Appendix K

Vulnerability Assessment

Technical Memorandum
City of Dunedin

Collective Water Resources
Master Stormwater Plan, Vulnerability Assessment

Subject:	**STORMWATER MANAGEMENT VULNERABILITY ASSESSMENT**
Date:	July 1, 2020 (revised)
To:	Whitney Marsh, City of Dunedin
From:	Stephanie Dunham, Collective Water Resources
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Through:	Jones Edmunds and Associates

Objective

Collective Water Resources (Collective), as a sub-consultant to Jones Edmunds and Associates (Jones Edmunds), performed a flooding vulnerability assessment for the City of Dunedin (City). Collective was tasked with estimating the increases in future flood vulnerability throughout the City due to projected sea level rise (SLR) that could exacerbate three flood hazards: extreme high tides, storm surge, and stormwater runoff. As part of the vulnerability assessment, Collective identified three assets within the City that could be encroached (or exposed) by flooding for each of the flooding hazards: property, structures, and roadways. Based on the exposure analysis, vulnerability was ranked for individual properties and roadways according to the characteristics of each of these assets with respect to the degree each could be affected (potential impact) - and the ability to cope with impacts (adaptive capacity). Stormwater adaptation strategies were also developed for the City to consider in its long-range planning.

Flooding Hazards

The potential increase in rainfall-induced flooding and King Tide events from sea level rise were evaluated. Jones Edmunds evaluated potential increase in flooding from coastal storm surge with increased sea

levels. For each of the three types of flooding (rainfall-induced, King Tide, and storm surge) two scenarios were analyzed corresponding with 1-foot and 2-feet of SLR. These SLR scenarios were selected to represent future tidal conditions that could occur within the following time frames according to the National Oceanic and Atmospheric Administration (NOAA) [1]:

- *One foot of sea level rise relative to 2020 could occur between 2039 and 2070.*
- *Two feet of sea level rise relative to 2020 could occur between 2052 and after 2100.*

Figure 1 illustrates the NOAA projections of relative sea level change from present through 2070 at the St. Petersburg tidal station (8726520) for the three sea level rise scenarios that are being utilized in Pinellas County's ongoing Vulnerability Assessment[2] and the scenarios recommended by the Tampa Bay Climate Science Advisory Panel (CSAP) for the Tampa Bay region[3].

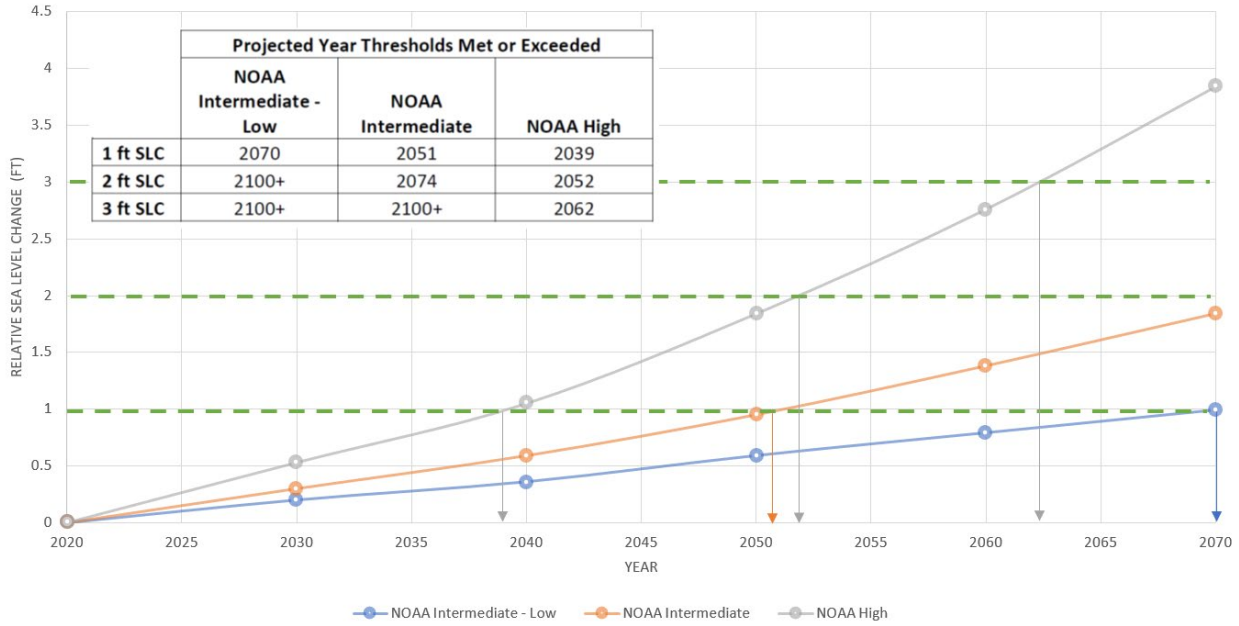


Figure 1. Projected Relative Sea Level Change from 2020-2070 for St. Petersburg Station 8726520

Rainfall-Induced Flooding

Collective evaluated the potential increase in rainfall-induced flooding from the 100-year/24-hour storm associated with the two SLR scenarios by adjusting the hydrologic and hydraulic models developed by Jones Edmunds for the City of Dunedin and Curlew Creek Watershed Management Plan. Both models

[1] NOAA Center for Operational Oceanographic Products and Services. (2017). Global and Regional Sea Level Rise Scenarios for the United States. Silver Spring: National Oceanic and Atmospheric Administration.

[2] Pinellas County. (2016). WSP USA Inc. Contract No. 167-0102-P Services Agreement for RESTORE Act Vulnerability Assessment Services. Clearwater: Pinellas County Government.

[3] Tampa Bay Climate Science Advisory Panel.(2019). Recommended Projections of Sea Level Rise in the Tampa Bay Region. Retrieved from http://www.tbrpc.org/wp-content/uploads/2019/08/CSAP_SLR_Recommendation_2019_Final-1.pdf

were produced using ICPRv4. Parameters within these watershed models were adjusted to account for each SLR scenario by:

- **Increasing tidal boundary elevations by 1-foot and 2-feet, respectively**
- **Adjusting initial water surface elevations for nodes influenced by the higher tidal boundary elevations under no-rainfall conditions**
- **Adjusting the water table depths to account for rising surficial aquifer elevations along the coastline and the associated reduction in soil storage.**

Tidal boundary conditions were modified for each scenario by adding the 1-foot and 2-feet SLR to the mean high water (MHW) level established for existing conditions model developed by Jones Edmunds (0.76 feet NAVD).

