	0.00	42%
2 Foot	0.06	0.15	85%
N 14TH AVE, from Hollywood Blvd to Sheridan St			Total Miles
			1.16
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.17	0.02	16%
2 Foot	0.38	0.65	90%

S 14TH AVE, from Hollywood CL to Hollywood Blvd			Total Miles
			1.02
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.12	0.00	11%
2 Foot	0.50	0.29	78%
TAFT ST, from US 1 to N 14 Ave			Total Miles
			0.45
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.00	0.00	0%
2 Foot	0.08	0.00	17%
WASHINGTON ST, US 1 to Diplomat Pkwy			Total Miles
			0.74
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.00	0.00	0%
2 Foot	0.17	0.07	33%

City-Owned Arterial Roads in Hollywood One Foot Sea Level Rise Scenario



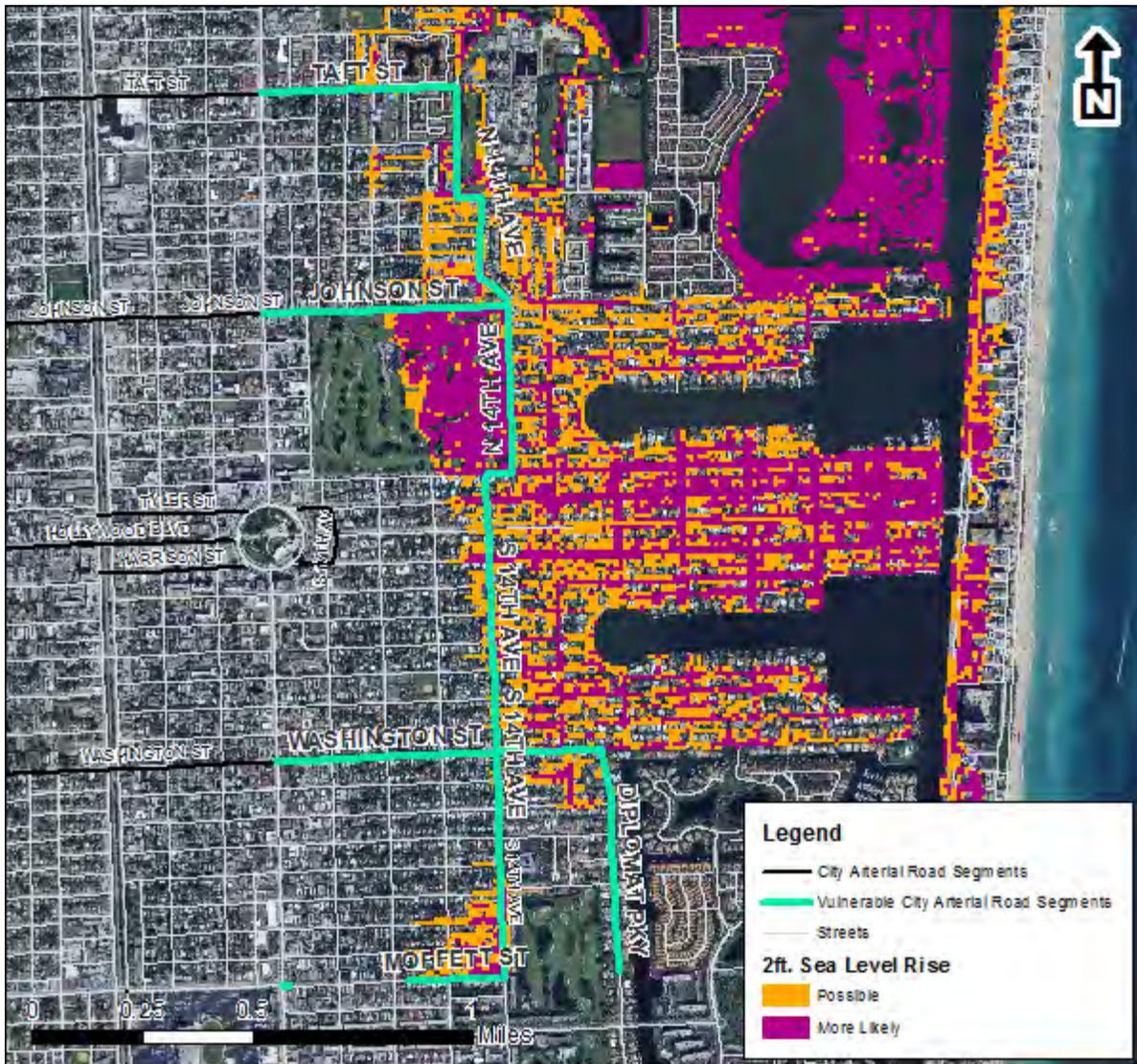
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Prepared By: H. Ziegler
 Environmental Protection and Growth Management Department
 Natural Resources Planning and Management Division

Date: 11/20/2013
 DEP Agreement No. CM238 DEP 55-236(08/11)

This Map provides a closer view of arterial road segments maintained by the City of Hollywood that lie at or below the projected one foot sea level rise scenario. Among the most vulnerable segments are Moffett St. (42% of segment length vulnerable) and N 14th Ave (16% of segment length vulnerable). Note that the segment of N 14th Ave shown connects through a section of Polk St and Arthur St.

City-Owned Arterial Roads in Hollywood Two Foot Sea Level Rise Scenario



This map is for conceptual purposes only and should not be used for legal boundary determinations.

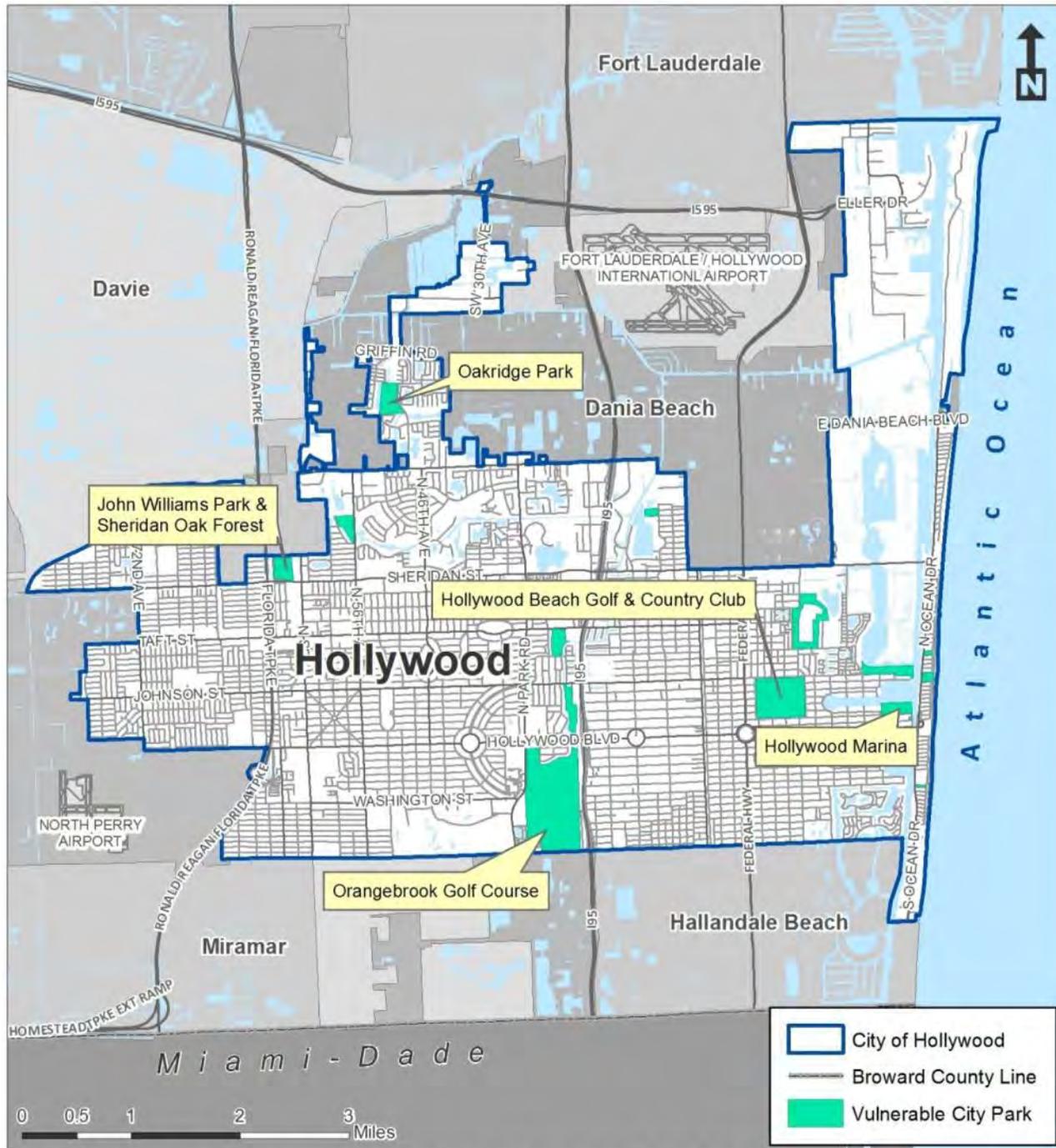

 Prepared By: H. Ziegler
 Environmental Protection and Growth Management Department
 Natural Resources Planning and Management Division

Date: 11/26/2013
 DEP Agreement No. CM238 DEP 55-236(08/11)

This Map provides a closer view of arterial road segments maintained by the City of Hollywood that lie at or below the projected two foot sea level rise scenario. Among the most vulnerable segments are N 14th Ave (90% of segment length vulnerable), Moffett St (85% of segment length vulnerable), and S 14th Ave (78% of segment length vulnerable). Note that the segment of N 14th Ave shown connects through a section of Polk St and Arthur St.

