

May 6, 2020

To: Elaine Franklin; City of Hollywood (FL) Environmental Sustainability Coordinator

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Re: CM 18-013 Citywide Vulnerability Assessment and Adaptation Plan

Purpose and Organization

The purpose of this memorandum is to summarize the City of Hollywood Citywide Vulnerability Assessment and Adaptation Plan project. This project included literature review, data collection, climatological impact analysis and preliminary adaptation planning efforts for critical citywide assets. This project was conceived as an initial step (Phase 1) to assist the City of Hollywood in developing a consistent approach to addressing and mitigating potential long-term climate change impacts. The four threat categories of climate impact, as described in the request for proposal (RFP) for this project, are:

- Sea Level Rise (SLR)
- Storm Surge (SS)
- Extreme Precipitation (EP)
- Extreme Heat (EH)

Each of the sections of this memorandum will present a description of the overall project tasks and the relevant findings and/or results with respect to each of the climate impact categories. Note: The scope of this project was developed with the intent of creating visual and analytical materials (e.g., graphics, spreadsheets, etc.), as opposed to, extensive narrative documentation. Therefore, this document will be brief and reference the larger graphics (maps) and analytical tables (spreadsheets) prepared during the project.

Introduction

The four threat categories referenced above impact the City in different ways. The first three (SLR, SS, EP) impact assets (e.g., roads, pump stations), which in turn, impact the population. The fourth (EH) impacts the population directly. This assessment discusses each category considering that difference.

The City of Hollywood is located in Southeast Florida, considered to be one of the most vulnerable geographic locations in the world with respect to sea level rise (SLR) and storm surge (SS). The increased frequency of severe weather further exacerbates that vulnerability and increases the need for

well-informed planning and well-protected infrastructure. As part of that planning, the City has been proactive and initiated efforts to identify and evaluate future climate change impacts on important assets found within the City limits. As such, the extent to which extreme precipitation results in increased flooding thereby magnifying the effects of SLR and SS was also considered due to the potentially increasing intensity of rain events. In addition, the trend towards extended durations of higher temperatures in the region, their potential to adversely impact vulnerable populations, and ways in which impacts might be mitigated was also explored.

To achieve the objectives of the City, the project included a review and inventory of relevant science-based literature including regional climate change plans, vulnerability assessments, scientific publications, and other current documents related to projected impacts from anticipated climate change, including the Southeast Florida Climate Compact (Compact) regional sea level rise projections. A bibliography/catalog of the materials reviewed was submitted in early 2019.

This Citywide Assessment is intended to develop a standardized process by which the City can reasonably assess the resilience of its existing assets and select an Adaptation Plan to protect them against the four threat categories. This project utilized Light Detection and Ranging (LiDAR) technology and Geospatial Information Systems (GIS) data to determine vulnerability and also relied upon input from Department staff to help determine the asset criticality, which was then used to prioritize actions to be taken. These actions may include hardening/modification or other types of action (e.g., code change).

The planning horizon of scenarios for sea level rise and storm surge have been prepared for years 2035, 2050, 2075, and 2100. Extreme precipitation impacts are considered an existing threat that can be evaluated presently with the understanding that the frequency of events may increase as climate change impacts progress. Extreme precipitation, as discussed here, is based on a recent storm that occurred in December 2019 that exceeded a “100-year” storm in the coastal area. Extreme heat was considered based on persistent weather conditions (high temperatures) and observed climate change impacts (increased temperatures and durations as recorded and forecast by U.S. Census, American Community Survey (ACS) for Sensitive Populations and the National Land Cover Database 2016 for potential Urban Heat Islands). Note: Extreme heat is treated as a human exposure issue, not an asset vulnerability threat. Tree canopy cover was used as a method of exposure mitigation. Socioeconomic data was also used under the category of extreme heat to illustrate vulnerable population locations and their potentially limited ability to mitigate the exposure due to economic factors (e.g., lack or expense of air conditioning).

Ultimately, the goals were to collect available data, assess the potential threats and develop a preliminary action plan. More importantly, this project proposes a standard approach to evaluate vulnerabilities and establish criticality of assets with respect to future climate related hazards.

Organization

This memorandum follows the main tasks of the scope approved by the City of Hollywood in November 2018. That scope included determination of climate impacts, identification of affected systems, a vulnerability and prioritization assessment workshop, prioritization of vulnerabilities, development of an adaptation catalog, a preliminary adaptation plan and community outreach.

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1. Future Climate Change Impacts Determination

A discussion of the approach used to develop each of the four threat categories and the scenarios for which the assets were evaluated is presented below.

1.1 Sea Level Rise

The projected sea level rise impacts associated with the City of Hollywood are presented in the series of maps previously provided under separate cover (May 2019). The maps presented were developed using available elevation data. This data was collected using a surveying technology that measures distance by illuminating a target with a laser light (LiDAR). The LiDAR information is based on a 2017 data collection event. This event produced five-square-foot quadrangles of elevation data. This data was overlaid with average water elevation projections derived from the Unified Sea Level Rise Projection for Southeast Florida updated per the 2015 Southeast Florida Regional Climate Change Compact for the planning years 2035 (12 inches SLR), 2050 (24 inches SLR), 2075 (36 inches SLR) and 2100 (60 inches SLR), using the USACE High Line. The figures illustrate the depth of local flooding present within the City during high tide.

A new set of projections was published by December 2019, after this study was completed. The projections suggest an incremental increase in SLR in comparison to the 2015 values. However, the new values do not change the results significantly because this Vulnerability Analysis used the USACE High Line estimations.

The main sea level rise impact to the City under near-term conditions (i.e., year 2035) is localized inundation measured in inches. The impact of future planning horizon sea level rise projections (i.e., 2100) is predicted to be geographically extensive inundation of greater than one foot extending to Federal Highway and along inland waterways within the City limits at each high tide.

1.2 Storm Surge

The projected storm surge impacts to the City are also presented in the maps previously provided (May 2019). The maps presented were developed based on the same available elevation data (LiDAR) used for the sea level rise development. This data is overlaid with water elevation projections derived from average sea level rise values from the Southeast Florida Regional Climate Change Compact for the planning years 2035, 2050, 2075 and 2100. The figures illustrate the depth of local flooding present within the City during a theoretical Category 3 hurricane making landfall along the City coast at high tide, modified for sea level rise increases. The Category 3 storm surge is based on historical data from several events making landfall along the southeastern Florida coast. The projected maximum inundation depth, or storm tide, (tidal elevation + storm surge) of that theoretical storm for each planning year is conservatively estimated to be 9.0, 10.0, 11.0, and 13.0 feet, respectively.

The main storm surge impact to the City under near-term conditions (i.e., year 2035) is localized inundation predicted to be between one and four feet in several areas. The impact of future planning horizon storm surge projections (i.e., year 2100) is predicted to be geographically extensive inundation of greater

than 4.0 feet extending to Federal Highway and along inland waterways/low lying areas within the City limits during a Category 3 event.

1.3 Extreme Heat Events

South Florida experienced high temperature weather patterns across the region on a regular basis, as such, the analysis of “extreme heat” presents a unique challenge. Extreme heat does create localized conditions in other parts of the country and the world. These phenomena are called “heat islands”. They typically occur in densely populated areas or regions that are fully developed (e.g., New York City metropolitan area). South Florida is slightly different in that the temperature is consistent, within a few degrees, across the region. “Heat Islands” do not form in this region. In an effort to provide a systematic approach to evaluating “extreme heat” geographically, a surrogate was used to evaluate this threat and the impact to citizens. That geographical surrogate is tree canopy because this local feature mitigates some exposure to heat. A map was developed to illustrate the current tree canopy cover of the City to begin data collection for investigating differences in heat impacted areas. For tree canopy, the most recent Multi-Resolution Land Characteristics Consortium National Land Cover Database (NLCD) that covers Hollywood (i.e., year 2011) was used. Two sub-products were used from this dataset: 1) Percent tree canopy cover estimates, and 2) the Anderson Level II classified land cover sub-settled to areas identified as developed land. The maps included in the May 2019 package illustrate the initial findings of the local canopy cover in the City. The primary purpose of this figure is to show the geographical variability of the tree canopy as an indicator of local conditions along with projected heat trends.

Climate change will have an impact on the region over time, so in addition to geographical representation, a review of historical temperature data was performed. For this review, data was collected to understand the historical and projected duration of “high-heat” events, number of days requiring cooling/air-conditioning, and the average daily minimum (nighttime) temperature (NEMAC, Climate-by-Location, 2019). As expected, the historical temperature data has shown some variability, but the overall trend is increasing. It should be noted that a “cooling degree-day” is used as a unit where 65-degrees Fahrenheit is subtracted from the day’s average temperature. This unit indicates heat conditions in a given area as a metric for tracking trends in temperature data. This unit is used due to its historical interest for agriculture. The projected portion of the data show the predicted temperatures, including heat days, steadily increasing. As such, air conditioning systems may run continuously (i.e., day and night) through the summertime. Beyond putting stress on HVAC systems and on power producers, this puts a disproportionate stress on sensitive populations and is indicative of the impacts as projected climate change conditions become realized. The intent of this approach is to use the data to develop methodologies to evaluate the complex interaction of factors. For example, climate conditions (increasing warm temperature weather duration), localized geographic conditions (tree canopy) and population sensitivity (median income, age, etc.). This data was used to evaluate populations and systems that may be affected by that type of temperature related stress.

1.4 Extreme Precipitation

Extreme precipitation is also a difficult phenomenon to locate geospatially. The localized randomness of extreme precipitation events can make geographical representations unusable from a practical

standpoint. For this reason, an approach was developed to evaluate the potentially affected areas with respect to increasing rainfall rates of design storm events and existing geographic areas (i.e., FEMA Flood Zones). The intent of this approach is to allow a vulnerability analysis of current and future rain events on targeted areas of the city. Subsequent to the initiation of the project, an extreme event occurred locally (December 23, 2019). The rainfall data for that event is included in this memorandum, however, street level flooding is only estimated based on descriptions from residents and news/newspaper accounts.

The Maps from the May 2019 submittal present the current FEMA flood zones overlaid with rainfall depth data from an additional storm event that approximated a two-year return frequency with rainfall of approximately 4.5 inches across the City on 9/29/10. It should be noted that the magnitude and duration of this storm coincides with the 1-day maximum, 2-year storm event established by the South Florida Water Management District in Technical Publication EMA #390 (2001). An actual storm with these characteristics has been used as a “design storm” for this exercise in other municipalities in South Florida (i.e., Miami-Dade, FL). The maps also present a revision to that data which includes projected rainfalls for a future (i.e., year 2035) 2-year storm event, which is predicted to produce 5.28 inches of rainfall. The rainfall increase is based on high greenhouse gas emissions scenarios, which are modeled to affect weather patterns and ultimately storm event rainfall. “Non-exceedance” is a technical term that refers to the probability that the amount of rainfall in a 24-hour period will not exceed the stated value. For the purposes of this effort, the following 2-year storm events were modeled:

- 5.28-in based on 90 percent non-exceedance
- 4.84-in based on 67 percent non-exceedance
- 4.78-in based on 50 percent non-exceedance

The mapping results indicate the rainfall of a 2-year storm event across the City varies in density. The main impact of increased storm event rainfall depth may be that flood zone areas will have to be re-evaluated due to greater geographic impacts.

2. Affected Systems Identification

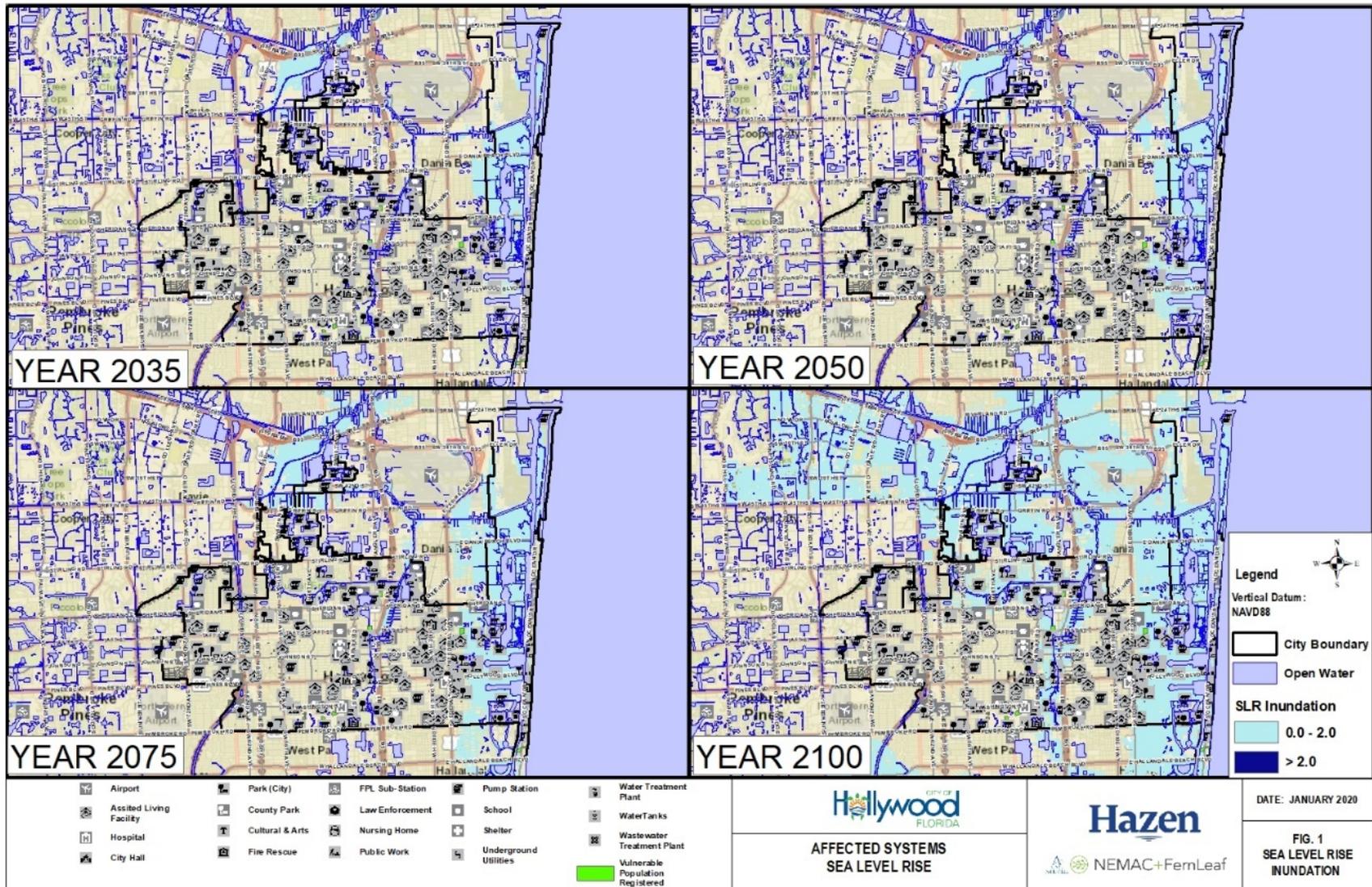
Following the determination of future climate change impacts, City systems/assets were geographically/spatially located on each map to illustrate the potential threat of each condition to a group of assets. A workshop with City staff was held to present the preliminary findings to each Department. This workshop included an exchange of information to understand the degree to which predicted impacts would affect respective assets and the corresponding mission of each Department. All conditions were represented (e.g., maps presented at the May 29, 2019 workshop use a Category 3 Hurricane for storm surge estimation). Below, similar examples are presented in each discussion.