Initial water surface elevations for nodes influenced by the higher tidal boundary conditions were modified for each scenario by conducting a no-rainfall simulation with each of the higher tidal boundary stages. The initial water surface elevations for the nodes where an increase in the stage occurred under the no-rainfall condition were adjusted accordingly.

Lastly, water table depths were adjusted to account for the projected change in surficial aquifer elevations from higher tides along the coastline and up into both Curlew and Cedar Creeks. Immediately at the coastline and portions of Curlew and Cedar Creeks that are directly inundated by the higher tide, the water table was assumed to be equal in elevation. Based on surficial aquifer properties for Pinellas County (Gausseaux et. al., 1984) and the Ghyben-Herzberg and Dupuit-Forchheimer approximations, the extent of this equal rise in water table elevation was projected approximately 2,200 feet inland and linearly tapered further inland to match the existing water table established by Jones Edmunds. Within the models, the depth to water table were adjusted accordingly.

Collective mapped floodplains for the 100-year/24-hour design storm with the two SLR scenarios. Level-pool inundation mapping was generated based on the peak stage for each basin. Like the mapping process employed by Jones Edmunds, floodplains were mapped by creating a 5-foot resolution water surface grid and "cleaned" to remove small islands and fill small gaps. Figure 2 illustrates the change in flood inundation results for the existing conditions 100-year/24-hour rainfall event (as mapped by Jones Edmunds) compared to the two SLR scenarios. The greatest change in flooding extent are seen along Dunedin's coast, especially west of US Alternate 19. However, it should be noted that while the areal extent of flooding is not dramatically greater, the flood elevations did significantly increase for many basins. Appendix K-1 summarizes the peak stages for the existing conditions, 1-foot SLR, and 2-foot-SLR scenarios for the 100-year, 24-hour storm. Nodes that reflect a rise in peak stage greater than or equal to 0.1-foot have been highlighted in the table. For the 1-foot SLR scenario, 86 out of 1230 nodes reflect a peak stage difference greater than or equal to 0.5-foot. For the 2-feet SLR, 136 nodes reflect this same difference.

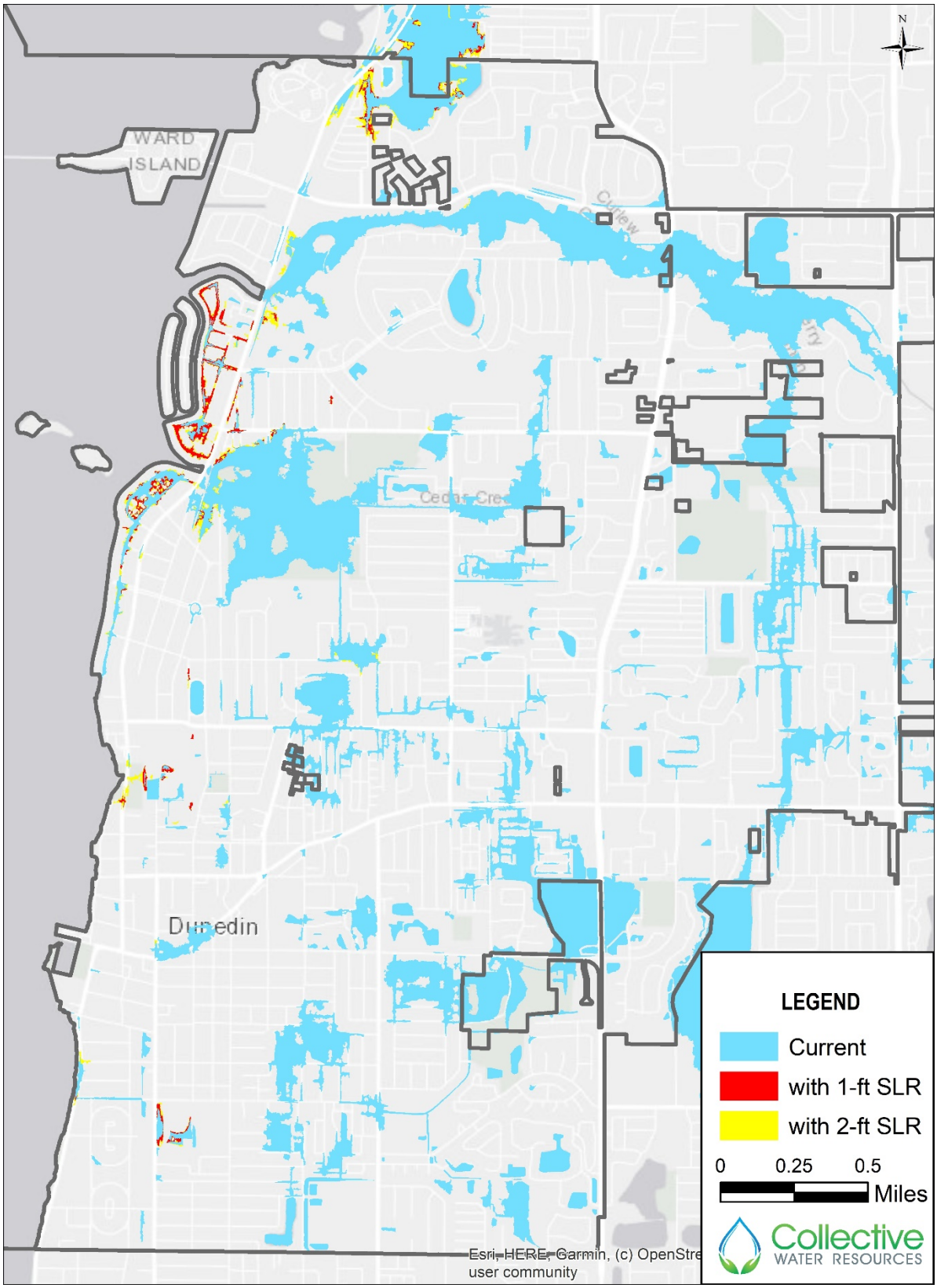


Figure 2. 100-year/24-hour Rainfall-Induced Flooding: Current, with 1-foot SLR, and with 2-feet SLR

King Tide

King Tide is a common term used to refer to the highest predicted tide of the year experienced in coastal areas. Current King Tides also provide an example of what future, daily water levels may be like with sea level rise. Collective reviewed the historic tidal data collected by the National Oceanic and Atmospheric Administration (NOAA) at the Clearwater Beach station (Station 8726724) for the past decade (2010 through 2019) to determine the highest annual tide. The average highest annual tide for this period is 2.9 feet (North American Vertical Datum of 1988, or NAVD88), or approximately 2.2 feet higher than the current MHW level. For the vulnerability assessment, two future King Tide scenarios were evaluated by adding 1-foot and 2-feet of SLR to the average highest annual tide, or 3.9 feet and 4.9 feet, respectively. The coastal area that would be inundated at these tide levels as well as more inland areas where back-water effects of tides can propagate through the stormwater management system were mapped by Collective. Figure 3 presents the areas within the City that could be inundated by these two King Tide scenarios.