City Parks

Vulnerability Assessment



This Map identifies areas at increased risk of inundation up to a two foot sea level rise scenario, projected to occur as soon as 2060.

This map is for conceptual purposes only and should not be used for legal boundary determinations.



Prepared By: Hannes Ziegler
 Environmental Protection and Growth Management Department
 Natural Resources Planning and Management Division

Date: 11/26/2013
 DEP Agreement No. CM238 DEP 55-236(08/11)

Table of Vulnerable City Parks

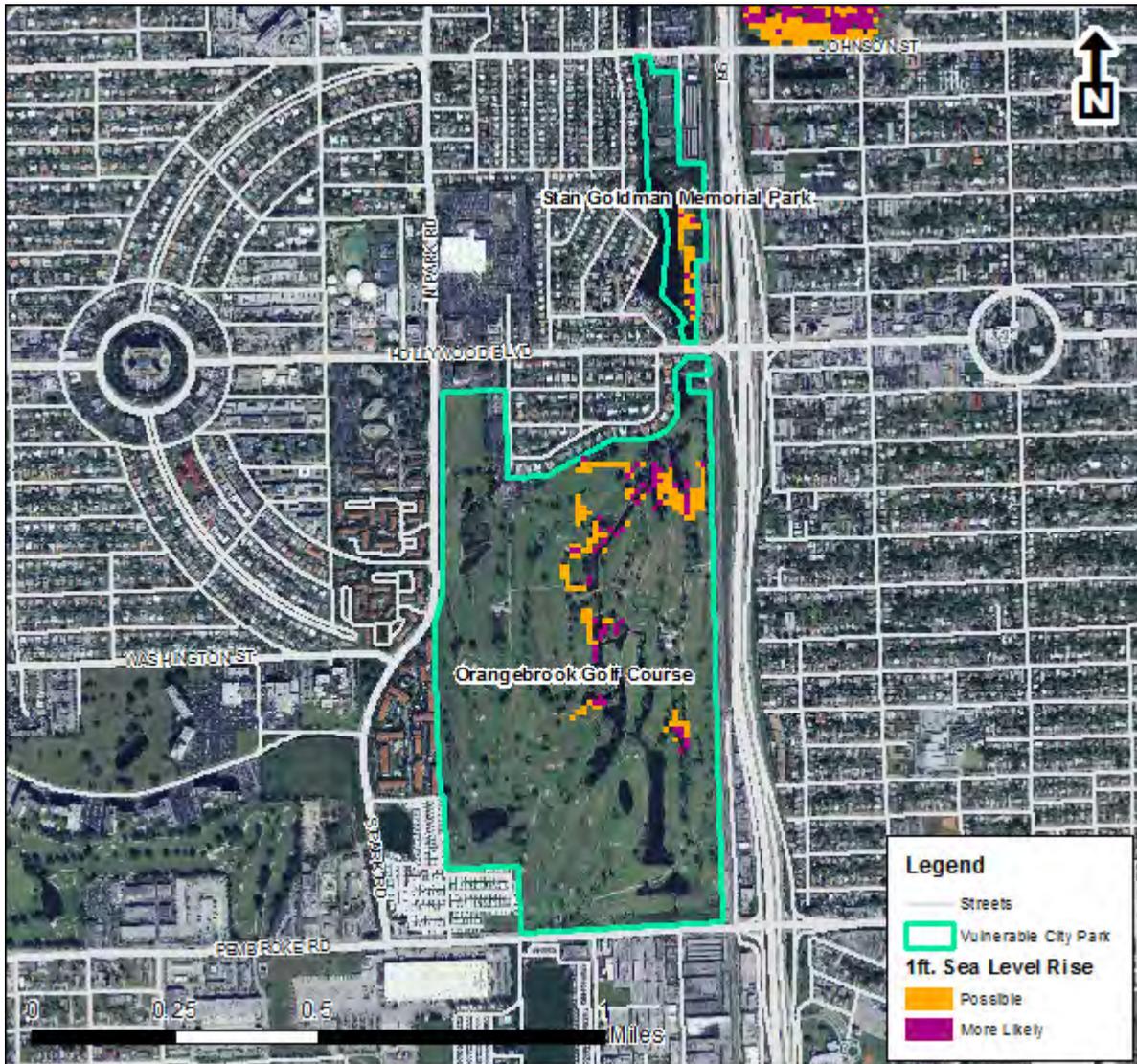
The following table lists all 18 city parks with vulnerabilities. Each park was assessed for the one and two foot sea level rise scenarios. For each park the table provides the acreage of vulnerable area, and the total area of the park with vulnerability expressed in percent. These estimates are based on the area of the entire park and the inundation grid and do not subtract the area of water bodies within the park to determine the percent value.

Eco Grande Golf Course			Total Acres
			44.80
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.00	0.00	0%
2 Foot	8.31	5.83	32%
Eppleman Park			Total Acres
			0.29
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.19	0.04	77%
2 Foot	0.00	0.29	100%
Holland Park			Total Acres
			24.11
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	1.74	10.33	50%
2 Foot	1.97	13.60	65%
Hollywood Beach Bandshell / Theater			Total Acres
			5.35
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.00	0.00	0%
2 Foot	0.20	0.29	9%
Hollywood Beach Community Center			Total Acres
			1.56
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.00	0.00	0%
2 Foot	0.29	0.51	52%

Hollywood Beach Golf & Country Club			Total Acres
			102.83
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	20.19	12.46	32%
2 Foot	6.49	39.51	45%
Hollywood Marina			Total Acres
			18.82
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.95	0.61	8%
2 Foot	0.98	2.28	17%
Hollywood South Beach Cultural Center			Total Acres
			0.98
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.00	0.00	0%
2 Foot	0.15	0.07	22%
John B Kooser Memorial Park			Total Acres
			0.24
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.05	0.16	88%
2 Foot	0.00	0.21	88%
John Williams Park			Total Acres
			10.61
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.00	0.00	0%
2 Foot	0.10	0.06	1%
Keating Park			Total Acres
			0.12
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.00	0.00	0%
2 Foot	0.01	0.08	75%
Martin Luther King Jr Park / Commcenter			Total Acres
			5.25
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.39	2.69	59%
2 Foot	0.23	3.31	67%
Oak Lake Park			Total Acres
			15.24
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.00	0.00	0%
2 Foot	0.02	0.63	4%

Oakridge Park			Total Acres
			30.21
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.00	0.00	0%
2 Foot	2.83	0.80	12%
Orangebrook Golf Course			Total Acres
			260.97
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	7.46	3.44	4%
2 Foot	26.76	29.72	22%
Rotary Park			Total Acres
			17.28
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.40	0.52	5%
2 Foot	2.42	1.61	23%
Sheridan Oak Forest			Total Acres
			12.88
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	0.69	0.00	5%
2 Foot	2.47	3.84	49%
Stan Goldman Memorial Park			Total Acres
			19.64
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	1.66	0.34	10%
2 Foot	2.32	3.55	30%

Orangebrook Golf Course, Stan Goldman Memorial Park One Foot Sea Level Rise Scenario