2.1 Sea Level Rise

Compiled sea level rise flood information for the analysis years is presented in **Figure 1**. The SLR inundation is not expected to have a significant impact to City assets until the Year 2075. Limited

inundation around the West Lake Park area is expected from 2035 to 2050. However, as the SLR increases it will start affecting the City east of Federal Highway. By the year 2100, most areas east of Federal Highway and adjacent to canals will be subject to SLR inundation. This will generally occur on a seasonal high tide frequency.

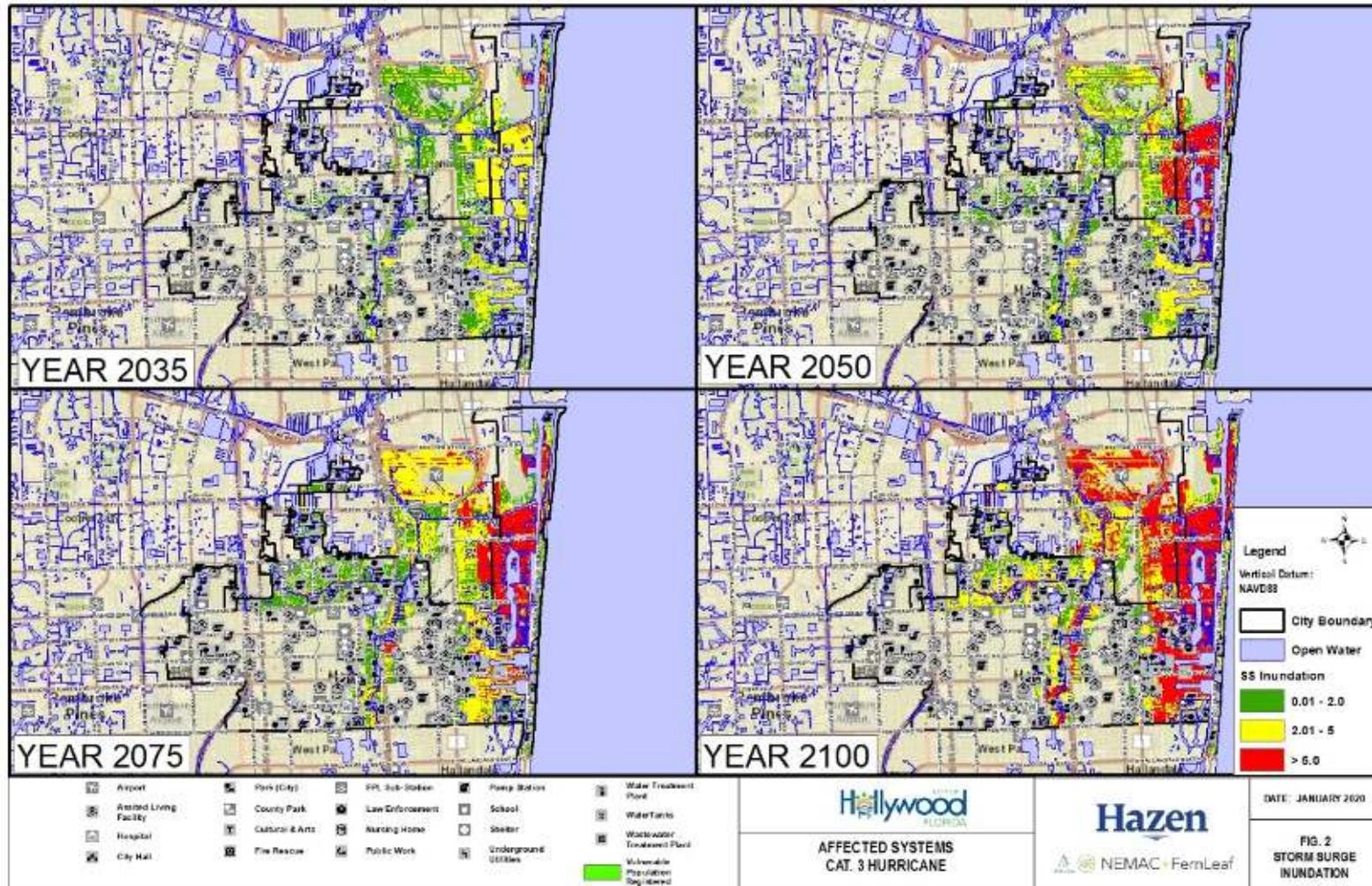
Figure 1: SLR Inundation: Affected Systems



2.2 Storm Surge

Similar to Figure 1, **Figure 2** shows the estimated Storm Surge Inundation for a Category 3 Hurricane directly hitting at the City's shoreline. The storm surge has more significant impact to the City than the SLR. Beginning in the Year 2035 it is estimated that the flood may cover all areas from the coast to Federal Highway, and from Pembroke Rd to Sheridan St. By 2050, the elevation at Federal Highway contains the flooding, but canals convey the inundation further into the City, in the lower-lying areas. By the year 2100, the increased storm surge inundation will impact a significantly greater portion of the City.

Figure 2: Cat 3 Hurricane Storm Surge Inundation: Affected Systems

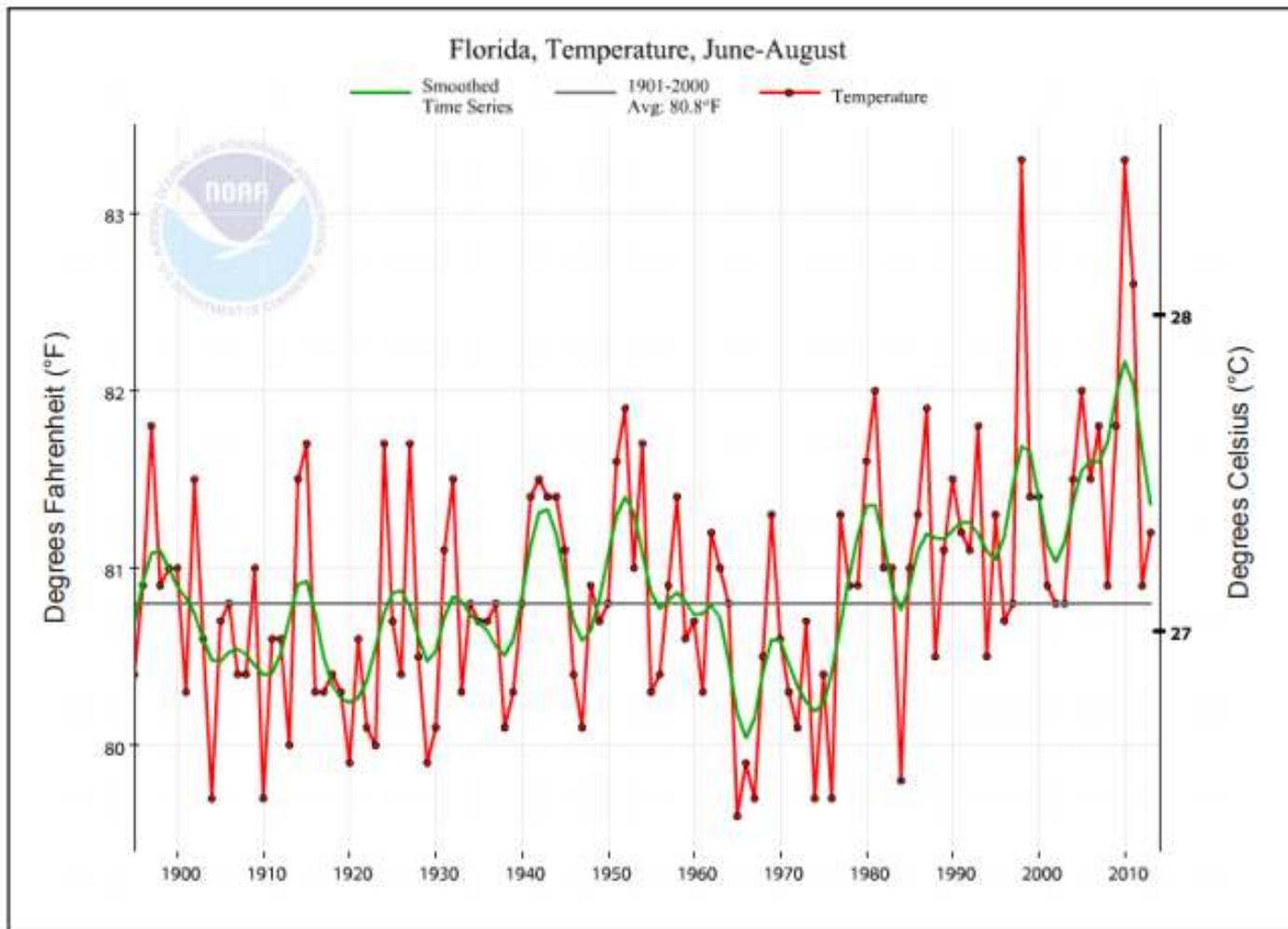


A detailed analysis will be presented in the Section 4.

2.3 Extreme Heat Events

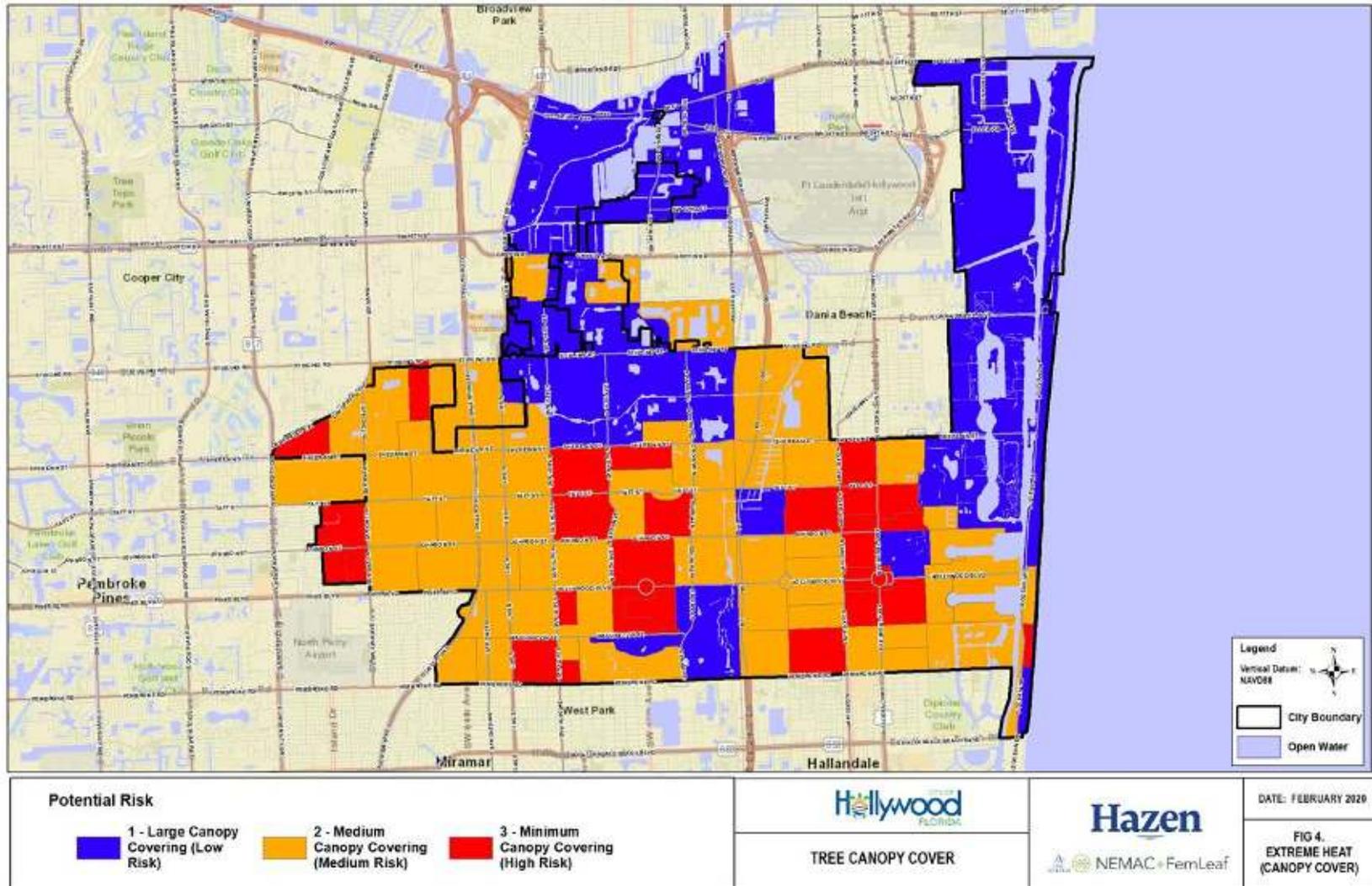
Extreme heat events are difficult to statistically categorize or rank. Average temperatures are typically above 80 degrees Fahrenheit for approximately five months in Florida with a mean temperature of 88 degrees. Eighty-eight degrees is also the reference value from a Florida Department of Health study (FDOH, 2015) above which, there is a strong correlation between Temperature and Heat-related Illness (HRI). **Figure 3** presents historical 3-month (June-August) data (NOAA, 2012), from the same report, where an increasing trend appears to be developing in recent years. If this trend continues, heat related impacts to the population may also increase as climate changes occur. The primary approach to mitigating extreme heat issues is to evaluate the available methods to reduce exposure to direct impacts of the conditions. Also, establishing the susceptibility of a population can be useful in determining impacts and subsequently addressing mitigation. The two criteria used in this study to systematically establish a vulnerability assessment were 1) tree canopy cover as a natural method of mitigation, and 2) identifying vulnerable populations to establish areas that may need assistance. Below, these two criteria are briefly discussed.