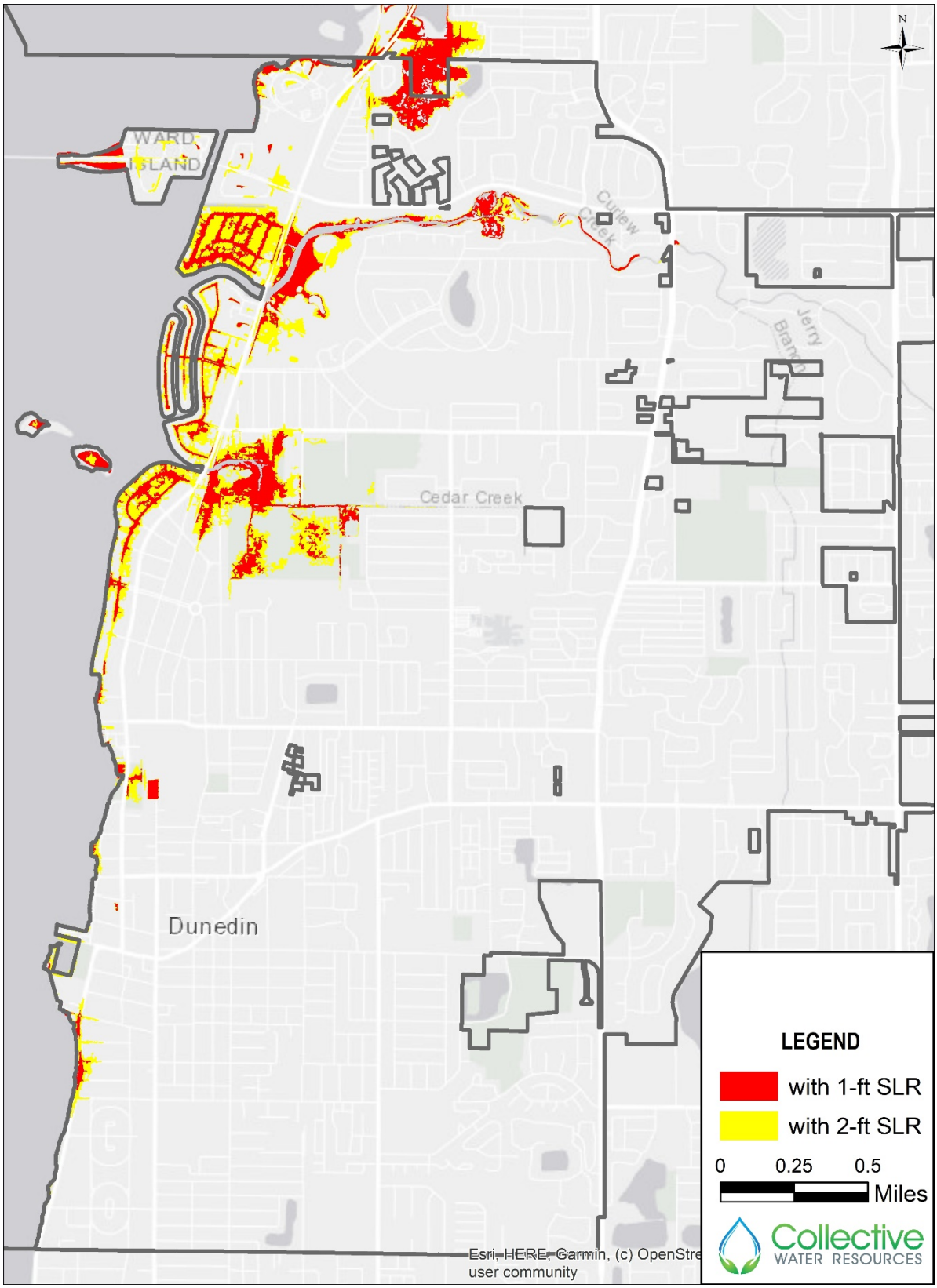


Figure 3: Potential King Tide Flooding for 1-Foot and 2-Feet SLR Scenarios

Coastal storm surge with wave runup

Jones Edmunds evaluated the potential increase in storm surge and wave runup associated with the two SLR scenarios. Jones Edmunds estimated coastal flood elevations for the 1-foot and 2-foot SLR scenarios along 15 coastal transects located within the City's limits. The analysis utilized the effective transects and stillwater elevations within the Wave Height Analysis for Flood Insurance Studies (WHAFIS) model from FEMA's Flood Insurance Study (FIS) for Pinellas County. To analyze the effects of projected SLR, the stillwater elevations were increased for each SLR scenarios. Figure 4 illustrates the projected coastal base flood elevations determined by Jones Edmunds, representing projected surge and wave setup, along each transect. One coastal transect, 5070, includes wave runup analysis. This is the only transect within the City's limits that includes this coastal flooding component in the effective FEMA FIS. Wave runup increased the most landward flood elevation by 0.7 feet and 0.5 feet for the 1-foot and 2-feet SLR scenarios, respectively. The most landward BFEs including wave runup are 11 feet for both scenarios.

Generally, the coastal flooding depths increased between one and two feet for the 1-foot SLR scenario compared to effective coastal Base Flood Elevations (BFEs) and between two and four feet for the 2-feet SLR scenario. Changes in coastal flooding extent (compared against effective mapping) are expected to be most pronounced in the southwest corner of the City's mainland as well as around Cedar Creek and the residential neighborhood between Palm Boulevard and Michigan Blvd east of Bayshore Boulevard (aka US-19 Alt).