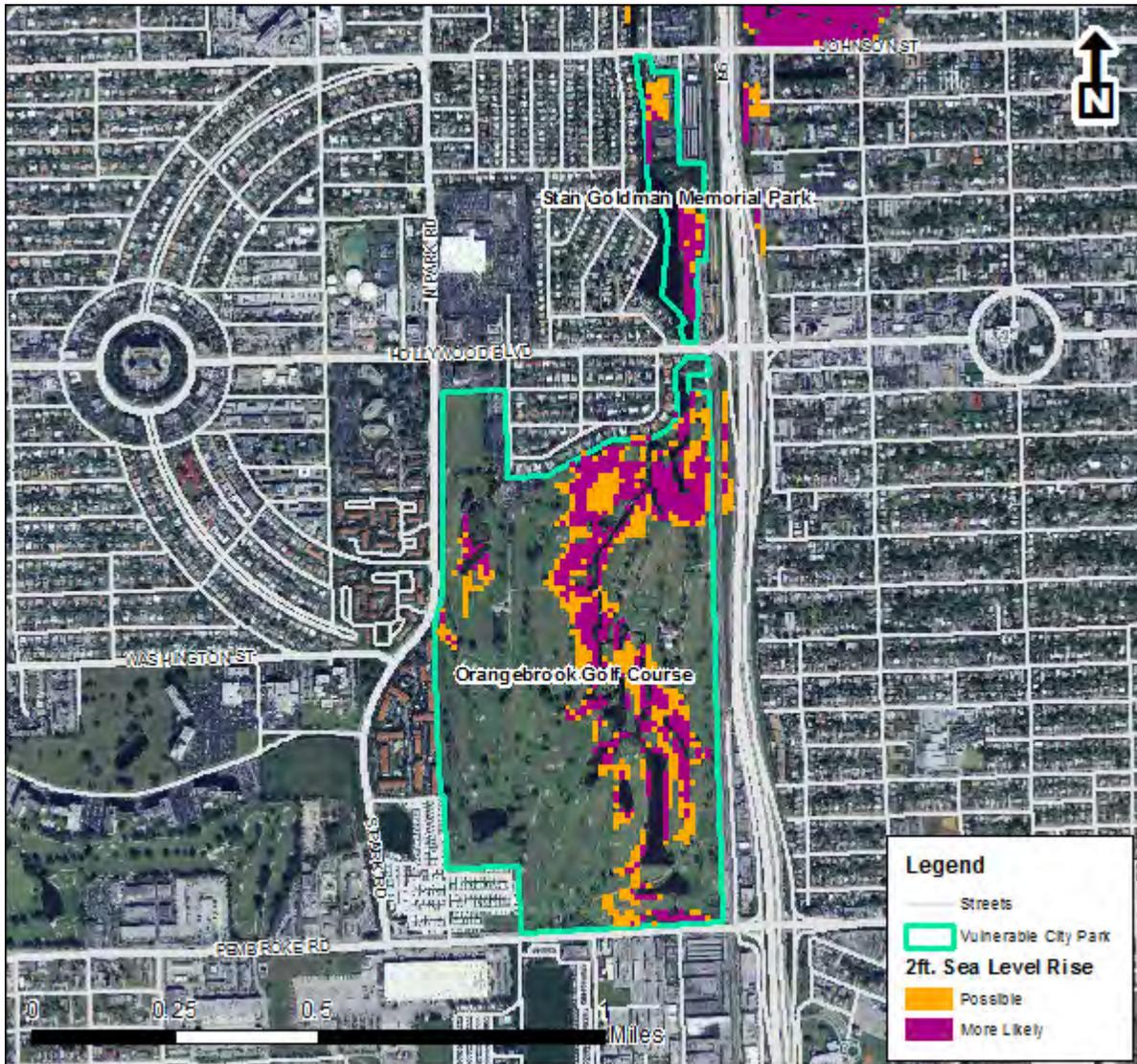
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BROWARD COUNTY
 Prepared By: M. Ziegler
 Environmental Protection and Growth Management Department
 Natural Resources Planning and Management Division

Date: 11/26/2013
 DEP Agreement No. CM238 DEP 55-236(08/11)

This Map shows Orangebrook Golf Course and Stan Goldman Memorial Park during the one foot sea level rise scenario. With 261 Acres, Orangebrook is one of the largest parks in the City of Hollywood. Orangebrook may have up to 4% of land located at or below projected sea levels during the one foot scenario.

Orangebrook Golf Course, Stan Goldman Memorial Park Two Foot Sea Level Rise Scenario



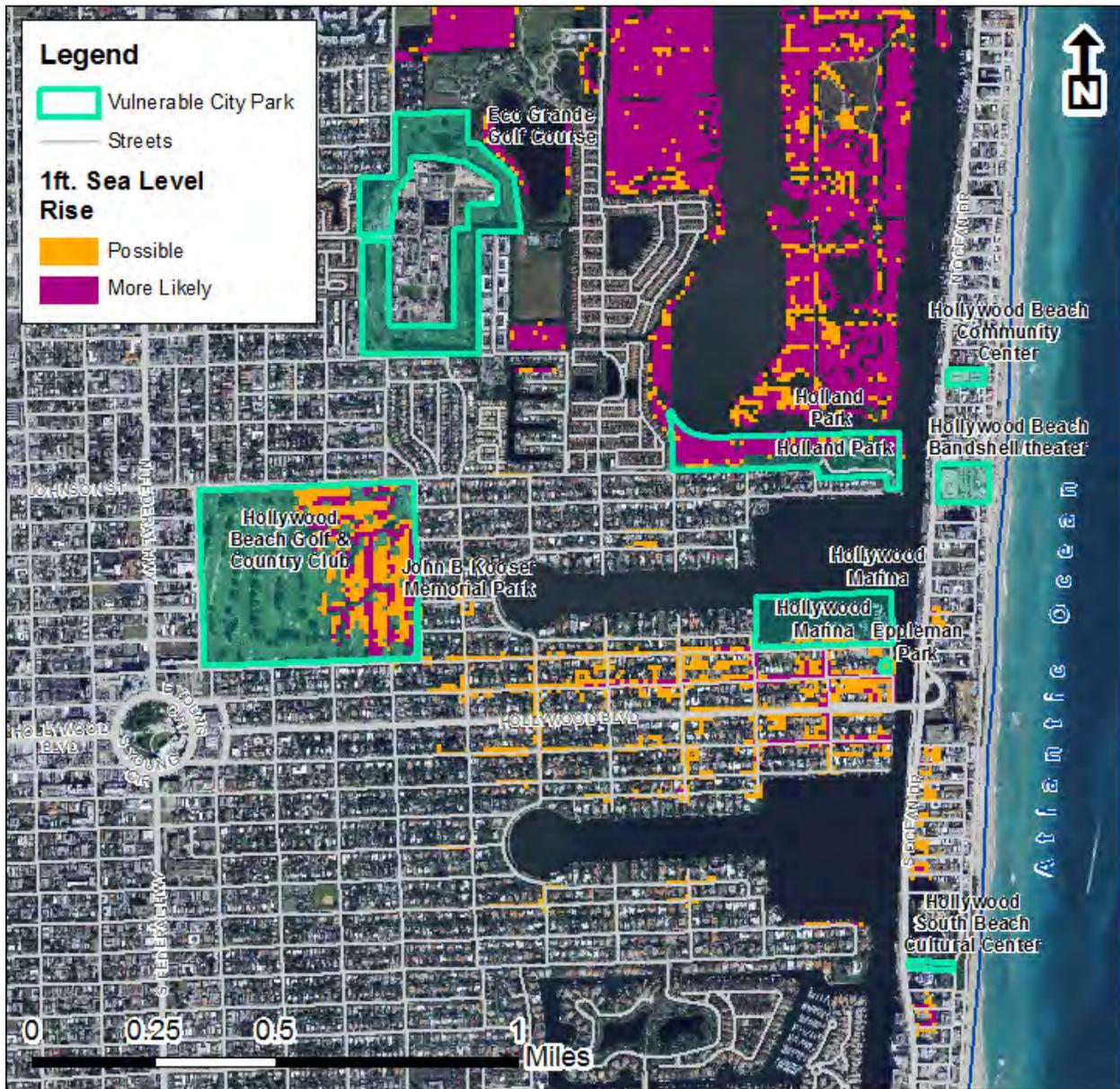
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BROWARD COUNTY
 Prepared By: H. Ziegler
 Environmental Protection and Growth Management Department
 Natural Resources Planning and Management Division

Date: 11/26/2013
 DEP Agreement No. CM238 DEP 55-236(08/11)

This Map shows Orangebrook Golf Course and Stan Goldman Memorial Park during the two foot sea level rise scenario. With 261 Acres, Orangebrook is one of the largest parks in the City of Hollywood. Orangebrook may have up to 22% of land located at or below projected sea levels during the two foot sea level rise scenario.