Figure 3 - Historical 3-month (June-August) Temperature



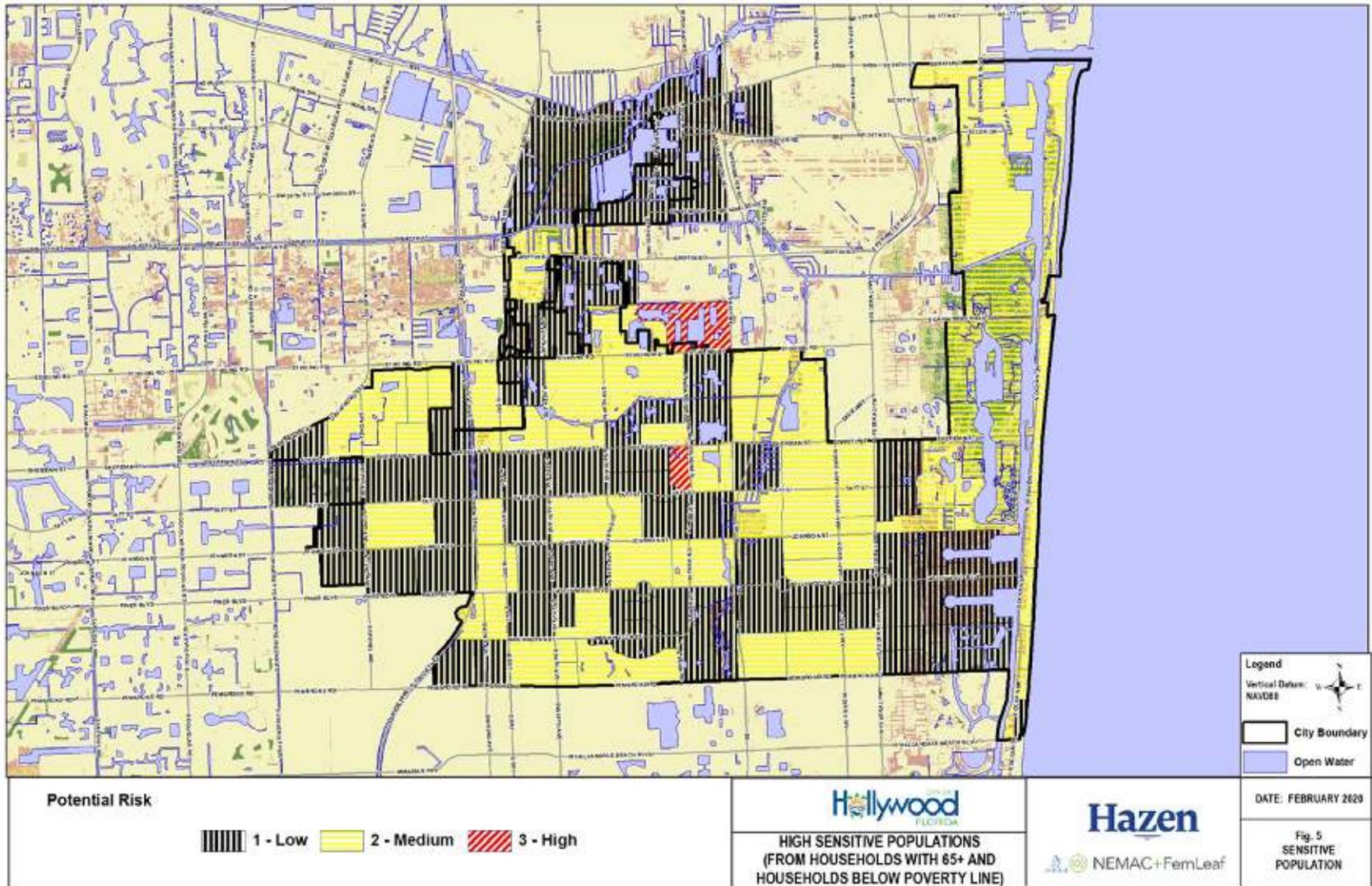
Tree canopy cover was used to establish areas within the city where residents were likely to be exposed to direct sunlight and therefore would be more susceptible to elevated temperatures. This approach is also typically used to identify what are known as “urban heat islands”, where the built-out conditions include concrete, asphalt, and other man-made landscape elements. As mentioned above, heat islands are not as distinct in tropical locations, but the canopy cover remains a useful surrogate for existing, natural mitigation. Estimated canopy cover within the City of Hollywood is presented in **Figure 4**.

Figure 4 – Estimated Canopy Cover in the City of Hollywood



In addition to tree canopy cover, “sensitive populations” were also identified while reviewing the available data. This information identifies populations that may not have the financial means to mitigate extended or harmful heat events (e.g., owning air conditioning or other methods of avoiding heat). Assisted living facilities were included in this study as part of the “sensitive populations” category given the susceptibility of the residents. These facilities by definition have sensitive populations and require infrastructure (A/C, elevators, etc.) that must be available to residents as potential climate change impacts increase in severity or during and after significant events that may increase exposure (e.g., power outages). This is especially critical after a storm event, such as a hurricane, where power may be unavailable for extended periods and building architecture is not conducive to occupancy without air conditioning. For the most sensitive portions of the population, these conditions also may necessitate generator backup power to operate air conditioning, as well as, elevators. In addition to the socio-economic conditions, other demographic data can be used to reveal locations of extremely sensitive portions of the community. An example of the geospatial results from this type of analyses are presented in **Figure 5**. This map illustrates the locations within the City with at-risk populations (e.g., low income, older than 65), based on the Centers for Disease Control (CDC) guidelines for identifying at-risk populations (CDC, 2015).

Figure 5 – Sensitive Population



2.4 Extreme Precipitation

Extreme precipitation is similar to extreme heat in that the impacts may be experienced across the City. This phenomenon is not necessarily a coastal phenomenon. For the purposes of this study extreme precipitation was only anecdotally analyzed for a storm in December of 2019. Again, although this storm did occur along the coast, such an event can happen anywhere in the City limits.

The typical two-year storm event in south Florida results in approximately 4.5 inches of rain in 24 hours, and it is projected to be 5.28 inches as result of climate change. **Figure 6** presents the projected accumulated rainfall from a “2-year” rain event. This event resulted in relatively little persistent street flooding. It is noted that the extreme rain event which occurred in December of 2019 between the 22nd and 23rd of the month exceeded the “2-year” amount significantly. The resulting inundation was not directly related to storm surge or an extreme high tide event. For comparison, the accumulated rainfall data is illustrated in **Figure 7** and the storm intensity is shown on the FDOT IFD curves presented in **Figure 8**. This event resulted in approximately one foot of street flooding for more than four hours, by some accounts, in the eastern parts of the City.

Figure 6 – Projected Precipitation

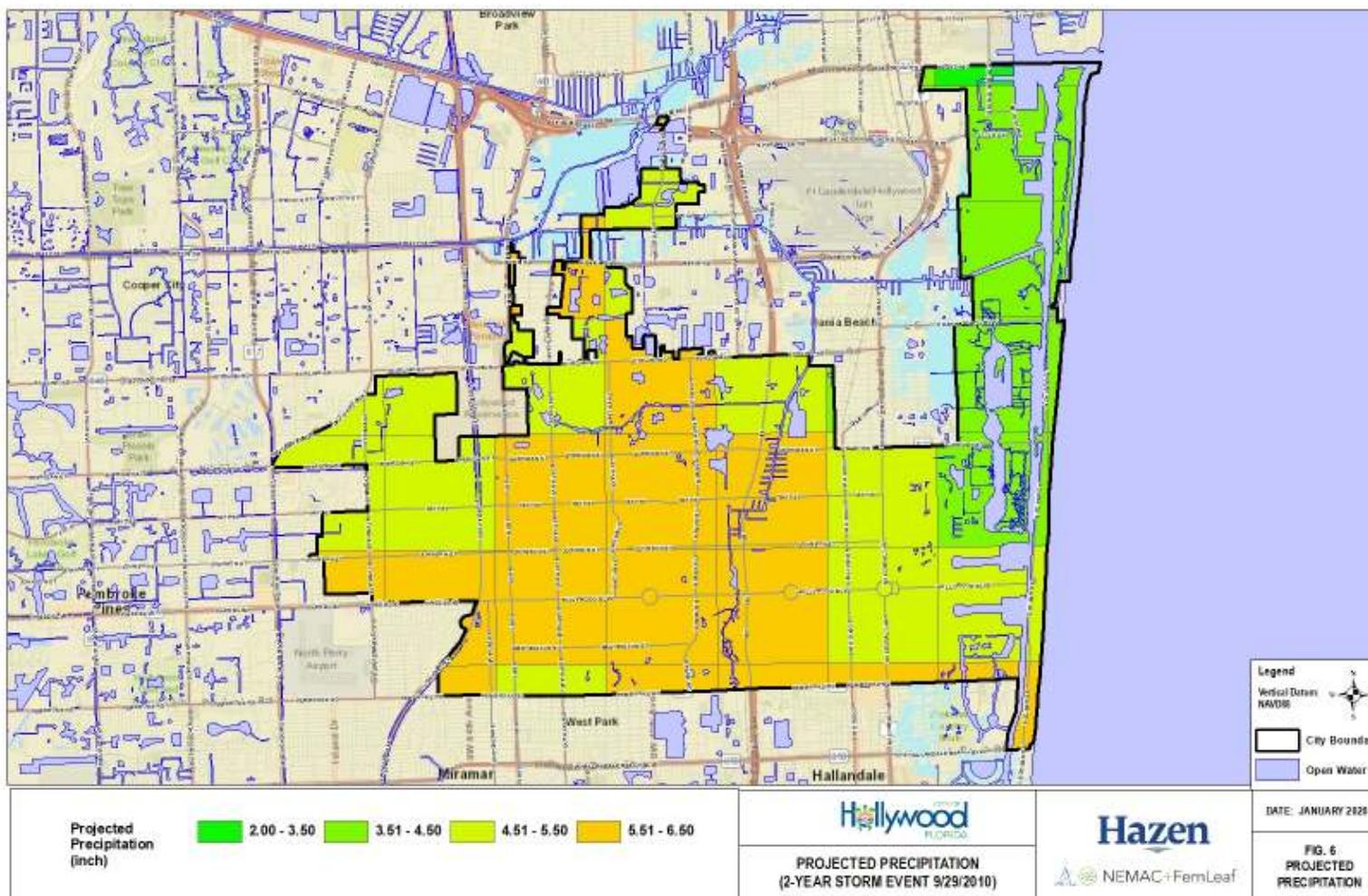


Figure 7 – Extreme Precipitation

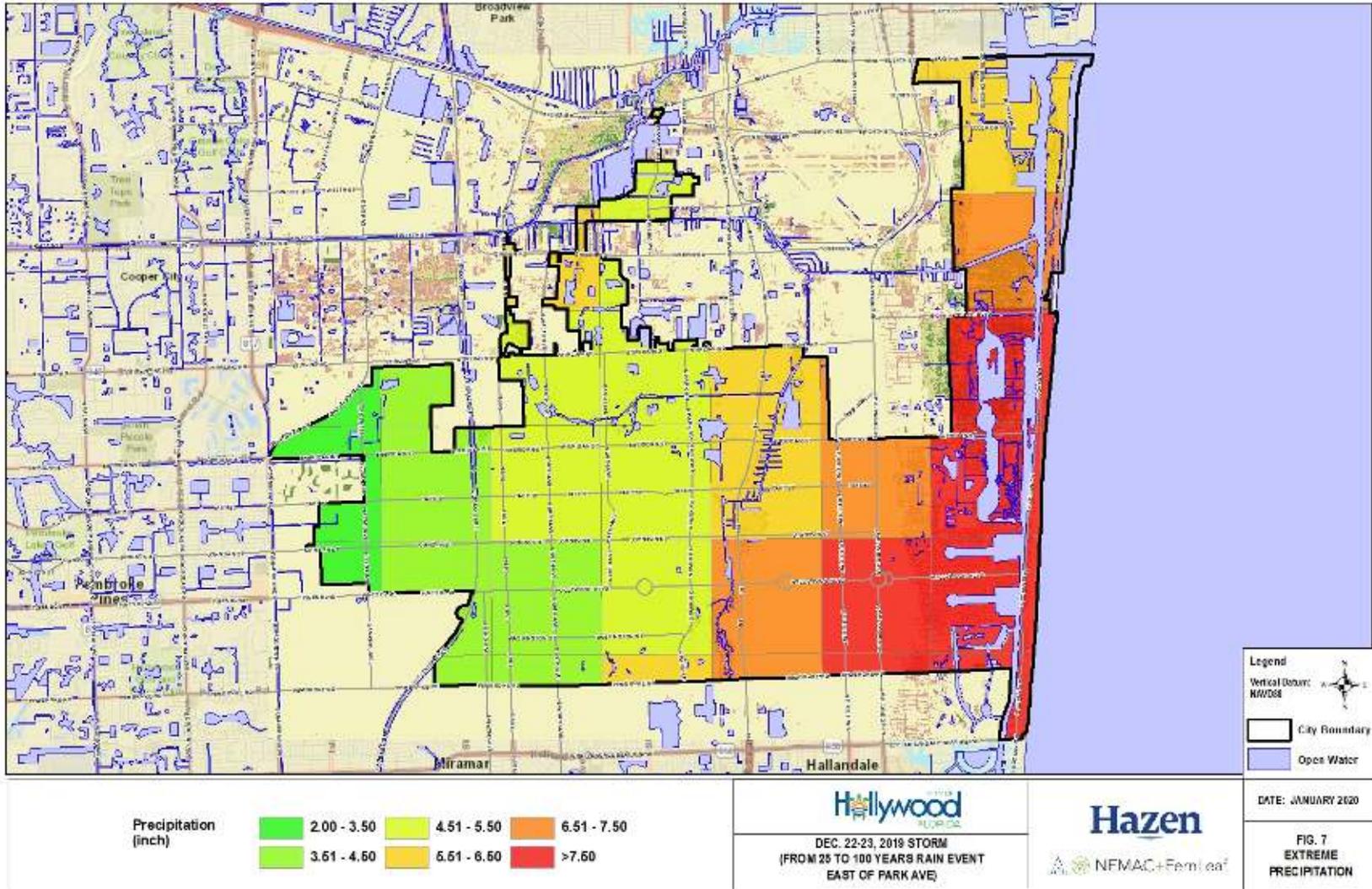
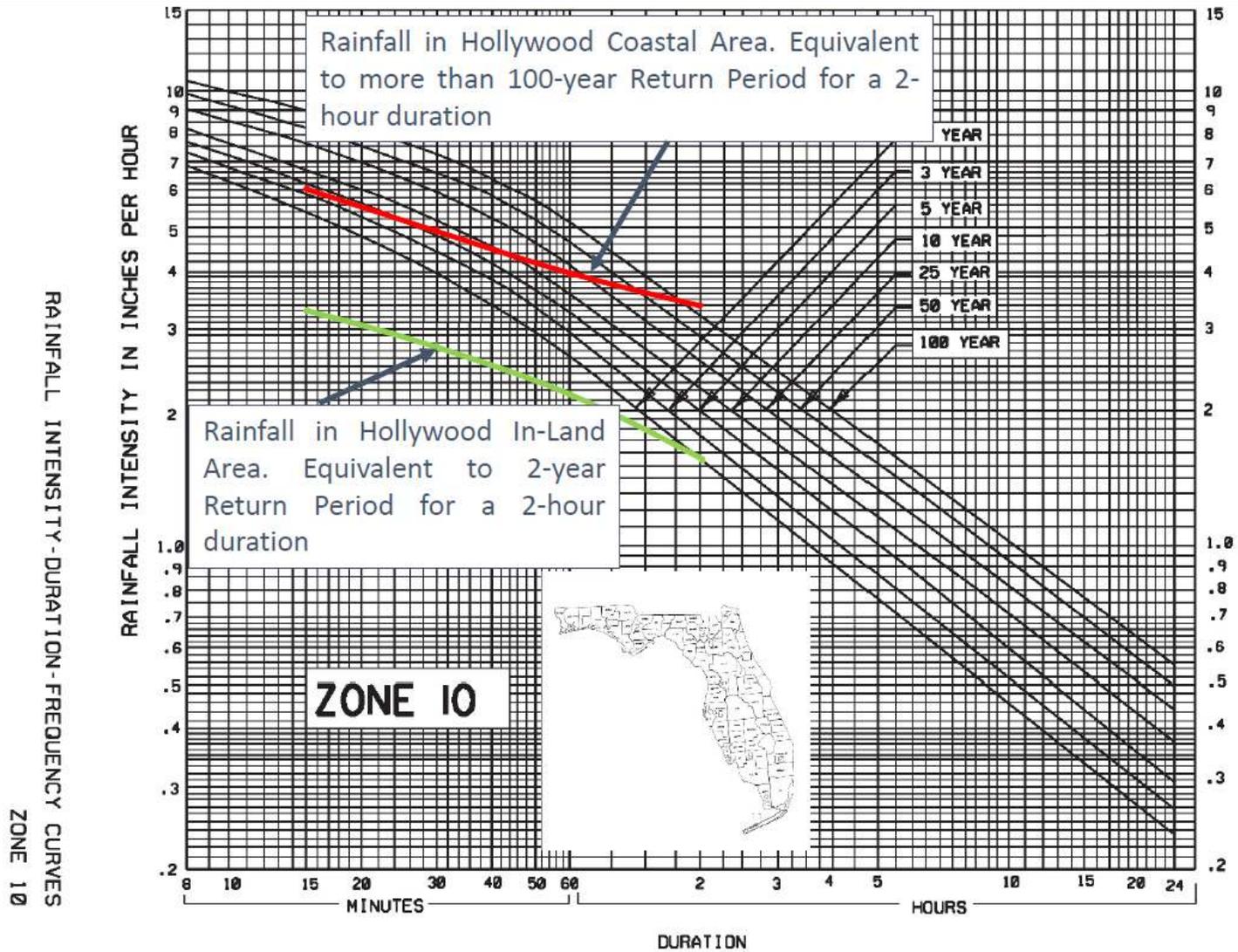