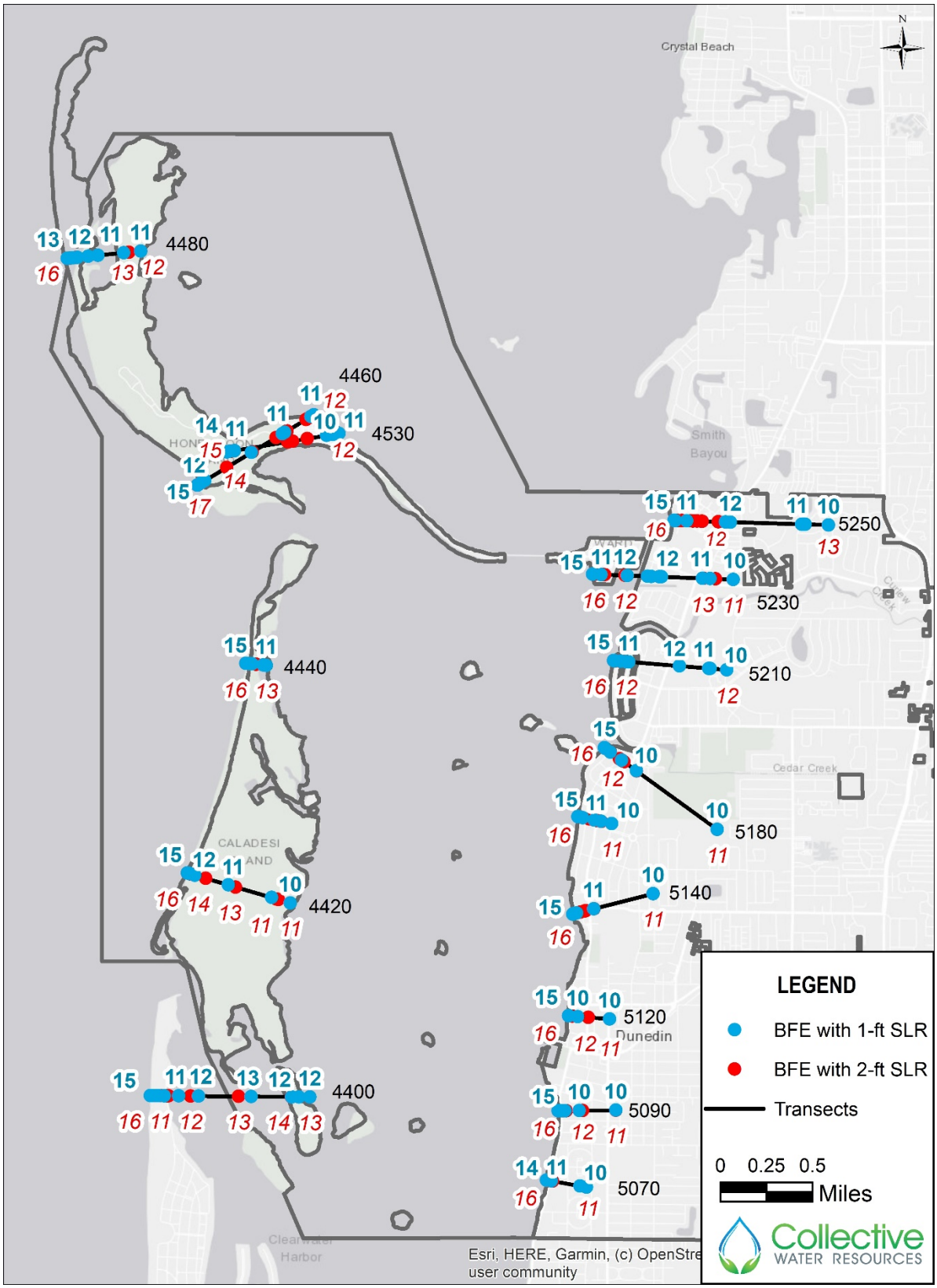


Figure 4. Potential Coastal Base Flood Elevations for 1-Foot and 2-Feet SLR Scenarios

Parcel Exposure

Parcel data collected from the Pinellas County Property Appraisers Office (PAO) was used to determine whether properties within the City's limits could be inundated by the three, future flooding hazards. A total of 11,932 land parcels are within the City's limits. Unit parcels were not included in the analysis.

Where spatial mapping of flooding extents is available (rainfall-induced and King Tide), parcels including any flooded area were identified as exposed. For storm surge, projected coastal base flood elevations were compared against the ground elevations within each parcel's extent to determine exposure. Table 1 summarizes the number and percentage of parcels exposed to each type of flooding for the 1-foot and 2-feet SLR scenarios. For rainfall-induced flooding, the number of structures exposed to current flooding from the 100-year/24-hour storm, as mapped by Jones Edmunds, is included for comparison purposes. Additionally, the number of properties intersecting coastal Special Flood Hazard Areas (e.g. Zones VE and AE), as defined by the effective Flood Insurance Rate Maps (FIRMs) from the Federal Emergency Management Agency (FEMA), have also been included below. While the BFEs associated with the effective FIRMs are lower than those projected under future conditions with SLR, the higher number of exposed parcels compared to storm surge scenario with 1-foot SLR is likely due to older mapping methodologies as well as older topographic data used to establish the effective mapping.

Table 1. Number and Percentage of Parcels Exposed to Flooding

Type of Flooding	SLR Scenario	Number of Parcels Exposed	Percent of Total Parcels[1]
Rainfall-Induced Flooding	Current	2,315	19.4%
	1-foot	2,410	20.2%
	2-feet	2,464	20.7%
King Tide	1-foot	537	4.5%
	2-feet	883	7.4%
Storm Surge	Current	2,117	17.7%
	1-foot	2,102	17.6%
	2-feet	2,339	19.6%

[1] Based on a total of 11,932 land parcels within the City limits.

Both future rainfall-induced and storm surge flooding could inundate approximately one-fifth of the parcels within the City. Parcels that could be flooded by rainfall-induced flooding with SLR, are distributed throughout the western portions of the City; however, the parcels that would experience storm surge flooding are within a mile of the coastline. For the Dunedin watershed, a total of 150 additional properties are expected to see exposure to flooding associated with the 100-year/24-hour storm event with up to 2-feet of SLR. Many of the properties that could be exposed to new flooding are in Osprey Place, Harbor View, Dunedin Shores, Dunedin Isles, and around Josiah Cephus Weaver Park. When comparing the 237 parcels that become exposed to storm surge with 2-feet of SLR compared to the 1-foot SLR scenario, many of these properties are located in Dunedin Isles Country Club, Suemar Subdivision, Dunedin Isles, Lucille Subdivision, downtown Dunedin, Belle Tere, and Shore Crest. These analyses suggest that properties already exposed to rainfall-induced and/or coastal flooding could see increased flood depths as sea levels rise.