Parks in the Hollywood Lakes Area One Foot Sea Level Rise Scenario



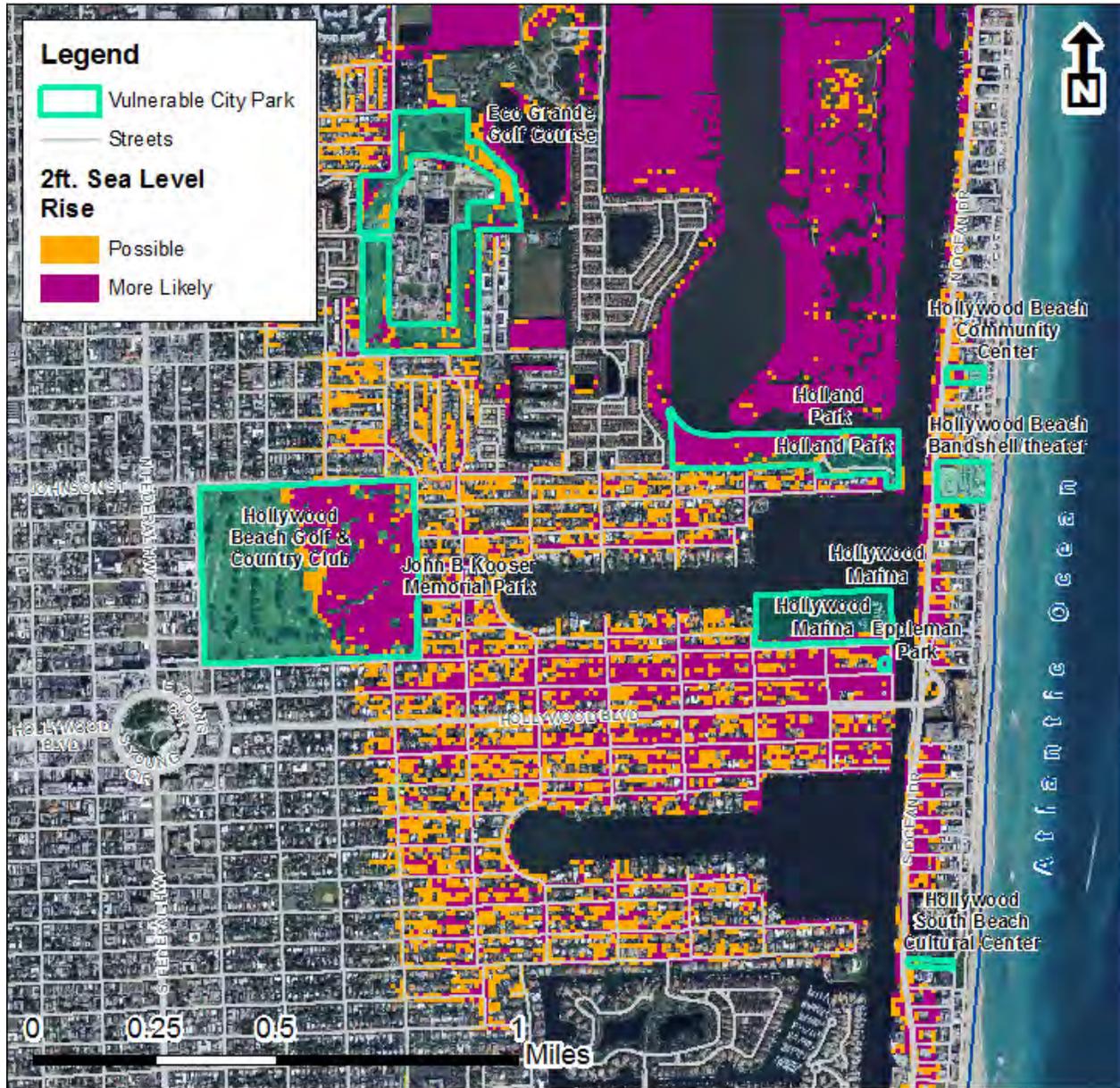
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BROWARD COUNTY
 Prepared By: Hannes Ziegler
 Environmental Protection and Growth Management Department
 Natural Resources Planning and Management Division

Date: 4/2/2014
 DEP Agreement No. CM238 DEP 55-238(08/11)

This map shows city parks in the Hollywood Lakes area during the one foot sea level rise scenario. This area of Hollywood has a large number of city parks and a large amount of land located at or below projected sea levels - all near tidally influenced water bodies. Among the vulnerable parks in this area are the Hollywood Marina (8%), Hollywood Beach Golf & Country Club (32%), Holland Park (50%), and Eppleman Park (77%), etc. Note also that many of the neighborhood streets and several homes in the Hollywood Lakes area lie at or below projected sea levels.

Parks in the Hollywood Lakes Area Two Foot Sea Level Rise Scenario



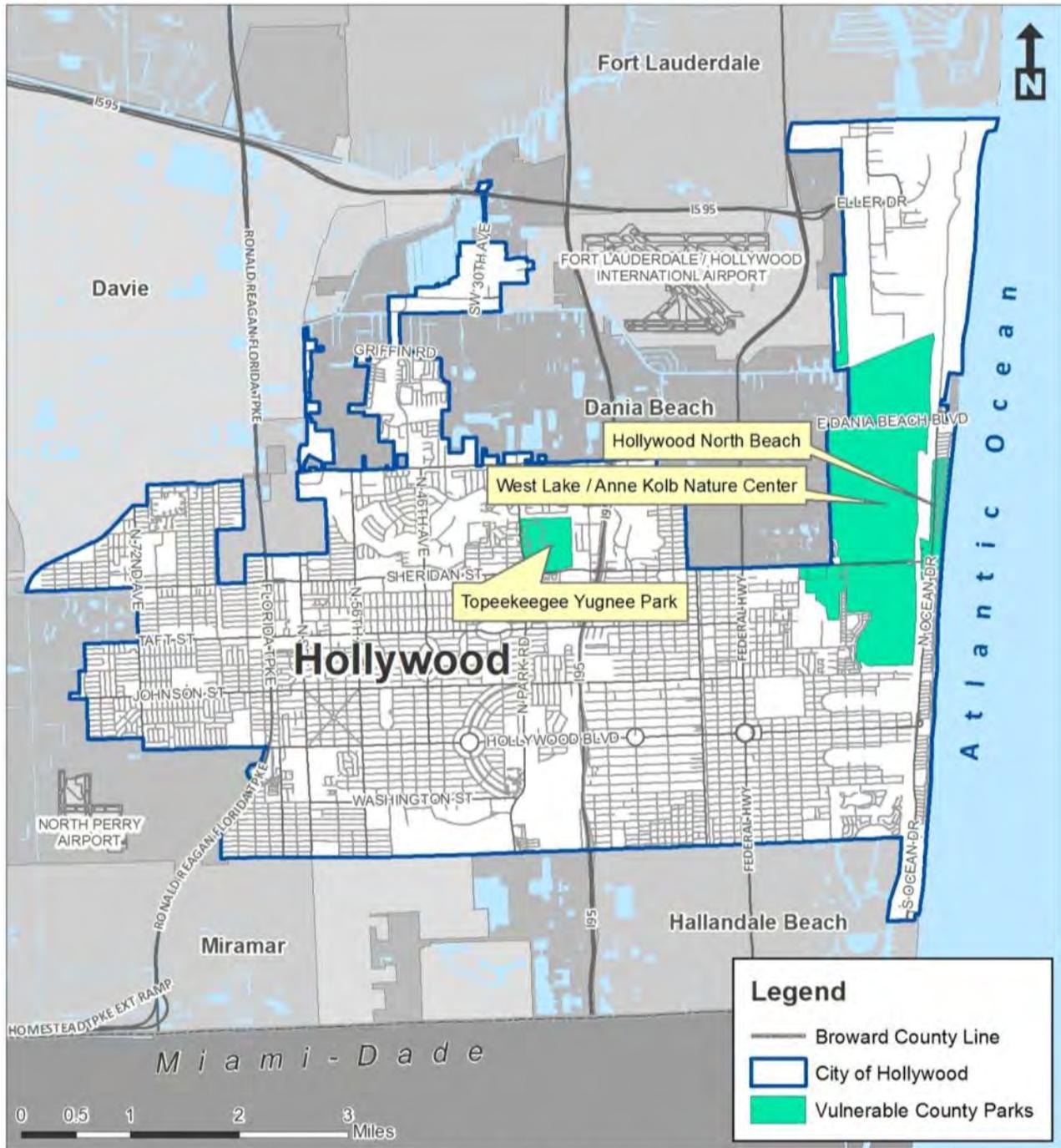
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BROWARD COUNTY Florida
 Prepared By: Hannes Ziegler
 Environmental Protection and Growth Management Department
 Natural Resources Planning and Management Division

Date: 4/2/2014
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This map shows city parks in the Hollywood Lakes area during the two foot sea level rise scenario. This area of Hollywood has a large number of city parks and a large amount of land located at or below projected sea levels - all near tidally influenced water bodies. Among the vulnerable parks in this area are the Hollywood Marina (17%), Hollywood Beach Golf & Country Club (45%), Holland Park (65%), and Eppleman Park (100%), etc. Note also that many of the neighborhood streets and homes in the Hollywood Lakes area lie at or below projected sea levels.

County Parks Vulnerability Assessment



This Map identifies areas at increased risk of inundation up to a two foot sea level rise scenario, projected to occur as soon as 2060.