Figure 8 – December 23, 2019 Storm Intensity



3. Vulnerability and Prioritization Assessment Workshop

A workshop was held with all relevant City Departments to obtain institutional information from staff. Individual breakout sessions were held with key staff to review vulnerability assessments and confirm prioritization of assets. This includes discussions of Department “mission critical” assets and operations that may be affected by climate change impacts. The results of this workshop and the individual sessions were used to rank the criticality of assets during the prioritization task.

A vulnerability assessment workshop was conducted on May 29, 2019 with staff from all City Departments after identifying climate-related impacts as mentioned in the previous section. A series of Maps was presented for the planning horizon of scenarios for sea level rise, storm surge, and extreme heat events for years 2035, 2050, 2075, and 2100. Extreme precipitation was developed for the 2035 planning horizon. This information was provided in a graphical format under separate cover for each Department to illustrate the impact to their associated assets. During the meeting the list of each Department’s assets was discussed, and all departments committed to provide an updated list of their assets.

The staff provided additional information relevant to their work areas. Select relevant comments, discussions and questions from the meetings were:

- Fire trucks threshold is 24 inches of water (Public Safety)
- During recent rainfall-induced flooding near the lakes people had to abandon cars and walk out of flooded areas. (Public Safety)
- King tides with heavy rainfall have become really problematic. (Public Safety)
- Higher ground clearance vehicles as a resilience strategy. Police just purchased a high-water vehicle (Public Safety)
- State building code, require ambient air temp below 81 when temperatures exceed 90 degrees (Public Safety)
- 8% of evacuees statewide were not living in evacuation zones. This has implications for capacity of shelters (Public Safety)
- Fire Station 40 is on the beach subject to flooding (Public Safety)
- Fire Station 105 floods due to king tides (Public Safety)
- No issues with standing water at the wastewater treatment plant, nearby golf course helps to absorb runoff. Plant has been hurricane hardened (Public Utilities)
- The City’s sewer system has high Infiltration and Inflow (I&I) during extreme precipitation events. Inflow is more important than infiltration and people remove caps on cleanouts to drain property areas (Public Utilities)
- A Budget policy must be established for Parks/Community Centers in order to guarantee an optimal operation

- How do we have effect outreach? Public input messaging (Public Affairs)
- How do we deal with skepticism? (Public Affairs)
- After completion, how to message results in a positive fashion (Public Affairs)
- Long-term, how to manage messaging forward? (Public Affairs)
- 50% low to median income housing in the City (Development Services)
- New developments must be 18-inches above crown of road (code). If redevelop more than 50%, must bring facilities to code (Development Services)
- Development services
 - Tree grants
 - Cool roofs
 - Assisted Living Facilities (ALFs) required to have generators
 - Roughly 50% of the City of Hollywood population has low to moderate income
 - Large percentage is elderly, disabled
 - City does have latitude to make landscape requirements for trees
- 6 parks have a splash feature for cooling (PRCA)
- No community centers have generators, got a grant to install generator at Boulevard Heights community center (PRCA)

Table 1 presents a summary of the assets under the responsibility of the departments. This first list enumerated a total of 620 assets. Upon review, it was determined that some assets were common among departments or did not belong to the city. The review lead to a total of 373 assets.

Table 1: Original Assets list provided by City of Hollywood Staff

Locations Provided by Depart	Ownership and Type															Sub-Totals
	Municipal: Public City Park Cultural	County Public County Park	Regional County Park	Seminole Private	Seminole Residential	State: Public	State: State Park	Federal: Commercial Residential	Davie County	Private	Private: Commercial Residential Other	County Charter	County Center	Private Career		
Fire Rescue	6															6
Police	5															5
Assisted Living Facilities										55						55
Hospitals										3						3
Nursing Home										3						3
PRCA	65	3	2				2									72
Community Centers	12															12
Public Works	101															101
Stormwater																
Pump Stations	12															12
Weir Structure	18															18
Wastewater																
Pump Stations	88	17		4	1	7		3	1		140					261
Treatment Plant	1															1
Water																
Pump Stations	27															27
Storage Tanks	2															2
Treatment Plant	1															1
Education		14								13		7	2	2		38
Education - Shelter		2										1				3
Sub-Totals	338	36	2	4	1	7	2	3	1	74	140	8	2	2		
Grand Total																620

4. Vulnerability Prioritization

Subsequent to the identification of affected systems and assignment of criticality scores to the list of 367 individual assets provided by the City, the prioritization effort was executed. The prioritization process included assessments of the vulnerability of the asset based on the criteria selected (e.g., depth of inundation, percent of parcel inundated). These assessments were used to develop a vulnerability score. This score was combined with the criticality score assigned to each asset based on its importance to the function of the Department. The criticality rankings are subjective, however the relative ranking system did consider the need for the assets to be in service before, during and after storm or other climatological events.

4.1 Vulnerability

The Vulnerability Assessment was developed using the following steps:

1. Establishment of Geospatial Information and Inundation Vulnerability
2. Establishment of the Asset/Property Criticality

This portion of the project was developed using the following information and data sets from the identified sources:

1. County GIS Geodatabase: Broward County
2. 2017, 5-foot Digital Elevation Model (DEM), developed from LIDAR data: Broward County
3. Sea Level Rise Projections: South East Florida Regional Climate Change Compact Unified Sea Level Rise Projection
4. Storm Surge Predictions for Broward County, Category 3, Direct Hit: Based on modeling completed by NOAA 2017 projections.

The first step in the process was to use GIS to accurately identify the assets provided by the department and overlay the elevation data. An existing Broward County Digital Elevation Model from recent LiDAR was used. This model provided high-resolution ground topography information, similar to a topographic survey. All elevations used in this project are in the NAVD88 Vertical Datum System. Existing GIS information contained detailed geospatial information about the City's assets as well as other important privately-owned facilities, like hospitals and schools among others.

The next step was to determine a vulnerability score for each property, which was assessed by combining its exposure to SLR and SS. To account for the spatial variation of the SLR and SS coverages used in the evaluation, each property was divided in 10-foot by 10-foot grid cells. The SLR exposure for each cell was determined directly from the SLR depth file provided by the NOAA. Each cell was classified in three groups: 1) not exposed, 2) between 0.01 to 2-foot exposure and 3) more than 2-foot exposure.

A similar procedure was applied to the SS evaluation. In this case the SS exposure included additional inundation due to SLR and a calculation of the SS depth at each cell based on SS elevations and the

DEM provided by the County. The SS exposure was classified as follows: 1) not exposed, 2) between 0.01 to 2-foot exposure, 3) between 2.01 and 5-foot exposure and 4) more than 5-foot exposure.

These classifications, made at a grid level, were summarized for each property to identify the total area within the property that fell within each class. Water bodies such as canals and lakes were excluded from the summary and were not used to calculate the percent of the property exposed to each hazard. These percentages were then used to calculate a “Vulnerability Score” (V).

$$V = 1xSLR \text{ exp } (\leq 2) + 2xSLR \text{ exp } (> 2) + 1xSS \text{ exp } (\leq 2) + 2xSS \text{ exp } (\text{between } 2 \text{ and } 5) + 3xSLR \text{ exp } (> 5)$$

This score, which is a number from zero to five, indicates the level of exposure of the property. A score of 5 indicates that the 100% of the property is exposed to more than 2 feet of SLR and more than 5 feet of SS inundation. A score of zero indicates the property is not exposed to SLR or SS inundation. The resulting values were combined to develop a vulnerability score and ranking for each location, by department property/asset.

4.2 Establishment of Project/Property Criticality

While the criticality of each facility depends on the particular asset function, this assesment created a generic criticality score for all assets across departments. Initial scores were developed by Hazen & Sawyer and subsequent meetings with several staff members from each department were used to refine these estimates and more accurately determine asset criticality.

The final step in developing the Vulnerability Assessment prioritization list was to combine the vulnerability with the criticality of the asset. The product of the criticality score and the vulnerability score resulted in the Vulnerability-Criticality score (VC). Planners should note that assets and their importance (criticality) are independent of the property and its intrinsic exposure to sea level rise and storm surge (vulnerability).

The unique nature of the assets does not allow a simple comparison among them. Not all assets have to be available during an emergency, (Hospitals and Fire Rescue), and others may be activated days after the event occurs (Parks). Therefore, in order to allow for the comparison and ultimate ranking of assets across departments, it was necessary to adjust the Vulnerability-Criticality score using a Weighting Factor. This weighting considers the overall relative “event recovery” need for each asset. This was based experience and discussion with City Staff. **Table 2** shows the weighting factors used.

Table 2: Vulnerability-Criticality (VC) Weighting Factors

Department/Category	Weighting Factor
Assisted Living Facilities	1.0
Fire Rescue	1.0
Hospitals	1.0
Nursing Homes	1.0
Police	1.0
PU: Stormwater	1.0
PU: Wastewater	1.0
PU: Water	1.0
Shelter (Education)	1.0
Public Works	0.8
Education	0.6
Community Centers	0.6
Park Recreation and Cultural Affairs	0.4

A distribution of assets evaluated by department is presented in **Table 3**, as follows:

Table 3: Total Assets Evaluated by Department

#	Department/Category	No. Assets ¹	%
1	Assisted Living Facilities	53	14.4%
2	Education	41	11.0%
3	Fire Rescue	6	1.6%
4	Hospitals	3	0.8%
5	Nursing Home	3	0.8%
6	Police	5	1.3%
7	PRCA		
	Parks	62	16.6%
	Community Centers	11	2.9%
	Total PRCA	73	19.6%
8	Public Works ²	57	15.3%
9	Public Utilities		
	Stormwater	12	3.2%
	Wastewater	89	23.9%
	Water	29	7.8%
	Underground Utilities	2	0.5%
	Total Public Utilities	132	35.4%
	Total Assets	373	100.0%

¹ List of Assets provided by the City of Hollywood

² Public Works does not include assets listed under another Department

A full list was developed which presents assets sorted both alphabetically and by their Criticality/Vulnerability Score for the Year 2075. This time period was selected for the future planning horizon after discussions with the City. The horizon is based on a nominal five-year window

for project identification/development/execution and estimated 50-year useful life of an asset. This timeframe selection was not the result of a rigorous evaluation of asset classes or projects.

Table 4 shows the results for assets with the top 20 VC-adjusted scores. The VC index ranges between one and twenty-five, where a score of 25 indicates complete asset failure. This index combines the exposure of the parcel to flood by SLR and SS, allowing prioritization of facilities according to the vulnerability score. Selected flood values were restricted based on a statistical analysis using the 2nd and 98th percentiles. Extreme precipitation events will generate similar issues however the exposure is citywide. The threat of extreme precipitation was not used in the ranking.

5. Adaptation Strategies Catalog

An Adaptation Strategies Catalog (Tabular Format) of potential mitigation strategies for given vulnerabilities was developed. This Catalog was created upon completion of the prioritized vulnerable asset list presented previously in Table 4. Regional, state-wide, national, and global adaptation options and best practices for highest ranked asset classes were researched.

Adaptation options are organized into the following categories, according to how they reduce vulnerability:

- Reducing exposure (reducing the presence of assets in harm's way)
- Reducing sensitivity (changing the way an asset is potentially affected)
- Increasing adaptive capacity (enhancing the ability to cope or withstand)
- Emergency Responsiveness

The adaptation strategies “toolbox” is attached in **Appendix A**.

This project developed an approach to analyzing large data sets and GIS/DEM information to effectively prioritize assets for the City of Hollywood. The combination and indexing of vulnerability scoring from both sea level rise and storm surge perspectives was valuable in determining the potential impacts to properties. The use of the DEM, built from LIDAR data, in addition to the VC Adjusted allowed the analysis to include specific locations on vulnerable properties.