Structure Exposure

A variety of building footprint data sources were utilized to determine which structures within the City's limits could be inundated by the three flooding hazards combined with the two SLR scenarios. Structure data utilized by Jones Edmunds for the flood protection level of service (LOS) analysis were used for this assessment. These building footprints were supplemented with data available from Pinellas County, Pinellas County PAO, and the impervious area mapping available for Pinellas County for portions of the City not included in Jones Edmund's LOS analysis. Building footprints were reviewed against parcel data and recent aerial imagery to identify missing structures. Generic 30-foot by 30-foot footprints were created for these missing structures. A total of 13,509 structures are included within these six data sets.

Where spatial mapping of flooding extents was available (rainfall-induced and King Tide), structures footprints that intersected with flooded areas were identified as exposed. For storm surge, projected coastal base flood elevations were compared against the lowest ground elevation within each structure's footprint to determine exposure. Table 2 summarizes the number of structures exposed to each type of flooding for the 1-foot and 2-feet SLR scenarios. For rainfall-induced flooding, the number of structures exposed to current flooding from the 100-year/24-hour storm is included for comparison purposes. Also, the number of structures intersecting effective FIRM coastal flood hazard areas are also included.

Table 2. Number and Percentage of Structures Exposed to Flooding

Type of Flooding	SLR Scenario	Number of Structures Exposed	Percent of Total Structures[1]
Rainfall-Induced Flooding	Current	1,146	8.5%
	1-foot	1,183	8.8%
	2-feet	1,241	9.2%
King Tide	1-foot	176	1.3%
	2-feet	552	4.1%
Storm Surge	Current	2,128	15.8%
	1-foot	1,870	13.8%
	2-feet	2,154	15.9%

[1] Based on a total of 13,509 structures within the City limits.

Based on the structure exposure analysis, storm surge intensified by SLR will likely present the greatest threat to the City's existing structures.

Road Exposure

Based on the approach used by Jones Edmunds roadway and drainage facility LOS analysis, Collective utilized the evacuation routes shapefile from the County's GIS library and Florida Department of Transportation (FDOT) data to identify the evacuation routes and arterial and high-use roadways. Local roadway centerlines within the City's limits were taken from the County's GIS library. According to the available centerline data there are 138.2 linear miles of local roads and trails, 30.4 miles of major roads (collectors and arterials), and 13.3 miles of evacuation routes within the City.

Collective evaluated how the potential increase in rainfall-induced flooding from the 100-year/24-hour storm associated with the two SLR scenarios impacted evacuation routes. Evacuation routes were graded

as passing or failing level of service criteria if roadway areas are inundated by either or both of the two rainfall-induced flooding scenarios. Figure 5 illustrates the evacuation routes that were identified as LOS deficient under these two SLR scenarios. In comparing against the segments identified by Jones Edmunds for current conditions, sea level rise will exacerbate LOS deficiencies along Bayshore Boulevard and Edgewater Drive. One new segment of Bayshore Boulevard near its intersection with Trade Winds Drive could result in a LOS deficiency with two-feet SLR.

Additionally, Collective assessed all roadways that could be exposed to potential future flooding. Roadways were marked as exposed to each of the flooding scenarios based on whether the roadway centerline is within the flood inundation area (rainfall-induced flooding and King Tide scenarios) or topographically lower than the most-landward base flood elevation determined at each transect (storm surge scenarios).

Table 3 summarizes the total linear miles (as measured along the roadway centerline) and percentage of all roadway mileage inundated by the various flooding scenarios. Consistent with structure exposure, potential storm surge flooding presents the greatest threat to roadways for all classification types. Key Evacuation Routes and coastal neighborhoods have the potential for being inaccessible or isolated, especially with storm surge flooding.