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Prepared By: Hannes Ziegler
Environmental Protection and Growth Management Department
Natural Resources Planning and Management Division

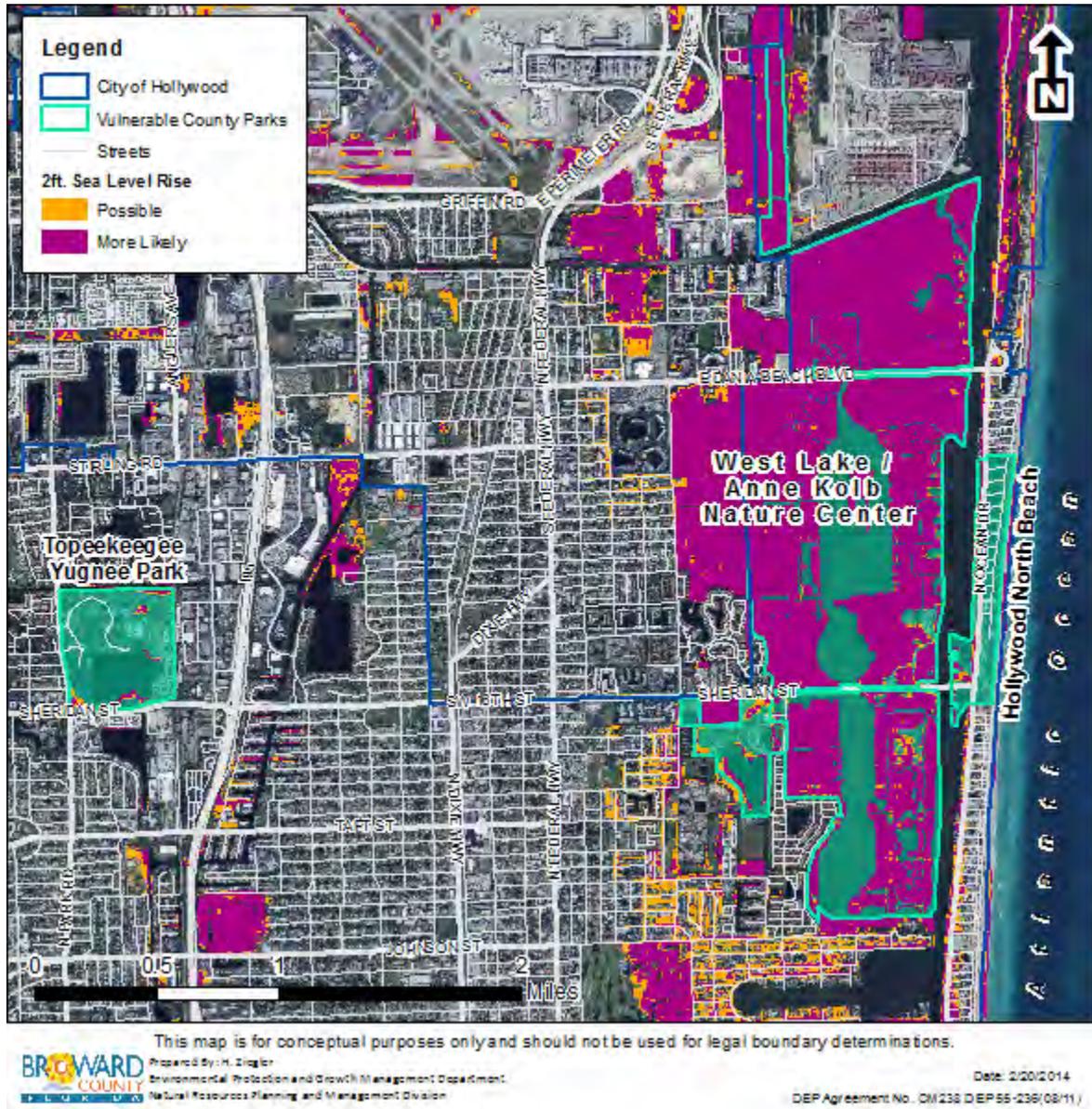
Date: 11/26/2013
DEP Agreement No. CM238 DEP 55-236(08/11)

Table of Vulnerable County Parks

The following table lists vulnerable county parks in the City of Hollywood. Each county park was assessed for vulnerabilities during the one and two foot sea level rise scenarios. Note that part of the West Lake / Anne Kolb Nature Center is located in the City of Dania Beach. The data in this table represents the entire West Lake / Anne Kolb Nature Center, not only the portion within the City of Hollywood. For each park the table provides the acreage of vulnerable area, and the total area of the park with vulnerability expressed in percent. These estimates are based on the area of the entire park and the inundation grid and do not subtract the area of water bodies within the park to determine the percent value.

Hollywood North Beach			Total Acres
			90.41
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	2.34	3.61	7%
2 Foot	4.68	9.52	16%
Topeekeegee Yugnee Park			Total Acres
			138.75
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	1.06	2.12	2%
2 Foot	2.97	5.26	6%
West Lake / Anne Kolb Nature Center			Total Acres
			1565.04
SLR Scenario	Possible	More Likely	Percent Total
1 Foot	92.00	981.87	69%
2 Foot	24.94	1101.64	72%

Hollywood County Parks Two Foot Sea Level Rise Scenario



This map shows County Parks in the City of Hollywood during the two foot sea level rise scenario. All three County Parks in the City of Hollywood have areas located at or below projected sea level during the two foot scenario. The most vulnerable park is the West Lake/ Anne Kolb Nature Center with an estimated 72% vulnerable. Hollywood North Beach has an estimated 16% of area vulnerable, and Topeekegee Yugnee Park an estimated 6% of area vulnerable. Note that part of the West Lake / Anne Kolb Nature Center is located in the City of Dania Beach (not shown on this map). These estimates are based on the area of the entire park and the inundation grid and do not subtract the area of water bodies within the park to determine the percent value.

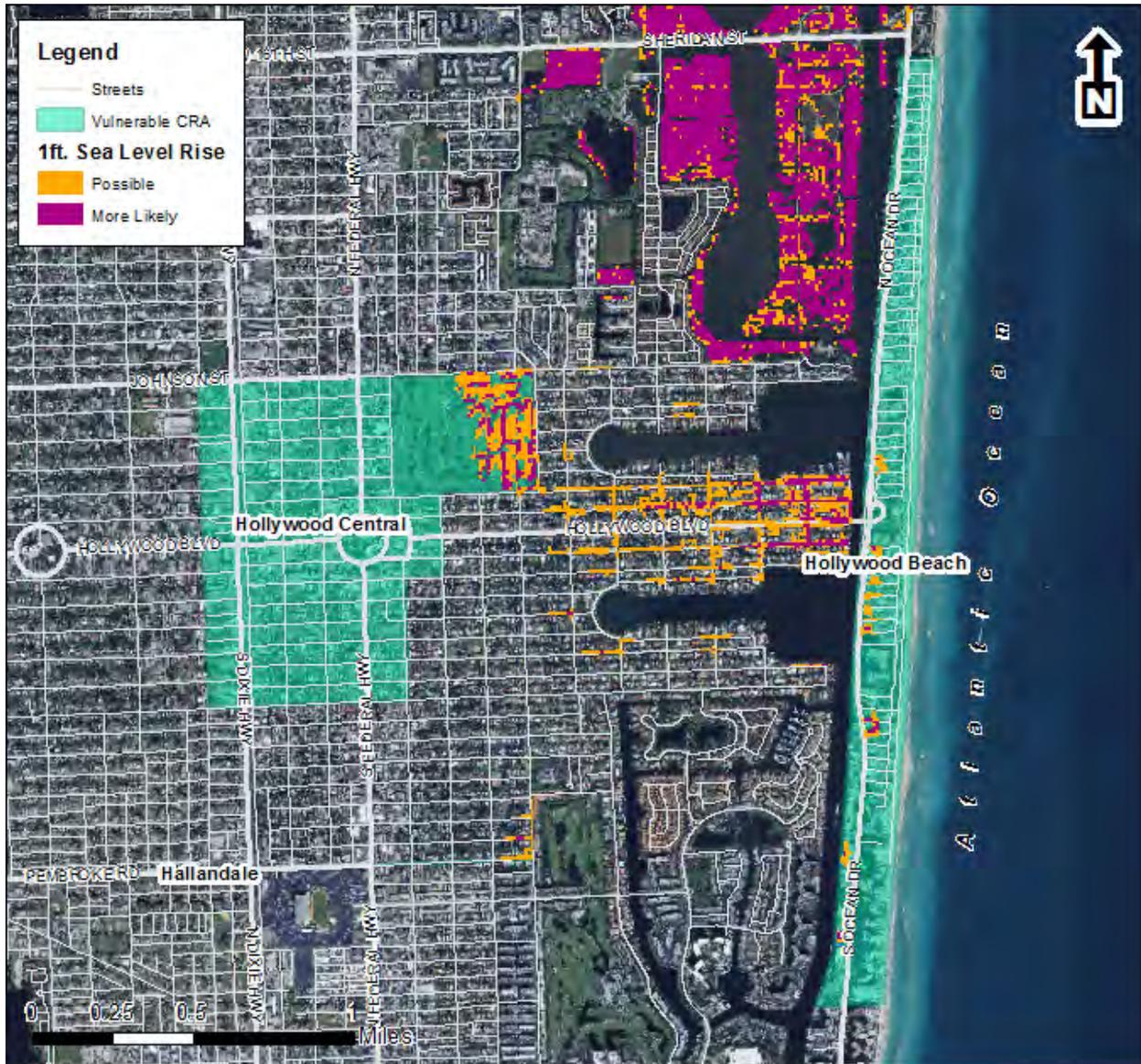
Table of Vulnerable Community Redevelopment Areas (CRA)

The following table lists CRAs within the City of Hollywood that have vulnerable areas during the one and two foot sea level rise scenarios. For each scenario, vulnerable CRAs receive a Y for yes, or an N for no.