Table 4: 20 Highest VC Adjusted Assets

#	Department// Category	Name	SLR Depth (ft) ¹			Storm Surge Inundation Depth (ft) ²			% of Property Exposed to SLR		% of Property Exposed to Storm Surge ²			Vulnerability Score	Criticality	Vulnerability x Criticality	VC Adjusted	Ranking Based on VC Score
			Min	Max	Mean	Min	Max	Mean	% Exposed between 0.01 ft and 2 ft	% Exposed >= 2 ft	% Exposed between 0.01 ft and 2 ft	% Exposed between 2 ft and 5 ft	% Exposed >= 5 ft					
1	Stormwater	PS Building 02	0.40	0.52	0.46	4.83	5.41	5.13	100.0%	0.0%	0.0%	11.5%	88.5%	3.88	5	19.42	19.42	1
2	Stormwater	PS Building 01	0.44	1.19	0.66	4.77	7.68	5.40	100.0%	0.0%	0.0%	25.0%	75.0%	3.75	5	18.75	18.75	2
3	Fire Rescue	Fire Station 40	0.13	0.66	0.47	3.87	5.96	5.15	100.00%	0.00%	0.00%	32.10%	67.90%	3.68	5	18.40	18.40	3
4	Stormwater	PS Building 03	0.37	0.71	0.55	4.58	6.32	5.36	100.0%	0.0%	0.0%	40.4%	59.6%	3.60	5	17.98	17.98	4
5	Stormwater	PS Submersible 11	0.19	0.57	0.45	4.27	6.00	5.04	100.0%	0.0%	0.0%	44.2%	55.8%	3.56	5	17.79	17.79	5
6	Stormwater	PS Building 04	0.14	0.62	0.37	3.44	6.58	4.81	100.0%	0.0%	0.0%	71.2%	28.8%	3.29	5	16.44	16.44	6
7	Water	ET-01		0.60	0.32	2.88	5.61	4.52	96.0%	0.0%	0.0%	83.7%	16.3%	3.12	5	15.62	15.62	7
8	Stormwater	PS Submersible 08	0.03	0.35	0.19	3.43	5.03	4.17	100.0%	0.0%	0.0%	94.2%	5.8%	3.06	5	15.29	15.29	8
9	Stormwater	PS Submersible 12		0.09	0.02	2.95	4.00	3.54	40.4%	0.0%	0.0%	100.0%	0.0%	2.40	5	12.02	12.02	9
10	Wastewater	E-05	0.02	0.31	0.13	3.27	4.65	3.87	100.0%	0.0%	0.0%	100.0%	0.0%	3.00	4	12.00	12.00	10
11	Stormwater	PS Submersible 13		0.08	0.02	2.46	4.02	3.14	26.9%	0.0%	0.0%	100.0%	0.0%	2.27	5	11.35	11.35	11
12	Wastewater	E-02	0.37	0.59	0.52	4.60	5.68	5.25	100.0%	0.0%	0.0%	23.1%	76.9%	3.77	3	11.31	11.31	12
13	ALF	Eastside Active Living/Nova Palms		0.38	0.06	1.75	5.03	3.14	34.0%	0.0%	11.2%	86.6%	2.2%	2.25	5	11.25	11.25	13
14	Public Works	Hollywood Beach (Beach Maintenance Building)	0.20	0.93	0.41	4.04	5.72	4.81	100.0%	0.0%	0.0%	68.3%	31.7%	3.32	4	13.27	10.61	14
15	Wastewater	Wastewater Treatment Plant		0.47	0.05	0.27	5.18	2.83	24.9%	0.0%	19.3%	77.9%	2.8%	2.08	5	10.41	10.41	15
16	Water	FW-05				2.24	3.38	2.84	0.0%	0.0%	0.0%	100.0%	0.0%	2.00	5	10.00	10.00	16
17	ALF	Majestic Memory Care Center		1.05	0.12	0.28	7.11	2.58	24.1%	0.0%	44.8%	41.7%	13.5%	1.93	5	9.64	9.64	17
18	Stormwater	PS Submersible 06				1.92	2.61	2.15	0.0%	0.0%	13.7%	86.3%	0.0%	1.86	5	9.31	9.31	18
19	Wastewater	E-03	0.15	0.47	0.25	3.64	4.88	4.23	100.0%	0.0%	0.0%	100.0%	0.0%	3.00	3	9.00	9.00	19
20	Wastewater	E-06	0.05	0.19	0.13	3.47	4.36	3.92	100.0%	0.0%	0.0%	100.0%	0.0%	3.00	3	9.00	9.00	20

¹Sea Level Rise Projections is based on up to 10 feet above average high tides. Therefore, it may not include inundation due to King Tides for all scenarios

²Storm Surge developed based on a direct impact of Category 3 hurricane at the City shoreline

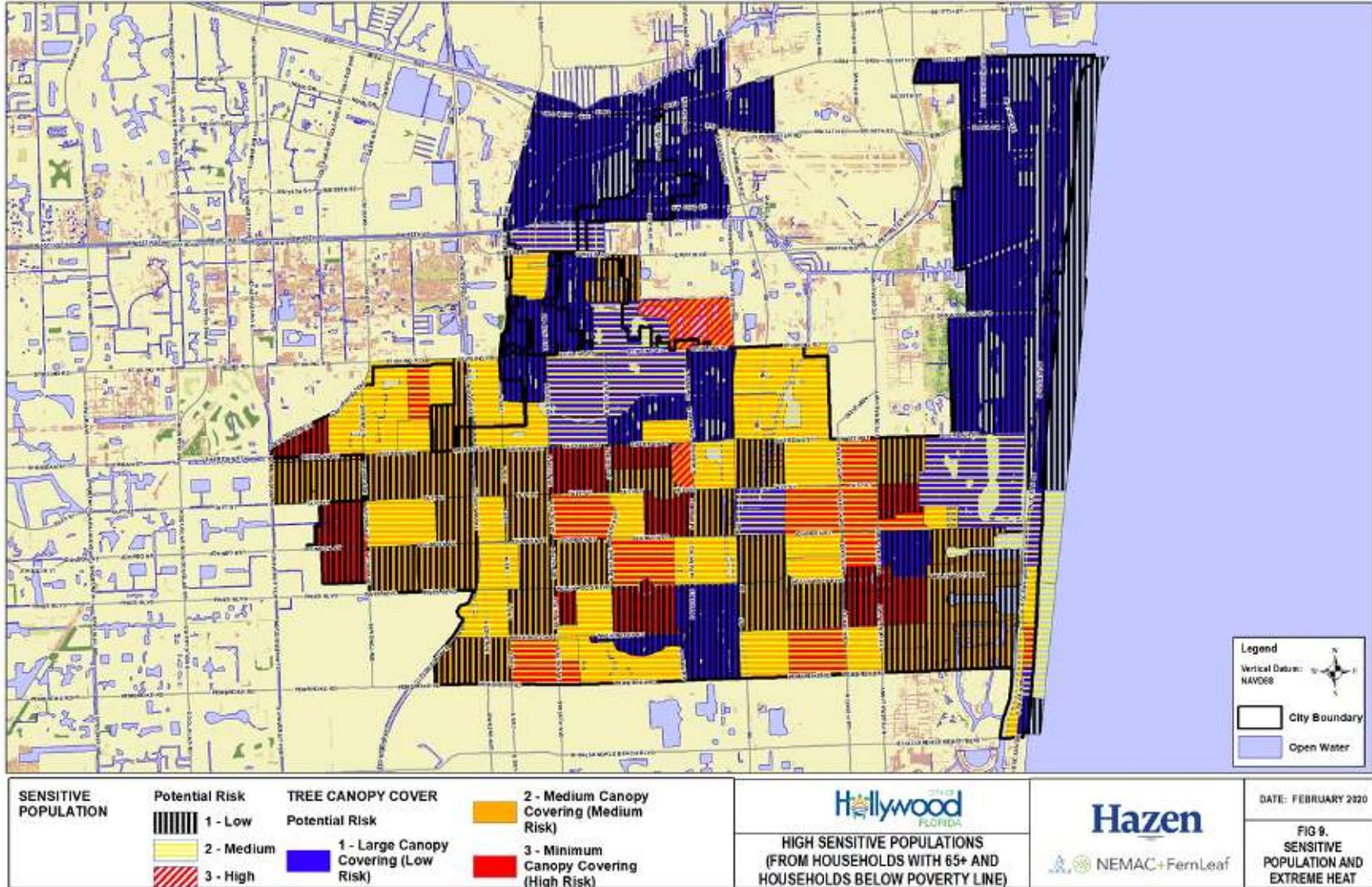
Six different threat categories were addressed in this analysis for the Year 2075. These categories are:

1. SLR Flood: The asset will only be impacted by SLR inundation
2. SS Flood: The asset will only be impacted by SS inundation
3. SLR Flood and Heat: The asset will be impacted by SLR in a non-Canopy area
4. SS Flood and Heat: The asset will be impacted by SS inundation in a non-Canopy area
5. Heat: Asset located in a non-canopy area
6. Extreme precipitation (Not included in asset threats due to limited data)

Of the 373 identified assets, a total of 128 assets were determined to be threatened in the Year 2075. These threats are mostly observed east of Federal Highway as a result of both SLR and SS.

The results show that the most sensitive population are predominantly located in Low Heat Risk areas, as shown in **Figure. 9**.

Figure 9: Sensitive Population and Extreme Heat



Tables 5 and 6 present a summary of threats by Frequency, and Location.

Table 5: Summary of Frequency of Threatened Assets

#	Threat/Combinations	No. Risk Occurrences	%
1	No Apparent Threat	245	65.7%
2	SLR + SS	19	5.1%
3	SS Flood	67	18.0%
4	SLR + SS +Heat	7	1.9%
5	SS Flood + Heat	24	6.4%
6	Heat	10	2.7%
7	SLR Flood	1	0.3%
Total		373	100.0%

Table 6: Summary of Threatened Assets by Location

#	Location	No. Assets	%
1	Total Coastal	99	77.3%
2	Total Inland	8	6.3%
3	Total Inland Canal	21	16.4%
Total		128	100.0%

The study addresses threats through these strategies: a) Hardening, b) Policy, c) Preserve / Restore Natural System, d) Public Outreach/Facilities, e) Reduce Impact and f) Support sensitive populations. Each strategy is combined with an option depending on the nature of the threat. **Appendix B** provides the Adaptation Plan to address threats for the assets considered. Note: six additional stormwater pump stations were included in the review, resulting in 128 total assets.

6. Preliminary Adaptation Plan and Community Outreach

The purpose of this preliminary Adaptation Plan is to present the proposed mitigation strategy, approach, general timeline and categorical costs of addressing threats to assets identified under the Citywide Vulnerability Assessment and Adaptation Plan (CM 18_013). This Plan builds on the prior tasks of the project including, document review, vulnerability assessment, criticality determination, and adaptation toolbox development. The adaptation plan includes approaches to mitigate the impacts of sea level rise, storm surge, extreme heat and extreme precipitation on 128 assets that were determined to have some of amount vulnerability. Extreme heat and extreme precipitation are much more random and not anchored to any geographic feature in distribution. Extreme heat was addressed by considering the presence or availability of air conditioning and electrical generator power, and/or improving the canopy cover in the area. Extreme precipitation is a phenomenon that is important, but localized data, even event impact data (e.g., street level inundation) is very limited and anecdotal, at best. This threat should be addressed in all future stormwater mitigation efforts. The Adaptation Plan

is not meant to be a comprehensive document, but a first step in developing a long-term strategy to address these issues. This document also creates a hierarchy of at-risk assets that can be used as basis for the next steps to be executed by the City under separate, specific projects. The Plan categorizes costs as well as the schedule timeframes for the proposed activities.

The Adaptation Plan presents each asset by rank and includes the name and address of each element. Assisted living facilities (ALFs) and schools are included in the Plan. The Plan also includes the projected SS and SLR inundation as well as the percent of parcel information developed under the Vulnerability Task (Task 4). Each threat that impacts the asset is listed along with the threat mitigation strategy (e.g., hardening, code review, etc.) and approach, which outlines the next steps to be taken in executing the Plan (specific assessment or activity). General comments are listed for each asset to provide context as to the assets function or components. Categorical timeframe and cost ranges are provided for each assets' threat mitigation approach.

Appendix A: Adaptation Toolbox

See Attached

**CITY OF HOLLYWOOD
CITYWIDE VULNERABILITY AND CRITICALITY STUDY - ADAPTATION TOOLBOX**

Threat	Asset	Area	Threat Mitigation Strategy	Adaptation Plan Approach	Unitized Cost	Units
Storm Surge	New Seawalls - Soil Retention	Coastal	Design Standards	Design Features to Mitigate Threat	\$ 500.00	Per LF
Storm Surge	Existing Seawalls - Soil Retention	Coastal	Hardening	Raising/Reinforcing asset	\$ 250.00	Per LF
Storm Surge	New Seawalls - Water Retaining/Management	Coastal	Design Standards	Design Features to Mitigate Threat	\$ 3,100.00	Per LF
Storm Surge	Existing Seawalls - Water Retaining/Management	Coastal	Hardening	Raising/Reinforcing asset	\$ 1,600.00	Per LF
Storm Surge	New Seawalls - Wave Action	Coastal	Design Standards	Design Features to Mitigate Threat	\$ 5,000-10,000	Per LF
Storm Surge	Existing Seawalls - Wave Action	Coastal	Hardening	Raising/Reinforcing asset	\$ 3,000-5,000	Per LF
Storm Surge	New Buildings - Office, General Use	Coastal	Design Standards	Design Features to Mitigate Threat	1-3%	of Project - One foot Height
Storm Surge	New Buildings - Utility, Fire, Police	Coastal	Design Standards	Design Features to Mitigate Threat	1-3%	of Project - One foot Height
Storm Surge	Existing Buildings - Office, General Use	Coastal	Hardening	Retrofit Mitigation - Water-tightening	\$ 5,000-10,000	Per opening - Large
Storm Surge	Existing Buildings - Utility, Fire, Police	Coastal	Hardening	Retrofit Mitigation - Water-tightening	\$ 5,000-10,000	Per opening - Large
Storm Surge	Existing Local Critical Asset - Electrical Equipment (Motors, Panels, etc.)	Coastal	Hardening	Retrofit Mitigation - Raising Asset	\$ 500-1,000	Per foot - Height
Storm Surge	New Local Critical Asset - Electrical Equipment (Motors, Panels, etc.)	Coastal	Design Standards	Design Mitigation - Raising Asset	\$ 500-1,000	Per foot - Height
Storm Surge	New Roads	Coastal	Design Standards	Design Mitigation - Raising Asset	\$ 200-500	Per LF - one foot Height
Storm Surge	Existing Roads	Coastal	Hardening	Design Mitigation - Raising Asset	\$ 200-500	Per LF - one foot Height
Storm Surge	Beach	Coastal	Hardening	Beach Renourishment	\$ 10,000,000.00	Lump sum
Sea Level Rise	New Roads	Citywide	Design Standards	Design Features to Mitigate Threat	\$ 500-1,000	Per LF - one foot Height
Sea Level Rise	Existing Roads	Coastal	Hardening	Design Mitigation - Raising Asset	\$ 200-500	Per LF - one foot Height
Sea Level Rise	New Buildings - Office, General Use	Coastal	Design Standards	Design Features to Mitigate Threat	1-3%	of Project - One foot Height
Sea Level Rise	New Buildings - Utility, Fire, Police	Coastal	Design Standards	Design Features to Mitigate Threat	1-3%	of Project - One foot Height
Sea Level Rise	Existing Buildings - Office, General Use	Coastal	Hardening	Design Mitigation - Water-tightening	\$ 5,000-10,000	Per opening - Large
Sea Level Rise	Existing Buildings - Utility, Fire, Police	Coastal	Hardening	Design Mitigation - Water-tightening	\$ 5,000-10,000	Per opening - Large
Sea Level Rise - Inland flooding	New Roads	Citywide	Design Standards	Design Mitigation - Raising Asset	\$ 100-200	Per LF - one foot Height
Sea Level Rise - Inland flooding	Existing Roads	Citywide	Hardening	Design Mitigation - Raising Asset	\$ 100-200	Per LF - one foot Height
Sea Level Rise - Inland flooding	Existing Buildings - Office, General Use	Citywide	Hardening	Design Mitigation - Water-tightening	1-3%	of Project - One foot Height
Sea Level Rise - Inland flooding	Existing Buildings - Utility, Fire, Police	Citywide	Hardening	Design Mitigation - Water-tightening	1-3%	of Project - One foot Height
Sea Level Rise - Inland flooding	New Buildings - Office, General Use	Citywide	Design Standards	Design Features to Mitigate Threat	\$ 5,000-10,000	Per opening - Large
Sea Level Rise - Inland flooding	New Buildings - Utility, Fire, Police	Citywide	Design Standards	Design Features to Mitigate Threat	\$ 5,000-10,000	Per opening - Large
Extreme Precipitaion	New and Existing Roads	Citywide	Design Standards	Design Features to Mitigate Threat (Increasing MS4 LOS)	\$ 200-400	Per LF - Improved Drainage or Raising road
Extreme Precipitaion	Existing Roads	Citywide	Hardening	Design Mitigation - Raising Asset	\$ 100-200	Per LF - one foot Height
Extreme Precipitaion	Heavily/Regularly Impacted Area	Citywide	Passive/Restoration	Preserve/Restore Natural systems that mitigate flood impacts	\$ 5,000-10,000	Per Acre
Extreme Precipitaion	Erosion Control	Citywide	Hardening	Design Features to Mitigate Threat	See Seawalls	NA
Extreme Heat	Residents - Assisted Living	Citywide	Policy	Review Code Requirements for AC/Generator/Elevator	1-3%	of Project - Electrical/Mechanical
Extreme Heat	Residents - Low income/At-Risk	Citywide	Support sensitive populations	Provide financial assistance (i.e. voucher programs) for low-income residents to help with power bills, energy upgrades to homes and apartments, and support services (i.e. air conditioning units) during extended periods of high temperature	NA	
Extreme Heat	Natural Areas, Parks, and Greenways	Citywide	Increase canopy coverage	Increase the urban tree canopy and target areas with urban heat island impacts.	\$ 200.00	per tree
Extreme Heat	Residents	Citywide	Public Outreach/Facilities	Designate public cooling shelters for extreme heat events (library, community centers) within City facilities, with partners (i.e. non-profits)	NA	
Extreme Heat	Public Services and People	Citywide	Public outreach/facilities	Create outreach program about cooling centers to public to promote where to go and decide when to do it	\$ 250,000.00	Lump sum
Extreme Heat	Natural Areas, Parks, and Greenways	Citywide	Preserve/Restore Natural System	Find ongoing funds to replant established canopy after events	\$ 200.00	per tree
Extreme Heat	Government-Owned Property	Citywide	Public Outreach/Facilities	Install and promote splash pads in targeted areas, investigate if there's a best practice to know if we have enough	\$ 1,000.00	Per Location
Extreme Heat	Multiple Assets	Citywide	Reduce Impact	Look at reducing heat absorbing materials (parking lots, parks) (i.e. Grassy), partner with Engineering, Design	NA	
Extreme Heat	Multiple Assets	Citywide	Policy	Incorporate resilience assessment in scoring and evaluation of new projects (metrics)	NA	
Extreme Heat	Natural Areas, Parks, and Greenways	Citywide	Increase canopy coverage	Create an urban forestry position to address tree canopy sustainability under urban forest tree management plan	\$ 100,000.00	Study/Plan
Extreme Heat	Multiple Assets	Citywide	Increase canopy coverage	Make sure there is shade, safe biking and walking connections in socially vulnerable areas	\$ 100,000.00	Study/Plan
Extreme Heat	Public Services and People	Citywide	Public Outreach/Facilities	Determine what the thresholds are to indicate when a heat and humidity (heat index) alert may be triggered	\$ 100,000.00	Study/Plan
Extreme Heat	Multiple Assets	Citywide	Reduce Impact	During strategic planning install landscaping and build structures to leverage sea winds and investigate what other coastal cities have done	\$ 100,000.00	Study/Plan
Extreme Heat	Multiple Assets	Citywide	Study	Determine what impacts of parks/tree canopy/wind flow are on surrounding areas (urban tree canopy analysis)	\$ 100,000.00	Study/Plan