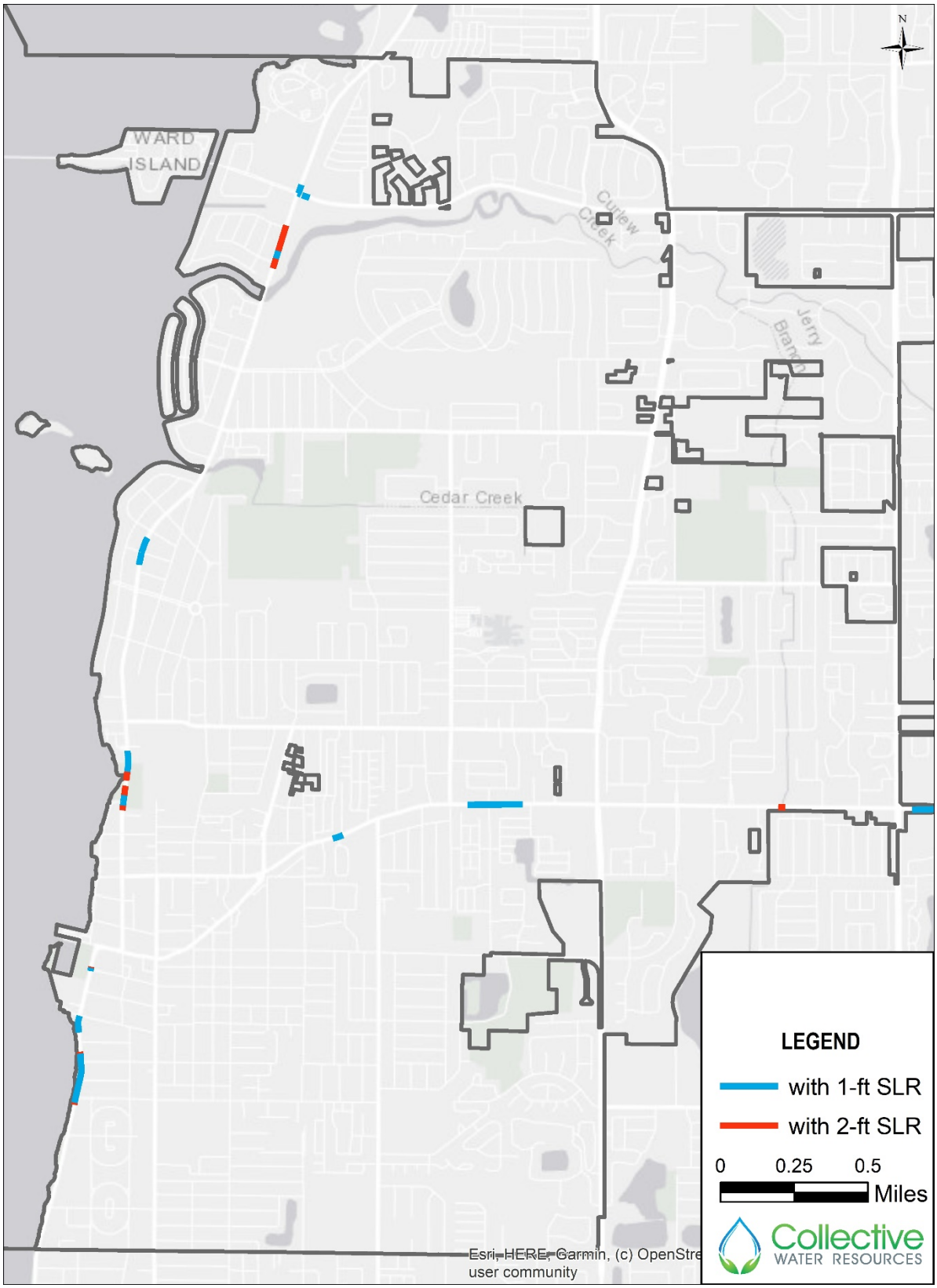


Figure 5. Evacuation Route LOS deficiencies for 1-Foot and 2-Feet SLR Scenarios

Table 3. Centerline Length and Percentage of Roadways Exposed to Flooding, by Classification

Type of Flooding	SLR Scenario	Roadway Classification	Roadway Miles Exposed	Percent of Roadway Miles[1]
Rainfall-Induced Flooding	Current	Local	20.4	15%
		Major	3.5	12%
		Evacuation	0.3	2%
	1-foot	Local	21.5	16%
		Major	3.4	11%
		Evacuation	0.4	3%
	2-feet	Local	22.1	16%
		Major	3.5	12%
		Evacuation	0.5	4%
	Difference 2-feet vs 1-foot	**Local**	**0.6**	**minimal**
		Major	**0.1**	**minimal**
		Evacuation	**0.1**	**1%**
King Tide	1-foot	Local	4.9	4%
		Major	0.03	minimal
		Evacuation	0.3	2%
	2-feet	Local	8.2	6%
		Major	0.3	1%
		Evacuation	1.3	10%
	Difference 2-feet vs 1-foot	**Local**	**3.3**	**2%**
		Major	**0.3**	**1%**
		Evacuation	**1.0**	**8%**
Storm Surge	1-foot	Local	22.0	16%
		Major	2.3	8%
		Evacuation	6.8	51%
	2-feet	Local	25.0	18%
		Major	3.3	11%
		Evacuation	7.3	55%
	Difference 2-feet vs 1-foot	**Local**	**3.0**	**2%**
		Major	**1.0**	**3%**
		Evacuation	**0.5**	**4%**

[1] Based on 138.2 linear miles of local roads and trails, 30.4 miles of major roads, and 13.3 miles of evacuation routes.

Vulnerability Assessment

Vulnerability, as defined by NOAA, is defined as the "*potential for loss of or harm/damage to exposed assets largely due to complex interactions among natural processes, land use decisions, and community resilience.*" [4] How vulnerable an exposed asset is depends on its potential impact, sensitivity to the impact, and adaptive capacity. These vulnerability elements are explained in greater detail below by asset type (i.e., property and roadway). This assessment considered structure-level characteristics and the services provided as well as roadway use.

Property Vulnerability

Potential Impact

During a vulnerability analysis, normally properties that are not exposed to a hazard have no potential impact. The degree to which a property could experience negative impacts due to a hazard is influenced by its sensitivity. Those properties that are exposed to flooding, were graded as either "high," "medium," or "low" sensitivity for each flooding threat/SLR scenario. High potential impact sensitivity was assigned to structures within a flood inundation area that are classified as one of the following types:

- Essential government facilities
- Historic
- Health care site
- Shelters
- Schools
- Fire Stations
- Police/Sheriff Stations
- Multiple family residences (e.g., condominiums)

The first seven types of uses are considered essential to societal and economic functions of the City. There are 61 essential facilities within the City's limits according to available data. The last type is included since potential impact is amplified due to multiple occupancy. Properties with these use types were identified from available Pinellas County GIS data. There are 1,542 structures that were classified as highly sensitive to potential impact. Medium sensitivity was designated for all other structure types that are within a flood inundation area. Low sensitivity was assigned to properties where flooding is projected on the property, but structure footprints were not within the flood extents as well as flooded properties without structures.

Adaptive Capacity

Adaptive capacity is the ability to cope with impacts with minimal disruptions and costs. A property's adaptive capacity to flooding was determined based on exposure as well as available information about when structures were built compared to availability of regulatory flood elevations to support the City's floodplain management. Similar to potential impact, properties were graded as either "high," "medium," or "low" adaptive capacity for each flooding threat/SLR scenario as detailed below.

[4] NOAA Office of Ocean and Coastal Resource Management. (2010). Adapting to Climate Change: A Planning Guide for State Coastal Managers. Silver Spring: National Oceanic and Atmospheric Administration.

Rainfall-Induced Flooding

High adaptive capacity was assigned to structures constructed outside of the flooding extent associated with the 100-year/24-hour design storm developed by Jones Edmunds. Medium adaptive capacity was assigned to structures located within the flooding extents and built after 1971, as determined from Pinellas County PAO data. The City had its first Flood Hazard Boundary Map published by FEMA in 1971 and implemented associated floodplain management requirements at that time to participate in the National Flood Insurance Program (NFIP). This assumes that BFE requirements associated with the FIS adopted by the City influenced finished floor elevations and provide structures additional adaptivity capacity to flooding. Low adaptive capacity was designated to structures within the flood inundation area and built prior to 1971. If the year a structure was built is not available, a low adaptive capacity was assigned.