Vulnerable Community Redevelopment Areas City of Hollywood		
CRA	One Foot Scenario(Y/N)	Two Foot Scenario (Y/N)
Hollywood Beach	Y	Y
Hollywood Central	Y	Y

Key: For Y/N, Y = Yes, N = No

Hollywood Central and Hollywood Beach Community Redevelopment Areas (CRA) One Foot Sea Level Rise Scenario



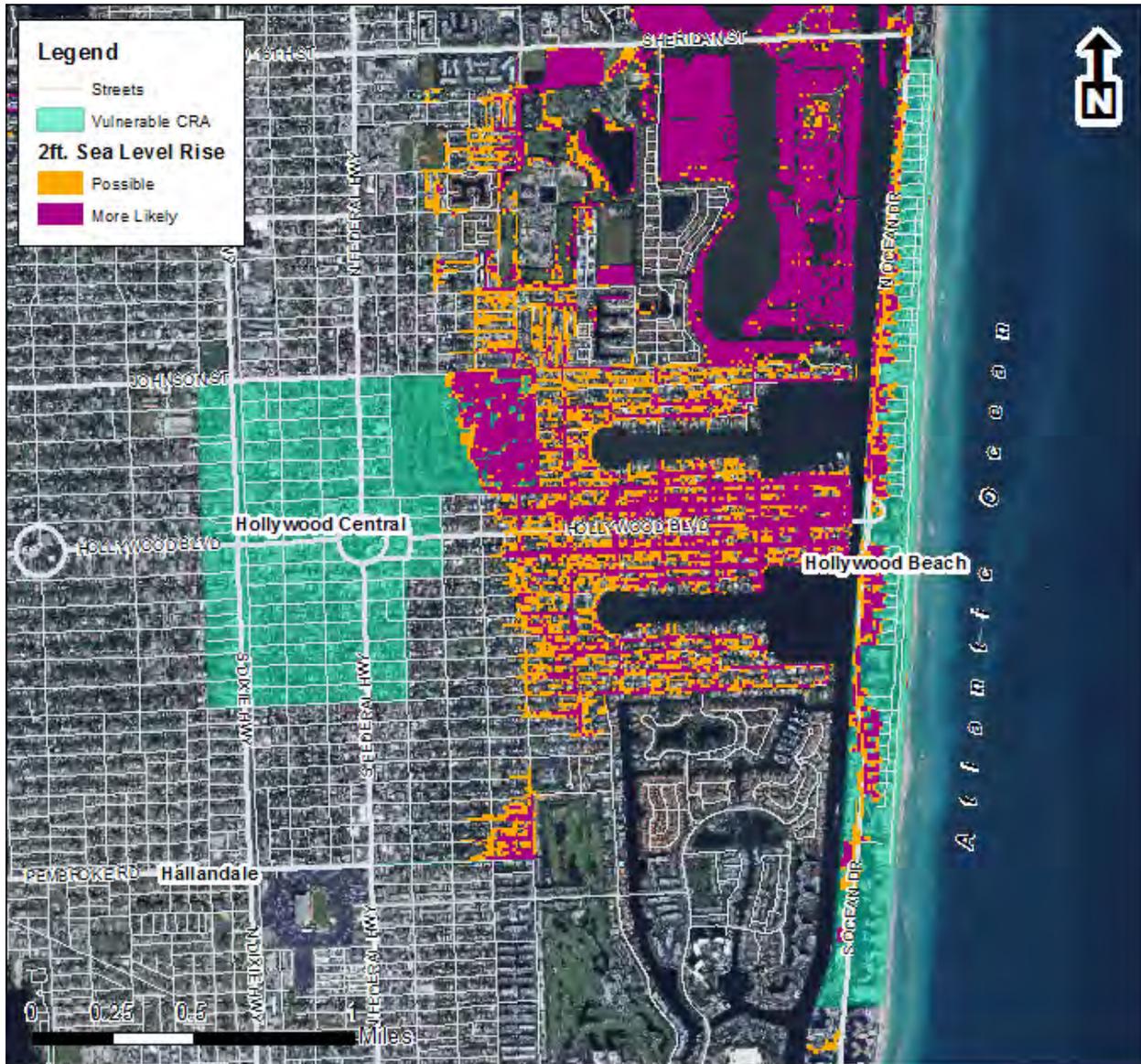
This map is for conceptual purposes only and should not be used for legal boundary determinations.

BROWARD COUNTY
FLORIDA
Prepared By: H. Ziegler
Environmental Protection and Growth Management Department
Natural Resources Planning and Management Division

Date: 11/26/2013
DEP Agreement No. CM238 DEP 55-236 (08/11)

This map shows the Hollywood Central and Hollywood Beach Community Redevelopment Area (CRA) boundaries overlaid by the one foot sea level rise scenario. Note that both CRAs are located near the coastline and/or tidally influenced waterways. Both CRAs have areas that lie at or below projected sea levels during the one foot scenario.

Hollywood Central and Hollywood Beach Community Redevelopment Areas (CRA) Two Foot Sea Level Rise Scenario



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BROWARD COUNTY
FLORIDA
Prepared By: H. Ziegler
Environmental Protection and Growth Management Department
Natural Resources Planning and Management Division

Date: 11/26/2013
DEP Agreement No. CM238 DEP 55-236 (08/11)

This map shows the Hollywood Central and Hollywood Beach Community Redevelopment Area (CRA) boundaries overlaid by the two foot sea level rise scenario. Note that both CRAs are located near the coastline and/or tidally influenced waterways. Both CRAs have areas that lie at or below projected sea levels during the two foot scenario. Due to the coastal ridge, most vulnerable areas in the Hollywood Beach CRA lie *behind* (West of) the barrier island, away from the beach. Hollywood Central CRA's only vulnerable area lies completely within Hollywood Beach Golf & Country Club.