Appendix B: Adaptation Plan (128 Assets)

See Attached

CITY OF HOLLYWOOD
ASSET ADAPTATION PLAN

Rank	Department	Name	Address	% of Property Exposed to SLR		% of Property Exposed to Storm Surge ²			Vulnerability Score	Criticality	Vulnerability x Criticality	Weighting Factor	Vulnerability x Criticality Adjusted	Area Flooding	Threat	Threat Mitigation Strategy			Adaptation Plan Approach	Comments	Schedule (Near term 1-3 yrs, Medium Term 3-5yrs, Long Term 5+ yrs)	Potential Cost Range (Low - \$0-100K, Med. \$100K-1M, High. Greater than \$1M)
				% Exposed between 0.01 ft and 2 ft	% Exposed >= 2 ft	% Exposed between 0.01 ft and 2 ft	% Exposed between 2 ft and 5 ft	% Exposed >= 5 ft								SLR Option	SS Option	Extreme Heat				
1	Stormwater	PS Building 02		100.0%			11.5%	88.5%	3.88	5	19.42	1.0	19.42	Coastal	SLR, SS	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a stormwater pump station and is considered highly critical before during and after an event . Not an occupied bldg.	Near Term	Low
2	Stormwater	PS Building 01		100.0%			25.0%	75.0%	3.75	5	18.75	1.0	18.75	Coastal	SLR, SS	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered highly critical before during and after an event . Not an occupied bldg.	Medium Term	Low
3	Fire Rescue	Fire Station 40	707 S Ocean Dr, Hollywood, FL, 33019	100.00%			32.10%	67.90%	3.68	5	18.40	1.0	18.40	Coastal	SLR, SS, Heat	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	Install/confirm resilient generator for power backup	SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Confirm central air conditioning and generator backup.	This is a Fire Station and is considered highly critical before during and after an event . May also be used to shelter staff throughout. Hardening should include mitigation of all potential pathways for inundation.	Near Term	Medium
4	Stormwater	PS Building 03		100.0%			40.4%	59.6%	3.60	5	17.98	1.0	17.98	Coastal	SLR, SS	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a stormwater pump station and is considered highly critical before during and after an event . Not an occupied bldg.	Near Term	Low
5	Stormwater	PS Submersible 11		100.0%			44.2%	55.8%	3.56	5	17.79	1.0	17.79	Coastal	SLR, SS, Heat	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Not an occupation issue for PS	This is a stormwater pump station and is considered highly critical before during and after an event . Not an occupied bldg.	Medium Term	Low
6	Stormwater	PS Building 04		100.0%			71.2%	28.8%	3.29	5	16.44	1.0	16.44	Coastal	SLR, SS	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		Flood - Location assessment including actual building penetration and asset elevations. Flood - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets (panels), enclosing multiple asset area/building).	This is a stormwater pump station and is considered highly critical before during and after an event . Not an occupied bldg.	Medium Term	Low
7	Water	ET-01	11115 Thomas St, Hollywood, FL 33019	96.0%			83.7%	16.3%	3.12	5	15.62	1.0	15.62	Coastal	SLR, SS	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is an elevated storage tank location and is considered critical throughout an event and assets have to be functional. There are limited staff or public accommodation needs. There are also limited hardening needs.	Long Term	Low
8	Stormwater	PS Submersible 08		100.0%			94.2%	5.8%	3.06	5	15.29	1.0	15.29	Coastal	SLR, SS	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a stormwater pump station and is considered highly critical before during and after an event . Not an occupied bldg.	Near Term	Low
9	Stormwater	PS Submersible 12		40.4%			100.0%		2.40	5	12.02	1.0	12.02	Coastal	SS, Heat		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Not an occupation issue for PS	This is a stormwater pump station and is considered highly critical before during and after an event . Not an occupied bldg.	Medium Term	Low
10	Wastewater	E-05	1000 N Northlake Dr, Hollywood	100.0%			100.0%		3.00	4	12.00	1.0	12.00	Coastal	SS, Heat		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Not an occupation issue for PS	This is a wastewater pump station and is considered critical before during and after an event . Not an occupied bldg.	Near Term	Low
11	Stormwater	PS Submersible 13		26.9%			100.0%		2.27	5	11.35	1.0	11.35	Coastal	SS, Heat		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Not an occupation issue for PS	This is a stormwater pump station and is considered highly critical before during and after an event . Not an occupied bldg.	Medium Term	Low
12	Wastewater	E-02	1210 N Ocean Drive, Hollywood	100.0%			23.1%	76.9%	3.77	3	11.31	1.0	11.31	Coastal	SLR, SS	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	NearTerm	Low
13	ALF	Eastside Active Living/Nova Palms	1600 Taft St, Hollywood, FL	34.0%		11.2%	86.6%	2.2%	2.25	5	11.25	1.0	11.25	Coastal	SS, Heat		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	Review Code Requirements for AC/Generator/Elevator	SLR Flooding - Location assessment including actual building penetration and asset elevations. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Confirm central air conditioning and generator backup. Heat - Code modification and/or building dept. review may be implemented	This is a private assisted living facility and is considered highly vulnerable to an event. May also be used to shelter residents throughout. The facility should be hardened to address possible flooding conditions due to SLR and SS. AC and backup power are critical during extended power outages. Cost would be incurred by owner.	Near Term	Medium
14	Public Works	Hollywood Beach (Beach Maintenance Building)	1112 North Ocean Drive	100.0%			68.3%	31.7%	3.32	4	13.27	0.8	10.61	Coastal	SLR, SS	Hardening Mitigation Water-tightening			SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a Public Works Facility and is considered highly critical before during and after an event. Will not be used to shelter staff throughout, but for use immediately after an event.	Near Term	Medium

¹Sea Level Rise Projections is based on up to 10 feet above average high tides . Therefore, it may not include inundation due to King Tides for all scenarios
²Storm Surge developed based on a direct impact of Category 3 hurricane at the City shoreline

CITY OF HOLLYWOOD
ASSET ADAPTATION PLAN

Rank	Department	Name	Address	% of Property Exposed to SLR		% of Property Exposed to Storm Surge ²			Vulnerability Score	Criticality	Vulnerability x Criticality	Weighting Factor	Vulnerability x Criticality Adjusted	Area Flooding	Threat	Threat Mitigation Strategy			Adaptation Plan Approach	Comments	Schedule (Near term 1-3 yrs, Medium Term 3-5yrs, Long Term 5+ yrs)	Potential Cost Range (Low - \$0-100K, Med. \$100K-1M, High. Greater than \$1M)
				% Exposed between 0.01 ft and 2 ft	% Exposed >= 2 ft	% Exposed between 0.01 ft and 2 ft	% Exposed between 2 ft and 5 ft	% Exposed >= 5 ft								SLR Option	SS Option	Extreme Heat				
15	Wastewater	Wastewater Treatment Plant	1621 N 14th Ave, Hollywood, FL 33020	24.9%		19.3%	77.9%	2.8%	2.08	5	10.41	1.0	10.41	Coastal	SS	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.			SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Confirm central air conditioning and generator backup.	This is a wastewater treatment location and is considered highly critical before during and after an event . May also be used to shelter staff throughout, therefore includes heat consideration although not in a heat island or vulnerable population area.	Long Term	High
16	Water	FW-05	1200 Sheridan St, Hollywood, FL 33019				100.0%		2.00	5	10.00	1.0	10.00	Citywide (Inland)	SS	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.			SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a Raw Water Well and is critical throughout an event. Estimated flooding conveyed by canal, inland to asset location	LongTerm	Low
17	ALF	Majestic Memory Care Center	1200 Arthur St, Hollywood, FL	24.1%		44.8%	41.7%	13.5%	1.93	5	9.64	1.0	9.64	Coastal	SS, Heat	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	Review Code Requirements for AC/Generator/Elevator	SLR Flooding - Location assessment including actual building penetration and asset elevations. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Confirm central air conditioning and generator backup. Heat - Code modification and/or building dept. review may be implemented	This is a private assisted living facility and is considered highly vulnerable to an event. May also be used to shelter residents throughout. AC and backup power are critical during extended power outages. Cost would be incurred by owner.	Near Term	Low Medium	
18	Stormwater	PS Submersible 06				13.7%	86.3%		1.86	5	9.31	1.0	9.31	Coastal	SLR, SS, Heat	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Heat exposure not a concern for this asset.	This is a stormwater pump station and is considered highly critical before during and after an event . Not an occupied bldg.	Near Term	Low
19	Wastewater	E-03	1100 N Ocean Dr, Hollywood	100.0%			100.0%		3.00	3	9.00	1.0	9.00	Coastal	SLR, SS, Heat	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Not an occupation issue for PS	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Near Term	Low
20	Wastewater	E-06	1350 Funston St, Hollywood	100.0%			100.0%		3.00	3	9.00	1.0	9.00	Coastal	SS, Heat	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Not an occupation issue for PS	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Near Term	Low	
21	Wastewater	E-01	2100 N Ocean Drive, Hollywood	76.9%			80.8%	19.2%	2.96	3	8.88	1.0	8.88	Coastal	SLR, SS	Design Mitigation - Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Near Term	Low
22	ALF	Azalea Gardens	1701 Mayo St, Hollywood, FL			41.0%	59.0%		1.59	5	7.95	1.0	7.95	Coastal	SS	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Location assessment including actual building penetration and asset elevations. ALF General - Confirm central air conditioning and generator backup. ALF General - Code modification and/or building dept. review may be implemented	This is a private assisted living facility and is considered highly vulnerable to an event. May also be used to shelter residents throughout. AC and backup power are critical during extended power outages. Cost would be incurred by owner.	Near Term	Low Medium	
23	ALF	North Lake Retirement Home	1222 N 16th Ave, Hollywood, FL			56.4%	43.6%		1.44	5	7.18	1.0	7.18	Coastal	SS	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	Review Code Requirements for AC/Generator/Elevator	SS Flooding - Location assessment including actual building penetration and asset elevations. ALF General - Confirm central air conditioning and generator backup. ALF General - Code modification and/or building dept. review may be implemented	This is a private assisted living facility and is considered highly vulnerable to an event. May also be used to shelter residents throughout. AC and backup power are critical during extended power outages. Cost would be incurred by owner.	Near Term	Low Medium	
24	Stormwater	PS Building 09				63.6%	31.8%	4.5%	1.41	5	7.05	1.0	7.05	Inland Canal	SS	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a stormwater pump station and is considered highly critical before during and after an event . Not an occupied bldg.	Medium Term	Low	
25	Wastewater	E-04	1000 S Southlake Dr, Hollywood	26.9%			100.0%		2.27	3	6.81	1.0	6.81	Coastal	SS, Heat	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Not an occupation issue for PS	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Medium Term	Low	
26	Wastewater	E-09	329 Balboa Street, Hollywood	23.1%			100.0%		2.23	3	6.69	1.0	6.69	Coastal	SS	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		Flood - Location assessment including actual building penetration and asset elevations. Flood - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Medium Term	Low	
27	Public Works	Eco Grande (Cart Barn/Storage Maintenance)	1451 Taft St, Hollywood	76.4%		2.6%	94.7%	2.8%	2.77	3	8.30	0.8	6.64	Coastal	SLR, SS	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a Public Works Facility and is NOT considered highly critical before during and after an event. Will not be used to shelter staff throughout. Degree of flooding indicates potential damage. City may elect to protect/modify.	Near Term	medium
28	Public Works	Hammerstein Residence And Garage	1520 Polk Street			10.9%	89.1%		1.89	4	7.56	0.8	6.05	Coastal	SS	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a Public Works Facility and is NOT considered highly critical before during and after an event. Will not be used to shelter staff throughout, but it may be use for residents parking during the event.	Medium Term	Low	