Storm Surge and King Tide Flooding

For determining vulnerability to potential increased coastal flooding associated with SLR, high adaptive capacity was assigned to structures constructed outside of the coastal flood hazard areas (i.e., Zone VE, Zone AE, and Zone X- 0.2 percent annual chance flood) associated with the effective FEMA FIS for the City or structures exposed to coastal flooding built since 2003. The September 2003 countywide FEMA FIS included updated coastal analysis of wave setup, wave heights, storm induced erosion, and primary frontal dune using the previously established coastal still water elevations for the Gulf of Mexico, St. Joseph Sound and Clearwater Harbor. Medium adaptive capacity was assigned to structures within the effective floodplain and built since 1984, the year when coastal flood hazard mapping was published by FEMA for the City. Low adaptive capacity was assigned to structures within the floodplain and built prior to 1984. If the year a structure was built is not available, a low adaptive capacity was assumed.

Results

For each parcel, potential impact and adaptive capacity were combined to describe vulnerability. A parcel's vulnerability was defined as "high," "medium," or "low" based on the rules summarized in Table 4. For instance, a property with high potential impact and high adaptive capacity was defined as medium vulnerability. It should be noted that building footprints overlay multiple parcels, and, in these instances, structure sensitivity and adaptive capacity was uniformly applied across all applicable parcels. Additionally, a parcel may contain multiple structures. In these instances, parcel potential impact was assigned by the most sensitive structure and adaptive capacity by the structure with the lowest capacity.

Table 4. Vulnerability Ranking

		Adaptive Capacity		
		High	**Medium**	**Low**
Potential Impact	**Low**	Low	Low	Medium
	Medium	Low	Medium	High
	High	Medium	High	High

Figures 6 through 11 present the vulnerability of the mainland and nearby islands properties, such as Ward Island, for each type of flooding/SLR scenario.

For the island properties within the City's limits, Figures 12 through 15 present the vulnerability assessments associated with potential future King Tide and Storm Surge flooding. The watershed model used for rainfall-induced flooding analysis does not include these areas.

Table 5 summarizes the total number and percentage of properties with high and medium vulnerability to flooding.

Table 5. Number and Percentage of Parcels with High or Medium Vulnerability to Flooding

Type of Flooding	SLR Scenario	Number of Parcels with High or Medium Vulnerability	Percent of Total Parcels[1]
Rainfall-Induced Flooding	1-foot	701	5.9%
	2-feet	703	5.9%
King Tide	1-foot	373	3.1%
	2-feet	680	5.7%
Storm Surge	1-foot	1,686	14.1%
	2-feet	1,898	15.9%

[1] Based on a total of 11,932 land parcels within the City limits.

Roadway Vulnerability

Potential Impact

Roadway classification was used to define sensitivity to potential impacts. High potential impact was assigned to evacuation routes, which are critical for emergency response, evacuating areas of the City prior to tropical storms/hurricanes and support the societal and economic functions of the City since they allow for a large volume of traffic. Major roadways, including arterials and collectors, were assigned a medium potential impact classification given their high traffic loads. All local roads and trails were given designated as low sensitivity to potential impacts.

Adaptive Capacity

Data are not readily available to assign adaptive capacity designations to roadway segments for this analysis. Minimum design standards for roadways, as defined by Pinellas County (see Figure 9-1) were assumed to apply. Similar to potential impact sensitivity, high adaptive capacity was assigned to evacuation routes. According to minimum standards, roadway and drainage systems must be designed to provide service at the 100-year frequency. Major, high-use roadways minimum standards require service at the 50-year frequency and were assigned medium adaptive capacity. Local roadways, which have a level of service design standard of 10-year frequency; these were assigned low adaptive capacity.

Results

Potential impact and adaptive capacity rankings are consistent based on roadway classification. Applying the same vulnerability rules as shown in Table 4, vulnerability rankings are the same across all roadways:

- **Evacuation routes:** high potential impact, high adaptive capacity= medium vulnerability
- **Major roadways:** medium potential impact, medium adaptive capacity = medium vulnerability
- **Local roadways:** low potential impact, low adaptive capacity = medium vulnerability.

Therefore, all the flooding segments of roadway, as summarized in Table 3, would carry the same level of vulnerability. Figures 16 through 18 present the vulnerability of the mainland and Ward Island roadways for each type of flooding/SLR scenario. Each figure illustrates, by road classification, the vulnerable segments of roadway for the 1-foot SLR scenario as well as the additional portions that are vulnerable with 2-feet of SLR. For the island properties within the City's limits, Figures 19 and 20 present the vulnerability assessments associated with potential future King Tide and Storm Surge flooding.

Vulnerability Conclusions

Key results of the vulnerability assessment of properties within the City are as follows:

- Rising sea levels will increase flooding vulnerability within the City:
  - The level of vulnerability to King Tide flooding is expected to increase from none to medium or high for 294 properties as sea levels rise between 1-foot to 2-feet.
  - Similarly, the level of vulnerability to storm surge is expected to increase from none to medium or high as sea levels rise between 1-foot to 2-feet for 194 properties.
- The majority of Dunedin's essential facilities have no or low vulnerability to flooding:
  - 12 properties which house essential facilities have high or medium vulnerability to rainfall-induced flooding exacerbated by SLR,
  - 9 properties with essential facilities have high or medium vulnerability to potential King Tides, and
  - 14 properties with essential facilities thereon have high or medium vulnerability to storm surge flooding intensified by SLR.
- The majority of properties with medium or high vulnerability to flooding are single family homes.
- Storm surge intensified by SLR will likely present the greatest vulnerability for properties within the City. This is consistent with the number of structures exposed to this type of flooding.
- The majority of properties vulnerable to storm surge flooding are highly vulnerable.
- All properties with high or medium vulnerability to rainfall-induced flooding for either SLR scenario already are exposed to flooding under current conditions. The amount of flooding experience by these properties will increase with rising sea levels.
- The majority of properties (52%) with high or medium vulnerability to rainfall-induced flooding with SLR, have older structures constructed prior to BFE requirements for floodplain management.
- While the number of properties that have a high or medium vulnerability to potential King Tide flooding for either SLR scenario is relatively low, this type of flooding will occur more frequently (e.g. such as annual basis). The compounded effects of this nuisance type of flooding has not been accounted for as part of this analysis.

With respect to roadways, key take-aways from the assessment are as follows:

- Roadway flooding can result in properties becoming inaccessible or isolated.
- Rising sea levels will likely increase flooding vulnerability of roadways within the City. This increased vulnerability includes new roadways that will be flooded due to rising sea levels as well

as additional length of roadways that currently flood. Given the topography throughout the City, the total length of roadways with increasing vulnerability is generally minimal.