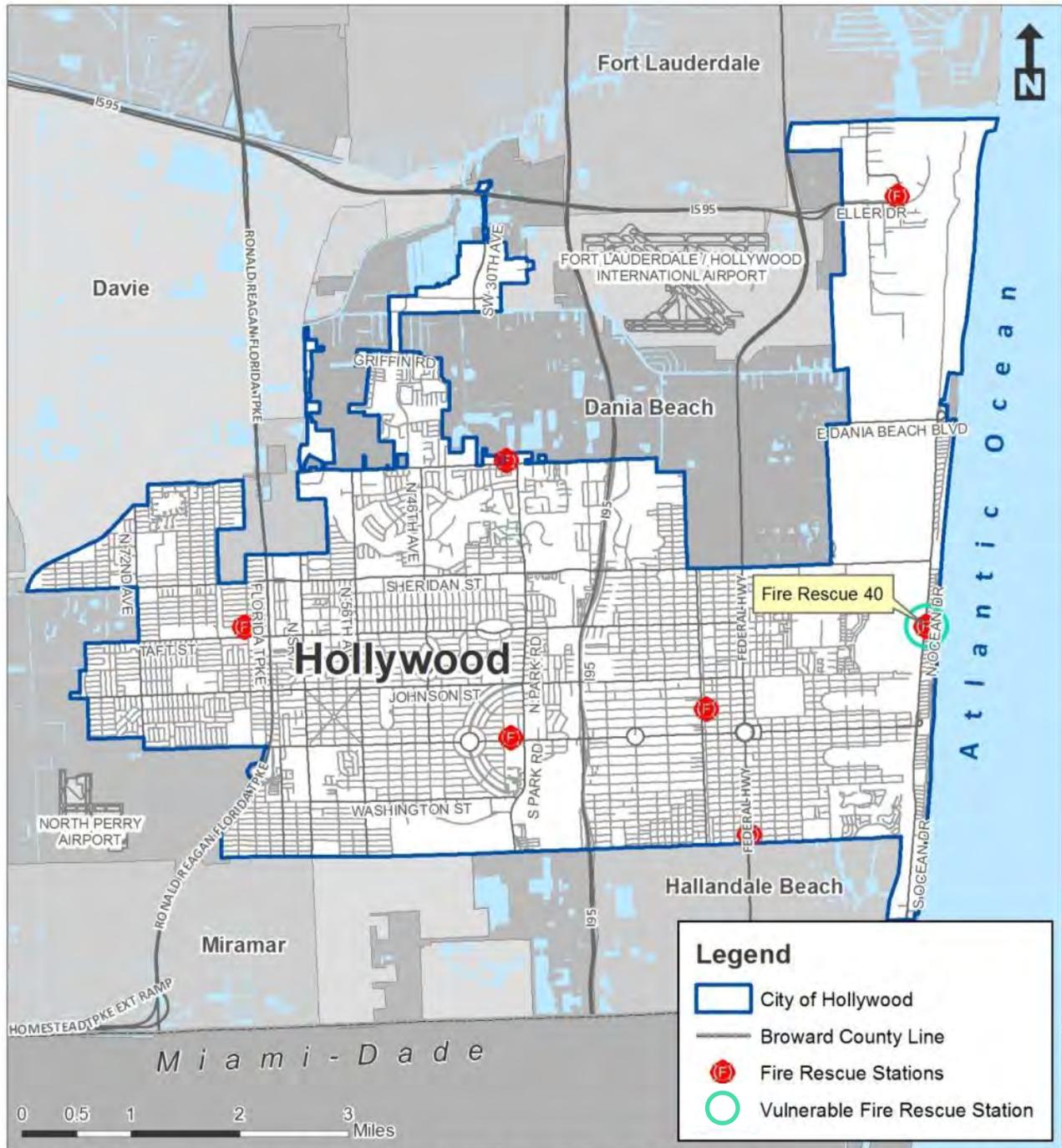
Table of Vulnerable Evacuation Routes

The following table lists road names for all evacuation routes within the City of Hollywood that have vulnerable areas during the one and two foot sea level rise scenarios. There are four total vulnerable routes. For each scenario, vulnerable routes receive a Y for yes, or an N for no.

Vulnerable Evacuation Routes City of Hollywood		
Roadway	One Foot Scenario(Y/N)	Two Foot Scenario (Y/N)
Dania Beach Blvd.	N	Y
Sheridan St.	N	Y
State Hwy. 820 (Hollywood Blvd.)	Y	Y
State Hwy. A1A (Ocean Blvd.)	Y	Y

Key: For Y/N, Y = Yes, N = No

Fire Rescue Stations Vulnerability Assessment



This Map identifies areas at increased risk of inundation up to a two foot sea level rise scenario, projected to occur as soon as 2060.

This map is for conceptual purposes only and should not be used for legal boundary determinations.



Prepared By: Hannes Ziegler
Environmental Protection and Growth Management Department
Natural Resources Planning and Management Division

Date: 12/2/2013
DEP Agreement No. CM238 DEP 55-236(08/11)

Table of Vulnerable Fire Rescue Stations

The following table provides information on Fire Rescue Stations in the City of Hollywood which have street inundation and access issues within a 1000-foot radius during either the one or two foot sea level rise scenarios. Out of the seven stations found within the City of Hollywood, Fire Rescue 40 may have street access issues and portions of the parcel located at or below projected sea levels during the two foot scenario. No stations were found to be vulnerable during the one foot scenario.

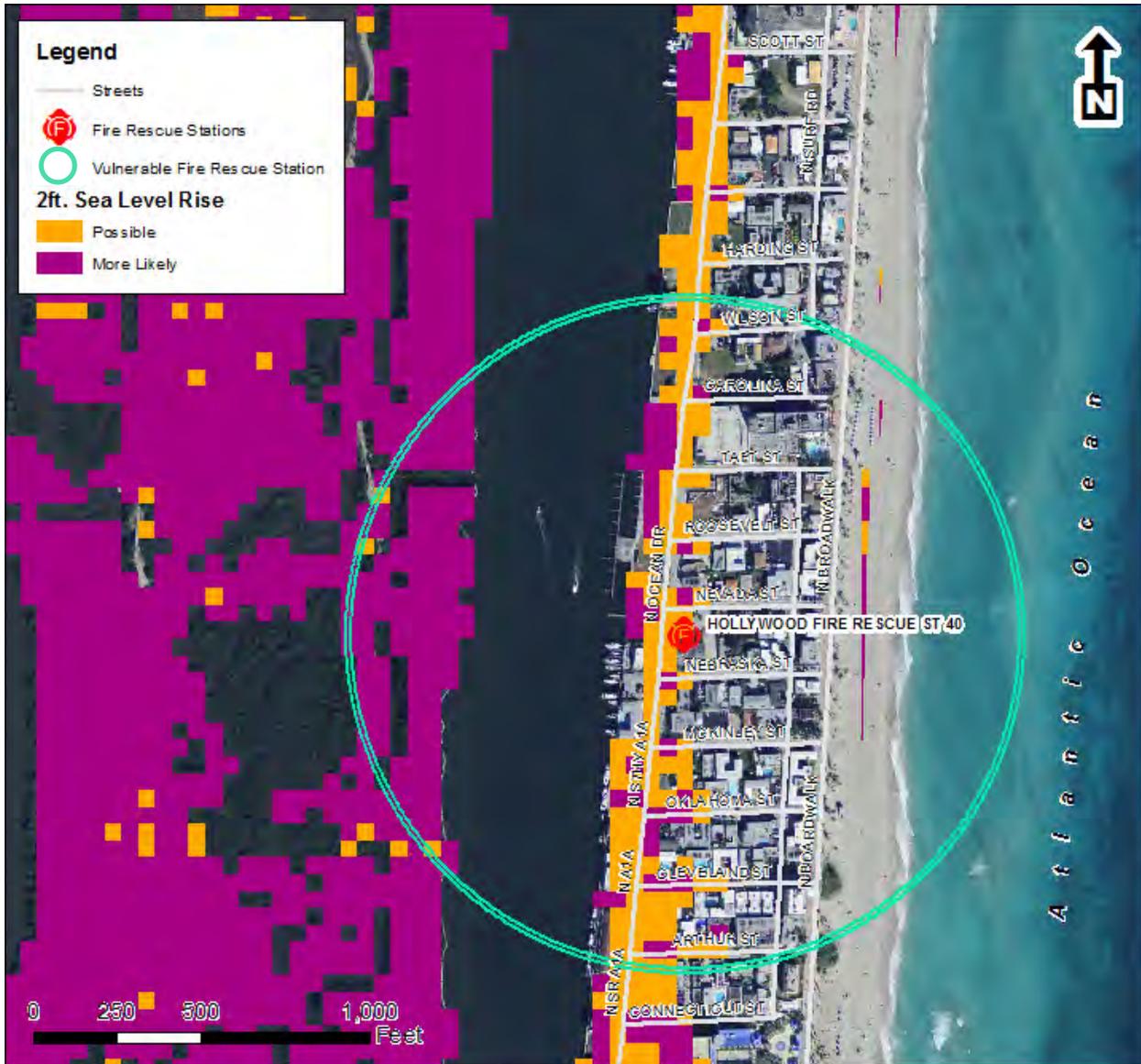
Vulnerable Fire Rescue Stations City of Hollywood		
Station	One Foot Scenario (Y/N)	Two Foot Scenario (Y/N)
Fire Rescue 40	N	Y

Key: For Y/N, Y = Yes, N = No

Hollywood Fire Rescue Station 40

Two Foot Sea Level Rise Scenario

2211 N. Ocean Drive, Hollywood 33019



This map is for conceptual purposes only and should not be used for legal boundary determinations.