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				% Exposed between 0.01 ft and 2 ft	% Exposed >= 2 ft	% Exposed between 0.01 ft and 2 ft	% Exposed between 2 ft and 5 ft	% Exposed >= 5 ft								SLR Option	SS Option	Extreme Heat				
29	Wastewater	E-13	751 Sheridan St, Hollywood	51.9%		3.8%	78.8%	17.3%	2.65	2	5.31	1.0	5.31	Coastal	SLR, SS	Hardening Mitigation - Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		Flood - Location assessment including actual building penetration and asset elevations. Flood - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets (panels), enclosing multiple asset area/building).	This is a very wastewater pump station a park and is considered low critical before during and after an event . Not an occupied bldg.	Medium Term	Low
30	Wastewater	P-03	3100 SW 42nd Avenue, Hollywood			25.0%	75.0%		1.75	3	5.25	1.0	5.25	Coastal	SS		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Medium Term	Low
31	ALF	Hollywood Beach Ret Home	1722-26 Madison St, Hollywood, FL			100.0%			1.00	5	5.00	1.0	5.00	Coastal	SS		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Location assessment including actual building penetration and asset elevations. ALF General - Confirm central air conditioning and generator backup. ALF General - Code modification and/or building dept. review may be implemented	This is a private assisted living facility and is considered highly vulnerable to an event. May also be used to shelter residents throughout. AC and backup power are critical during extended power outages. Cost would be incurred by owner.	Near Term	Medium
32	ALF	H Floridian Inc	1831 Plunkett St, Hollywood, FL			95.12%			0.95	5	4.76	1.0	4.76	Coastal	SS		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	Install/confirm resilient generator for power backup	SS Flooding - Location assessment including actual building penetration and asset elevations. ALF General - Confirm central air conditioning and generator backup. ALF General - Code modification and/or building dept. review may be implemented	This is a private assisted living facility and is considered highly vulnerable to an event. May also be used to shelter residents throughout. AC and backup power are critical during extended power outages. Cost would be incurred by owner.	Near Term	Low Medium
33	Wastewater	E-07	3516 S Ocean Drive, Hollywood	30.8%		76.9%	19.2%	3.8%	1.58	3	4.73	1.0	4.73	Coastal	SS, Heat		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Not an occupation issue for PS	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Medium Term	Low
34	Police	South East Network Center	1511 S Federal Hwy, Hollywood, FL, 33020			81.0%	5.5%		0.92	5	4.60	1.0	4.60	Coastal	SLR, SS, Heat	Hardening Mitigation - Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	Install/confirm resilient generator for power backup	SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Confirm central air conditioning and generator backup.	This is a Police Facility and is considered highly critical before during and after an event . May also be used to shelter staff throughout.	Medium Term	Medium
35	Wastewater	P-01	3701 SW 30th Avenue, Hollywood			57.7%	42.3%		1.42	3	4.27	1.0	4.27	Inland Canal	SS		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Medium Term	Low
36	Public Works	Hollywood Beach Golf & Country Club (Clubhouse)	1650 Johnson St, Hollywood	15.6%		57.7%	37.2%	5.1%	1.63	3	4.89	0.8	3.92	Coastal	SS		Dsign features to mitigate threat.		SS Flooding - Design of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	Design currently underway	Near Term	Medium
37	Nursing Home	Golfcrest Health Care Center	600 N 17th Ave, Hollywood, FL			72.9%			0.73	5	3.65	1.0	3.65	Coastal	SS		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Location assessment including actual building penetration and asset elevations. ALF General - Confirm central air conditioning and generator backup. ALF General - Code modification and/or building dept. review may be implemented	This is a private assisted living facility and is considered vulnerable to an event. May also be used to shelter residents throughout. AC and backup power are critical during extended power outages. Cost would be incurred by owner.	Near Term	Low Medium
38	Wastewater	E-19	1830 S Westlake Drive, Hollywood			82.7%	17.3%		1.17	3	3.52	1.0	3.52	Coastal	SS		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Medium Term	Low
39	Wastewater	E-14	1480 Three Island Blvd, Hollywood			86.5%			0.87	4	3.46	1.0	3.46	Coastal	SLR, SS, Heat	Hardening Mitigation - Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Heat exposure not a concern for this asset.	This is a wastewater pump station and is considered critical before during and after an event . Not an occupied bldg.	Near Term	Low
40	Wastewater	E-10	1250 Sheridan Street (Westlake Bathhouse), Hollywood			36.5%	63.5%		1.63	2	3.27	1.0	3.27	Coastal	SS		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a very wastewater pump station a park and is considered low critical before during and after an event . Not an occupied bldg.	Near Term	Low
41	PRCA	John B Kooser Memorial Park	1401 Polk St	100.0%			100.0%		4.00	2	8.00	0.4	3.20	Coastal	SLR, SS				NA	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low
42	PRCA	Eppleman Park	Tyler St	100.0%		13.1%	86.9%		3.87	2	7.74	0.4	3.10	Coastal	SLR, SS, Heat				NA	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low
43	Wastewater	E-08	800 Three Islands Blvd, Hollywood			100.0%			1.00	3	3.00	1.0	3.00	Coastal	SLR, SS, Heat	Hardening Mitigation - Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Heat exposure not a concern for this asset.	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Near Term	Low

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				% Exposed between 0.01 ft and 2 ft	% Exposed >= 2 ft	% Exposed between 0.01 ft and 2 ft	% Exposed between 2 ft and 5 ft	% Exposed >= 5 ft								SLR Option	SS Option	Extreme Heat	Description of Plan Execution				
44	Wastewater	E-12	976 Weeping Willow Way, Hollywood			100.0%			1.00	3	3.00	1.0	3.00	Coastal	SS	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Near Term	Low		
45	Wastewater	N-17	3865 SW 53rd Place, Hollywood			100.0%			1.00	3	3.00	1.0	3.00	Inland Canal	SS	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Near Term	Low		
46	Wastewater	E-15	1461 Marina Drive, Hollywood			100.0%			1.00	3	3.00	1.0	3.00	Coastal	SLR, SS, Heat	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Heat exposure not a concern for this asset.	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Near Term	Low		
47	Wastewater	E-18	1100 Lyontree Street, Hollywood			100.0%			1.00	3	3.00	1.0	3.00	Coastal	SS	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Near Term	Low		
48	Wastewater	X-108	1 Young Cir, Hollywood			100.0%			1.00	3	3.00	1.0	3.00	Coastal	SS	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Near Term	Low		
49	Wastewater	W-11	2702 Harding Street, Hollywood	100.0%					1.00	3	3.00	1.0	3.00	Inland Canal	SLR	Hardening Mitigation - Water-tightening		SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected.	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Medium Term	Low		
50	Public Works	Art And Cultural Center	1650 Harrison Street, Hollywood			77.3%	22.5%		1.22	3	3.67	0.8	2.94	Coastal	SS	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a public works building that is not anticipated to be needed before, during or after a storm	Long Term	Low		
51	Wastewater	E-17	1675 Seagrape Way, Hollywood			96.2%			0.96	3	2.88	1.0	2.88	Coastal	SS	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Near Term	Low		
52	Community Centers	Hollywood Beach Culture and Community Center	1301 S Ocean Dr, Hollywood, FL, 33019	34.3%		94.0%	6.0%		2.40	2	4.81	0.6	2.88	Coastal	SS, Heat	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	Install/confirm resilient generator for power backup	SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Not an occupation issue for PS	This is a Community Services building that is not anticipated to be needed before, during or after a storm, however may be called to service.	NearTerm	High		
53	PRCA	Hollywood Marina	700 Polk St	95.9%		2.1%	39.3%	58.6%	3.52	2	7.05	0.4	2.82	Coastal	SLR, SS	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Confirm central air conditioning and generator backup.	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements. Recent Boat Ramp improvements include such mitigation.	Medium Term	Low		
54	Public Works	Garfield Parking Deck	Garfield St, Hollywood	97.5%		57.5%	42.5%		3.40	1	3.40	0.8	2.72	Coastal	SLR, SS	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	Parking deck may have limited electrical/mechanical equipment.	Long Term	Low		
55	Wastewater	E-16	901 Three Islands Blvd, Hollywood			90.4%			0.90	3	2.71	1.0	2.71	Coastal	SLR, SS, Heat	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Heat exposure not a concern for this asset.	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Near Term	Low		
56	PRCA	Holland Park	Johnson St	80.9%		2.2%	38.5%	59.3%	3.38	2	6.76	0.4	2.70	Coastal	SLR, SS	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	NA	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Medium Term	Low		
57	Public Works	Hollywood Beach Golf & Country Club (Maintenance)	1650 Johnson St, Hollywood			100.0%			1.00	3	3.00	0.8	2.40	Coastal	SS		Design features to mitigate threat.	SS Flooding - Design of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	Design currently underway	Near Term	Medium		
58	Wastewater	E-11	1150 Sheridan Street (Westlake Boathouse), Hollywood			82.7%	17.3%		1.17	2	2.35	1.0	2.35	Coastal	SS	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a very wastewater pump station a park and is considered low critical before during and after an event . Not an occupied bldg.	Medium Term	Low		
59	PRCA	Eco Grande Golf Course	1451 Taft St	61.4%		13.4%	66.0%	17.4%	2.59	2	5.18	0.4	2.07	Coastal	SLR, SS	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	SS and SLR - Design Features to Mitigate Threat	Golf Course design features can be implemented to limit impacts of both SS and SLR	Medium Term	Medium		
60	Education	South Broward High School	1901 N Federal Hwy, Hollywood, FL 33020	16.9%		19.4%	39.0%		1.14	3	3.43	0.6	2.06	Coastal	SS, Heat		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	Install/confirm resilient generator for power backup	SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Confirm AC and Generator Backup	School Board Facility	Long Term	Medium	

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Rank	Department	Name	Address	% of Property Exposed to SLR		% of Property Exposed to Storm Surge ²			Vulnerability Score	Criticality	Vulnerability x Criticality	Weighting Factor	Vulnerability x Criticality Adjusted	Area Flooding	Threat	Threat Mitigation Strategy			Adaptation Plan Approach	Comments	Schedule (Near term 1-3 yrs, Medium Term 3-5yrs, Long Term 5+ yrs)	Potential Cost Range (Low - \$0-100K, Med. \$100K-1M, High. Greater than \$1M)
				% Exposed between 0.01 ft and 2 ft	% Exposed >= 2 ft	% Exposed between 0.01 ft and 2 ft	% Exposed between 2 ft and 5 ft	% Exposed >= 5 ft								SLR Option	SS Option	Extreme Heat				
61	Community Centers	Garfield Community Center	300 Connecticut St, Hollywood, FL, 33019	80.0%		11.4%	20.0%	68.8%	3.37	1	3.37	0.6	2.02	Coastal	SLR, SS	Hardening Mitigation Water-tightening	Hardening		Flood - Location assessment including actual building penetration and asset elevations. Flood - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets (panels), enclosing multiple asset area/building).	Community Center mitigation may prevent damage. Cost Benefit analysis recommended	Long Term	Medium
62	PRCA	Hollywood Beach Golf Course	1650 Johnson St	51.1%		32.1%	24.1%	40.2%	2.52	2	5.04	0.4	2.02	Coastal	SLR, SS	Hardening Mitigation Water-tightening	Hardening		Flood - Location assessment including actual building penetration and asset elevations. Flood - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets (panels), enclosing multiple asset area/building).	Golf Course design features can be implemented to limit impacts of both SS and SLR	Long Term	Medium
63	Education	Hollywood Academy of Arts & Science	1720 Harrison St, Hollywood, FL 33020			92.8%	7.2%		1.07	3	3.22	0.6	1.93	Coastal	SLR, SS, Heat	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	Install/confirm resilient generator for power backup	SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Confirm AC and Generator Backup	School Board Facility	Long Term	Medium
64	Wastewater	N-16	4978 SW 35 Ter, Hollywood			44.2%			0.44	4	1.77	1.0	1.77	Inland Canal	SS				SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered critical before during and after an event . Not an occupied bldg.	Long Term	Low
65	Wastewater	W-28	1400 N 31st Avenue (Rotary Park), Hollywood	53.8%					0.54	3	1.62	1.0	1.62	Inland Canal	SS		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Long Term	Low
66	Public Works	Lifeguard Tower 24	Hollywood Beach				100.0%		2.00	1	2.00	0.8	1.60	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
67	PRCA	Conservation Site 433.2 (Dania Beach)	Area North of the Dania Beach Pier	32.3%		38.2%	47.6%	11.4%	2.00	2	4.00	0.4	1.60	Coastal	SLR, SS				SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a Beach conservation site. SS and SLR mitigation for this area should be considered as part of the overall management of the beach as an asset	Long Term	Low
68	Public Works	Lifeguard Tower 14	Hollywood Beach				100.0%		2.00	1	2.00	0.8	1.60	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
69	Public Works	Hollywood Beach Bandshell/Theater	200 Johnson St, Hollywood				100.0%		1.00	2	2.00	0.8	1.60	Coastal	SS		Hardening		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This bandshell facility is located on the beach. The stage is elevated. It is not intended for use for during or after a storm event.	Long Term	Low
70	Wastewater	N-15	4950 SW 38th Avenue, Hollywood			38.5%			0.38	4	1.54	1.0	1.54	Inland Canal	SS		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	This is a wastewater pump station and is considered critical before during and after an event . Not an occupied bldg.	Long Term	Low
71	PRCA	Jefferson Park	Jefferson St			14.0%	85.9%		1.86	2	3.72	0.4	1.49	Coastal	SS				NA	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low
72	Public Works	Lifeguard Tower 01	Hollywood Beach			30.8%	69.2%		1.69	1	1.69	0.8	1.35	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
73	Public Works	Lifeguard Tower 22	Hollywood Beach			46.2%	53.8%		1.54	1	1.54	0.8	1.23	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
74	PRCA	Sailor's Point	921 N. Lake Dr.	86.4%			87.2%	12.8%	2.99	1	2.99	0.4	1.20	Coastal	SLR, SS, Heat				NA	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	NA	NA
75	Public Works	Lifeguard Tower 11	Hollywood Beach			53.8%	46.2%		1.46	1	1.46	0.8	1.17	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
76	PRCA	Joe DiMaggio Park	1016 Washington St	10.5%		64.3%	35.7%		1.46	2	2.92	0.4	1.17	Coastal	SS, Heat				NA	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low
77	Hospitals	Kindred Hospital - Hollywood	1859 Van Buren St, Hollywood, FL 33020			21.9%			0.22	5	1.10	1.0	1.10	Coastal	SS		Hardening		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	Hospital facilities are expected to be resilient. A detailed facility assessment should be performed.	NA	NA
78	Public Works	Lifeguard Tower 15	Hollywood Beach			63.6%	38.4%		1.36	1	1.36	0.8	1.09	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA

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ASSET ADAPTATION PLAN

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				% Exposed between 0.01 ft and 2 ft	% Exposed >= 2 ft	% Exposed between 0.01 ft and 2 ft	% Exposed between 2 ft and 5 ft	% Exposed >= 5 ft								SLR Option	SS Option	Extreme Heat	Description of Plan Execution	Comments		
79	PRCA	Three Island Park	1002 Three Island Blvd			40.8%	12.1%	21.9%	1.31	2	2.61	0.4	1.05	Coastal	SS				NA	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low
80	Public Works	Lifeguard Tower 10	Hollywood Beach			72.7%	27.3%		1.27	1	1.27	0.8	1.02	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
81	Wastewater	N-14	5245 SW 33rd Way, Hollywood			32.7%			0.33	3	0.98	1.0	0.98	Inland Canal	SLR, SS, Heat	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	Install/confirm resilient generator for power backup	SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Heat exposure not a concern for this asset.	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Long Term	Low
82	PRCA	Harry Berry Park	Azaela Ter			47.4%	35.6%		1.19	2	2.37	0.4	0.95	Coastal	SLR, SS, Heat				NA	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low
83	PRCA	Oakridge Park	5200 SW 35th Ave			35.7%	30.6%	6.9%	1.18	2	2.35	0.4	0.94	Inland Canal	SS				NA	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low
84	PRCA	Historical Beach Paddleball Courts	300 Connecticut St, Hollywood, FL 33019			87.7%	12.3%		1.12	2	2.25	0.4	0.90	Coastal	SS		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building).	Paddleball courts are anticipated to require mitigation.	Long Term	Low
85	Wastewater	N-13	3851 Hollywood Oaks Drive, Hollywood			28.8%			0.29	3	0.87	1.0	0.87	Inland Canal	SS		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Location assessment including actual building penetration and asset elevations.	This is a wastewater pump station and is considered medium critical before during and after an event . Not an occupied bldg.	Long Term	Low
86	Public Works	Lifeguard Tower 08	Hollywood Beach			92.3%	7.7%		1.08	1	1.08	0.8	0.86	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
87	Education	Hollywood Central Elementary School	1700 Monroe St, Hollywood, FL 33020			46.7%			0.47	3	1.40	0.6	0.84	Coastal	SLR, SS, Heat	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	Install/confirm resilient generator for power backup	SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Confirm central air conditioning and generator backup.	School Board Facility	NA	NA
88	Public Works	Lifeguard Tower 12	Hollywood Beach			100.0%			1.00	1	1.00	0.8	0.80	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
89	Public Works	Lifeguard Tower 21	Hollywood Beach			100.0%			1.00	1	1.00	0.8	0.80	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
90	Public Works	Lifeguard Tower 05	Hollywood Beach			100.0%			1.00	1	1.00	0.8	0.80	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
91	Public Works	Lifeguard Tower 23	Hollywood Beach			100.0%			1.00	1	1.00	0.8	0.80	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
92	Public Works	Lifeguard Tower 02	Hollywood Beach			100.0%			1.00	1	1.00	0.8	0.80	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
93	Public Works	Lifeguard Tower 16	Hollywood Beach			100.0%			1.00	1	1.00	0.8	0.80	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
94	Public Works	Lifeguard Tower 18	Hollywood Beach			100.0%			1.00	1	1.00	0.8	0.80	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
95	Public Works	Lifeguard Tower 06	Hollywood Beach			100.0%			1.00	1	1.00	0.8	0.80	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
96	Public Works	Lifeguard Tower 04	Hollywood Beach			100.0%			1.00	1	1.00	0.8	0.80	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
97	Public Works	Lifeguard Tower 13	Hollywood Beach			100.0%			1.00	1	1.00	0.8	0.80	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
98	Public Works	Lifeguard Tower 07	Hollywood Beach			100.0%			1.00	1	1.00	0.8	0.80	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA
99	Public Works	Lifeguard Tower 03	Hollywood Beach			100.0%			1.00	1	1.00	0.8	0.80	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA

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				% Exposed between 0.01 ft and 2 ft	% Exposed >= 2 ft	% Exposed between 0.01 ft and 2 ft	% Exposed between 2 ft and 5 ft	% Exposed >= 5 ft								SLR Option	SS Option	Extreme Heat	Description of Plan Execution				
100	Public Works	Lifeguard Tower 20	Hollywood Beach			100.0%			1.00	1	1.00	0.8	0.80	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA	
101	Public Works	Lifeguard Tower 19	Hollywood Beach			100.0%			1.00	1	1.00	0.8	0.80	Coastal	SS		Assess asset location mitigation (e.g., relocate)		SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA	
102	Stormwater	PS Building 07					7.7%		0.15	5	0.77	1.0	0.77	Inland Canal	SS		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Location assessment including actual building penetration and asset elevations.	This is a stormwater pump station and is considered highly critical before during and after an event . Not an occupied bldg.	Medium Term	Low	
103	PRCA	Hollywood Central Performing Arts Center	1770 Monroe St			63.8%			0.64	3	1.91	0.4	0.77	Coastal	SS		Hardening Mitigation - Water-tightening - Elevate Electrical Comp.		SS Flooding - Location assessment including actual building penetration and asset elevations.	This Building may be expensive to repair. Mitigation may be more appropriate from a cost benefit perspective.	Near Term	Medium	
104	PRCA	Arts Park at Young Circle	1 N Young Cir			58.2%	2.5%		0.63	3	1.89	0.4	0.76	Coastal	SLR, SS, Heat	Hardening Mitigation Water-tightening	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	Install/confirm resilient generator for power backup	SLR Flooding - Location assessment including actual building penetration and asset elevations to be protected. SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Confirm central air conditioning and generator backup.	Park Buildings should be assessed. Ground elevation of Park appears resilient	Long Term	Low	
105	PRCA	Conservation Site 353.1	Area between Balboa St and Walnut St			68.9%			0.69	2	1.38	0.4	0.55	Coastal	SS				NA	This is a Beach conservation site. SS and SLR mitigation for this area should be considered as part of the overall management of the beach as an asset.	Long Term	Medium	
106	Public Works	Lifeguard Tower 17	Hollywood Beach			61.5%			0.62	1	0.62	0.8	0.49	Coastal	SS				SS Flooding - Location assessment including actual building penetration and asset elevations.	Lifeguard Towers are movable and can be relocated to prior to event.	NA	NA	
107	PRCA	Stan Goldman Memorial Park	800 Knights Rd	58.2%					0.58	2	1.16	0.4	0.47	Inland Canal	SLR, SS, Heat				NA	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low	
108	PRCA	Rotary Park	End of Oak St & the Ocean.	55.3%					0.55	2	1.11	0.4	0.44	Inland Canal	SS				NA	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low	
109	Education	Little Flower Catholic School	1843 Pierce St, Hollywood, FL 33020			20.5%			0.20	3	0.61	0.6	0.37	Coastal	SS		Hardening	Design Mitigation Water-tightening	SS Flooding - Location assessment including actual building penetration and asset elevations.	School Board Facility	NA	NA	
110	PRCA	Charnow Park	300 Connecticut St, Hollywood, FL 33019			90.4%			0.90	1	0.90	0.4	0.36	Coastal	SS				NA	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low	
111	PRCA	Conservation Site 353.2	Area between Desoto St and Walnut St			41.4%			0.41	2	0.83	0.4	0.33	Coastal	SS				NA	This is a Beach conservation site. SS and SLR mitigation for this area should be considered as part of the overall management of the beach as an asset	Long Term	Medium	
112	ALF	Merriment Manor Retirement Home	1835 Wilson St, Hollywood, FL			6.3%			0.06	5	0.32	1.0	0.32	Inland Canal	SS			Install/confirm resilient generator for power backup	SS Flooding - Location assessment including actual building penetration and asset elevations. ALF General - Confirm central air conditioning and generator backup. ALF General - Code modification and/or building dept. review may be implemented	This is a private assisted living facility and is considered vulnerable to an event. May also be used to shelter residents throughout. AC and backup power are critical during extended power outages. Cost would be incurred by owner.	Near Term	Low Medium	
113	PRCA	Keating Park	301 Magnolia Ter			18.8%	4.2%		0.27	2	0.54	0.4	0.22	Coastal	SS				NA	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low	
114	PRCA	Lions Park	3003 Hollywood Blvd	21.5%					0.22	2	0.43	0.4	0.17	Inland Canal	SS, Heat				NA	Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low	

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				% Exposed between 0.01 ft and 2 ft	% Exposed >= 2 ft	% Exposed between 0.01 ft and 2 ft	% Exposed between 2 ft and 5 ft	% Exposed >= 5 ft								SLR Option	SS Option	Extreme Heat	Description of Plan Execution				
115	PRCA	Oak Street Park	End of Oak St & the Ocean.			20.8%			0.21	2	0.42	0.4	0.17	Coastal	SS				NA		Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low
116	PRCA	Oakwood Hills Park	2701 N 26th Ave	10.6%					0.11	2	0.21	0.4	0.09	Inland Canal	SS				NA		Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low
117	Education	Bethune Elementary School of the Arts	2400 Meade St. Hollywood, FL 33020	3.4%					0.03	3	0.10	0.6	0.06	Inland Canal	SS, Heat	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	Install/confirm resilient generator for power backup	SS Flooding - Determination of mitigation approach to maximize threat reduction avoidance (e.g., raising assets, enclosing multiple asset area/building). Heat - Confirm central air conditioning and generator backup.		This is a private school. Asset included as community entity.	NA	NA	
118	Community Centers	Dr. Martin Luther King Jr. Community Center	2400 Charleston St, Hollywood, FL, 33020	2.3%					0.02	4	0.09	0.6	0.05	Inland	Heat		Install/confirm resilient generator for power backup	Heat - Confirm central air conditioning and generator backup.		This is a Community Services building that is not anticipated to be needed before, during or after a storm, however may be called to service.	Medium Term	Medium	
119	PRCA	Waterview Park	2660 Coolidge St	3.7%					0.04	2	0.07	0.4	0.03	Inland Canal	SS, Heat	Hardening Mitigation - Water-tightening - Elevate Electrical Comp.	Limited Canopy may be mitigated by tree planting	NA		Park facilities (i.e., benches, swing sets, etc.) are considered resilient for the purposes of this assessment. Consideration of climate change threats should be included in upgrades/improvements.	Long Term	Low	
120	ALF	Abbey Manor Retirement Res	1930 Lincoln St, Hollywood, FL						0.00	5	0.00	1.0	0.00	Inland	Heat		Review Code Requirements for AC/Generator/Elevator	Heat - Confirm central air conditioning and generator backup.		This is a private assisted living facility and is considered highly vulnerable to an event. May also be used to shelter residents throughout. AC and backup power are critical during extended power outages. Cost would be incurred by owner.	Near Term	Low Medium	
121	Education - Shelter	Beachside Montessori Village	2230 Lincoln St, Hollywood, FL 33020						0.00	5	0.00	1.0	0.00	Inland	Heat		Install/confirm resilient generator for power backup	Heat - Confirm central air conditioning and generator backup.		School Board Facility. This is a shelter.	Near Term	Low	
122	ALF	Buckingham Place	1845 Garfield St, Hollywood, FL						0.00	5	0.00	1.0	0.00	Inland	Heat		Review Code Requirements for AC/Generator/Elevator	Heat - Confirm central air conditioning and generator backup.		This is a private assisted living facility and is considered highly vulnerable to an event. May also be used to shelter residents throughout. AC and backup power are critical during extended power outages. Cost would be incurred by owner.	Near Term	Low Medium	
123	ALF	Camelot Court	2233 McKinley St, Hollywood, FL						0.00	5	0.00	1.0	0.00	Inland	Heat		Review Code Requirements for AC/Generator/Elevator	Heat - Confirm central air conditioning and generator backup.		This is a private assisted living facility and is considered highly vulnerable to an event. May also be used to shelter residents throughout. AC and backup power are critical during extended power outages. Cost would be incurred by owner.	Near Term	Low Medium	
124	ALF	Five Star Premier Residences Of Hollywood	2480 N Park Rd, Hollywood, FL						0.00	5	0.00	1.0	0.00	Inland	Heat		Review Code Requirements for AC/Generator/Elevator	Heat - Confirm central air conditioning and generator backup.		This is a private assisted living facility and is considered highly vulnerable to an event. May also be used to shelter residents throughout. AC and backup power are critical during extended power outages. Cost would be incurred by owner.	Near Term	Low Medium	
125	ALF	Hammond House Hollywood	5301 McKinley St, Hollywood, FL						0.00	5	0.00	1.0	0.00	Inland	Heat		Review Code Requirements for AC/Generator/Elevator	Heat - Confirm central air conditioning and generator backup.		This is a private assisted living facility and is considered highly vulnerable to an event. May also be used to shelter residents throughout. AC and backup power are critical during extended power outages. Cost would be incurred by owner.	Near Term	Low Medium	
126	ALF	Heart To Heart Assisted Living	2201 N 55th Ave, Hollywood, FL						0.00	5	0.00	1.0	0.00	Inland	Heat		Review Code Requirements for AC/Generator/Elevator	Heat - Confirm central air conditioning and generator backup.		This is a private assisted living facility and is considered highly vulnerable to an event. May also be used to shelter residents throughout. AC and backup power are critical during extended power outages. Cost would be incurred by owner.	Near Term	Low Medium	

¹Sea Level Rise Projections is based on up to 10 feet above average high tides. Therefore, it may not include inundation due to King Tides for all scenarios

²Storm Surge developed based on a direct impact of Category 3 hurricane at the City shoreline

CITY OF HOLLYWOOD
ASSET ADAPTATION PLAN

Rank	Department	Name	Address	% of Property Exposed to SLR		% of Property Exposed to Storm Surge ²			Vulnerability Score	Criticality	Vulnerability x Criticality	Weighting Factor	Vulnerability x Criticality Adjusted	Area Flooding	Threat	Threat Mitigation Strategy			Adaptation Plan Approach		Comments	Schedule (Near term 1-3 yrs, Medium Term 3-5yrs, Long Term 5+ yrs)	Potential Cost Range (Low - \$0-100K, Med. \$100K-1M, High. Greater than \$1M)
				% Exposed between 0.01 ft and 2 ft	% Exposed >= 2 ft	% Exposed between 0.01 ft and 2 ft	% Exposed between 2 ft and 5 ft	% Exposed >= 5 ft								SLR Option	SS Option	Extreme Heat	Description of Plan Execution				
127	Education	Sheridan Hills Elementary School	5001 Thomas St, Hollywood, FL 33021						0.00	3	0.00	0.6	0.00	Inland Canal	Heat			Review Code Requirements for AC/Generator/Elevator	Heat - Confirm central air conditioning and generator backup.	This is a school. Asset included as community entity.	Near Term	Low Medium	
128	Education	Sheridan Technical Center	5400 Sheridan St, Hollywood, FL 33021						0.00	3	0.00	0.6	0.00	Inland Canal	Heat			Review Code Requirements for AC/Generator/Elevator	Heat - Confirm central air conditioning and generator backup.	This is a school. Asset included as community entity.	Near Term	Low Medium	

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²Storm Surge developed based on a direct impact of Category 3 hurricane at the City shoreline