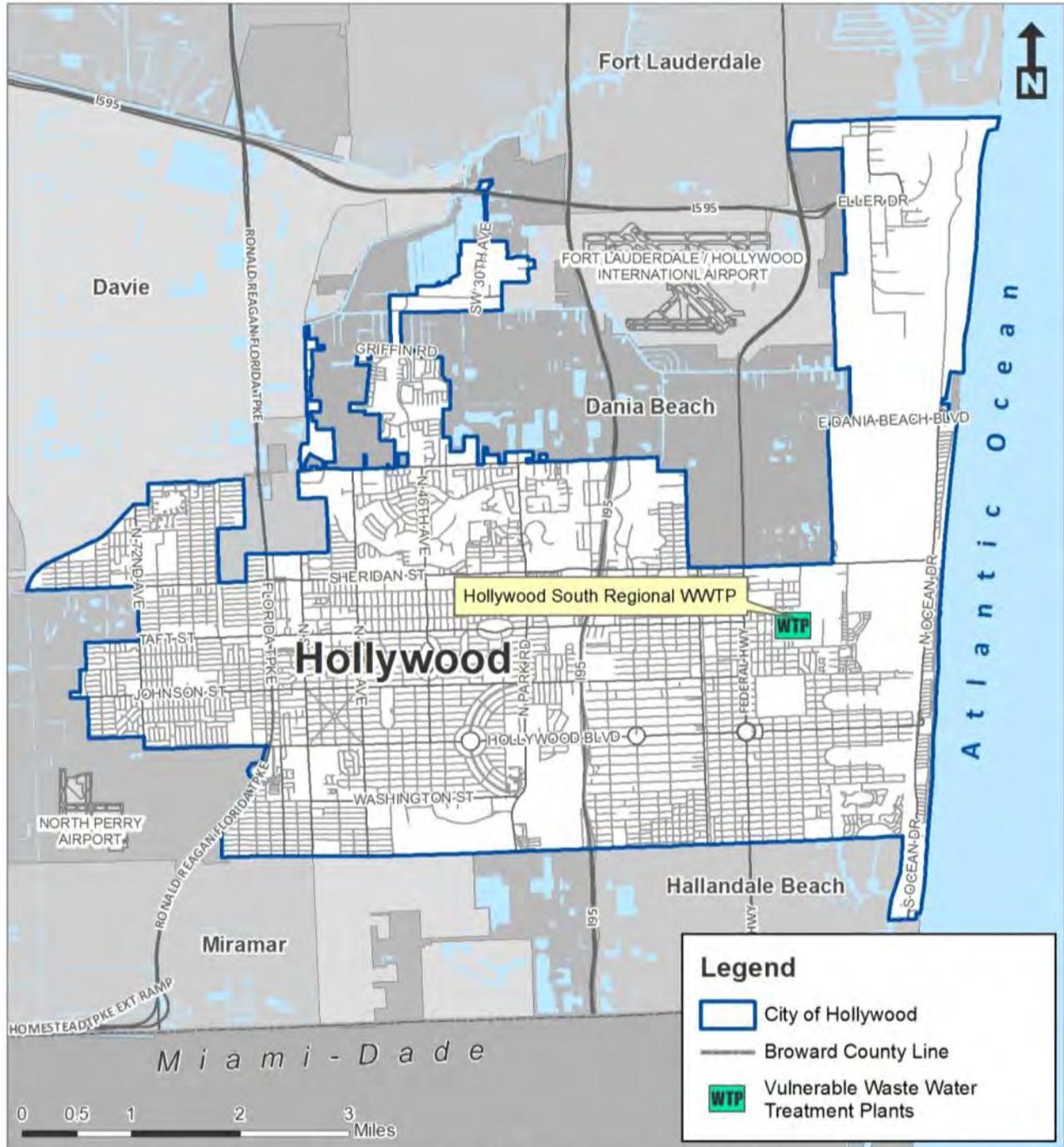
BROWARD COUNTY
FLORIDA
 Prepared By: H. Ziegler
 Environmental Protection and Growth Management Department
 Natural Resources Planning and Management Division

Date: 12/2/2013
 DEP Agreement No. CM238 DEP 55-236 (08/11)

This map shows Hollywood Fire-Rescue Station 40 with a 1000-ft radius to help identify potential access issues near the station. This area is located within the Hollywood Beach CRA. Inundation may occur within the station's parcel and on nearby streets during the two foot sea level rise scenario, thereby reducing accessibility to and from the station and possibly threatening operability of the station. No nearby streets or the parcel are vulnerable during the one foot scenario.

Waste Water Treatment Plants

Vulnerability Assessment



This Map identifies areas at increased risk of inundation up to a two foot sea level rise scenario, projected to occur as soon as 2060.

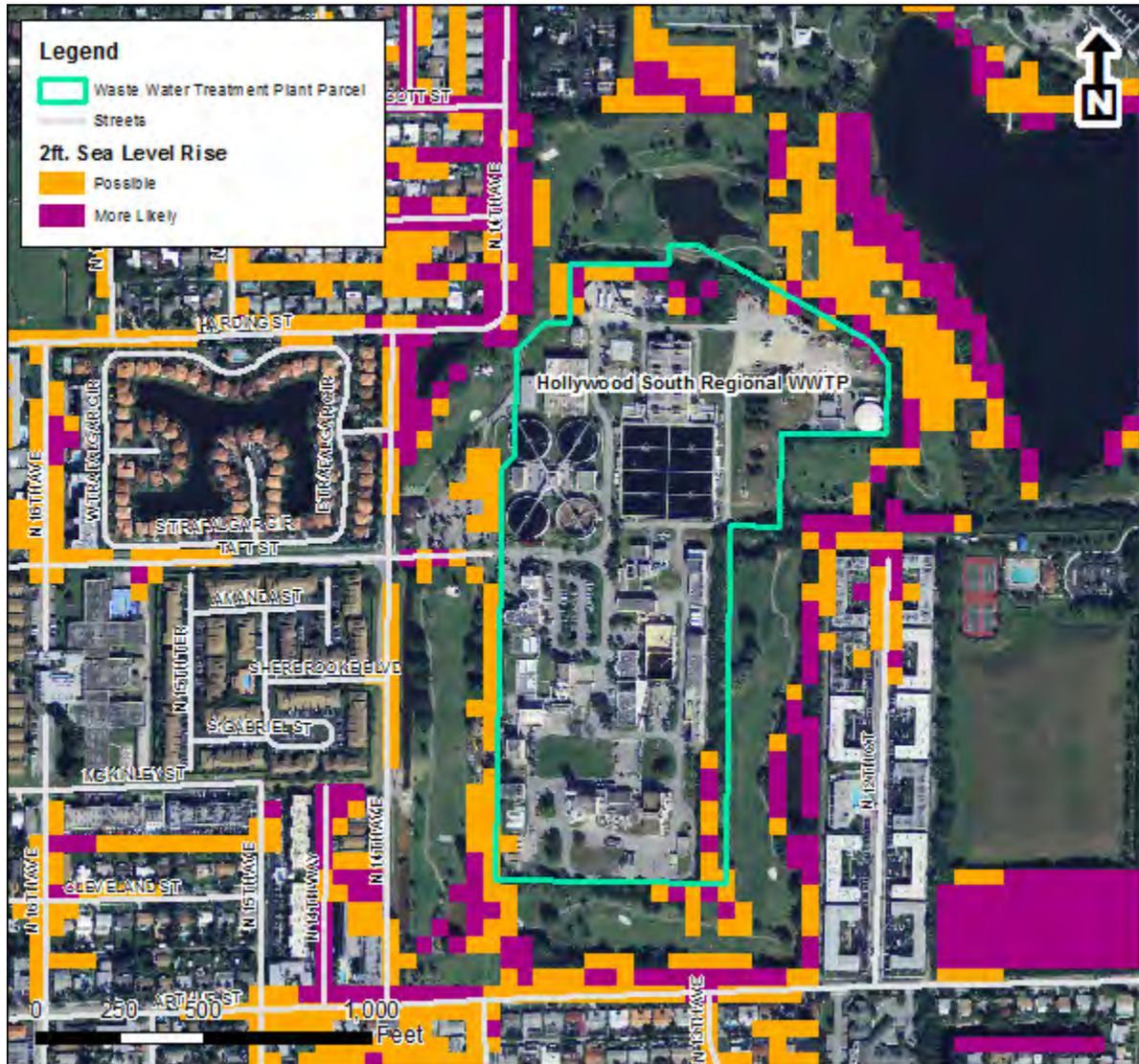
This map is for conceptual purposes only and should not be used for legal boundary determinations.

Table of Vulnerable Waste Water Treatment Plants

The following table lists Waste Water Treatment Plants (WWTP) in the City of Hollywood which have areas located at or below projected sea levels during the one and two foot scenarios. The Hollywood South Regional WWTP may have up to 5% of area vulnerable during the two foot scenario. The plant is not likely to be vulnerable during the one foot sea level rise scenario.

Hollywood South Regional WWTP			Total Acreage
			32.23
SLR Scenario	Possible (Acres)	Likely (Acres)	Percent of Total Acreage
1 Foot	0.00	0.00	0%
2 Feet	0.95	0.65	5%

Hollywood South Regional Waste Water Treatment Plant Two Foot Sea Level Rise Scenario



This map is for conceptual purposes only and should not be used for legal boundary determinations.

BROWARD COUNTY
 Prepared By: H. Ziegler
 Environmental Protection and Growth Management Department
 Natural Resources Planning and Management Division

Date: 1/23/2014

DEP Agreement No. CM 238 DEP 55-236(08/11)

This map shows the Hollywood South Regional Waste Water Treatment Plant (WWTW) during the two foot sea level rise scenario. Areas near the edges of the plant’s parcel are located at or below projected sea levels during the two foot scenario. Up to 5% of the parcel may be vulnerable. The plant is not likely to be vulnerable during the one foot sea level rise scenario.