- Increasing depths of flooding on already vulnerable roadways will exacerbate damage and losses and impact the ability of both emergency vehicles and routine traffic to access these roadways.
- Storm surge with 2-feet of SLR will likely result in the entire evacuation route along the City's coastline (consisting of segments of Bayshore Boulevard, Broadway, Edgewater Drive, and Main Street) being inundated.
- Additionally, storm surge with 2-feet of SLR will impact access to essential facilities such as Heather Haven, Fire Station 61, and Pinellas County Sheriff's North District station.
- Rainfall-induced flooding predominately impacts local roadways, which is to be expected since they are not typically designed to this flood frequency (100-year).
- Rainfall-induced flooding compounded with SLR will impact access to essential facilities such as Heather Haven and the Wild Flower Inn assisted living facility. Accessibility to City Hall will be further impaired with increasing sea levels.
- While the length of roadways to potential King Tide flooding for either SLR scenario is relatively low, this type of flooding will occur more frequently (e.g. such as on an annual basis). The compounded effects of this nuisance type of flooding has not been accounted for as part of this analysis.

Stormwater Adaptations

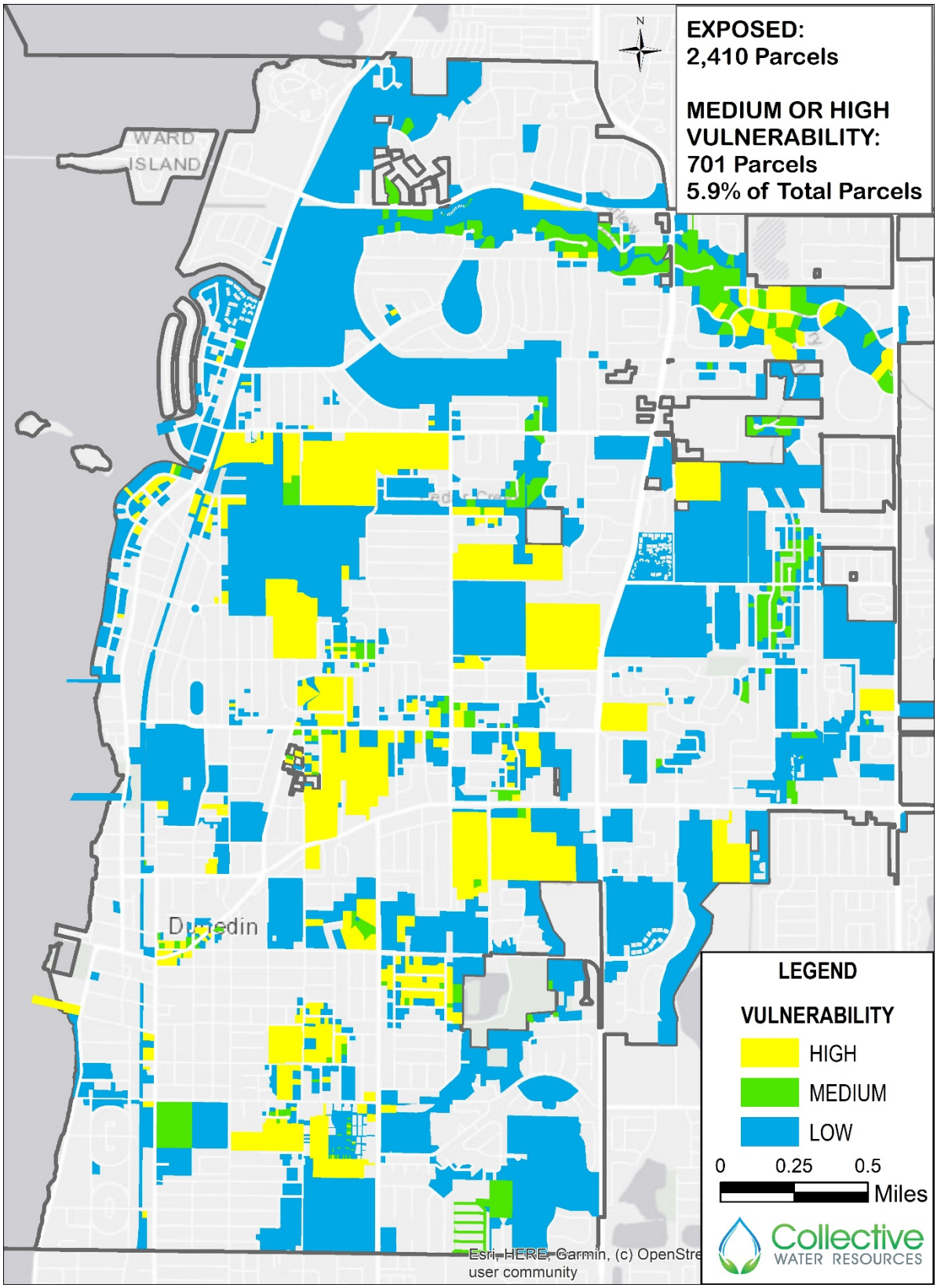
Stormwater adaptations that are available to address major flood vulnerability needs and priorities include both structural and non-structural measures. Based on the results of the vulnerability assessment the following measures should be considered in the City's long-term planning efforts:

- Install backflow preventors for City's stormwater management system outfalls. A complete inventory of all outfalls and their immediate upstream structures throughout the City, with associated elevations, would be recommended to develop the prioritization list. Evaluating the pipe and drop structure data within the Dunedin watershed model, 26 outfalls are associated with high King Tide vulnerability areas. BMPs recommended by Jones Edmunds in Section 10, such as Buena Vista Drive Drainage Improvements and San Jose Park, would support this strategy. Similar BMPs should be considered in the Harbor View and Baywood Shores areas in the near term.
- Consider adopting future conditions in the design of stormwater improvements. The City should adopt design scenario(s) that include(s) future tidal boundary elevation, water table elevations, and/or rainfall conditions that would be included in the design of all capital improvements. The same could implemented for all stormwater management system permitting within the City. The sensitivity, future adaptive capacity, and lifespan of the improvements should be considered with respect to which future condition scenario should be applied in the design. Per the recommendations of the CSAP, improvements with relatively short lifespans or high adaptive capacity could be designed including SLR based on NOAA Intermediate-Low projections. Improvements with a long-anticipated life or that service critical infrastructure (and are therefore highly sensitive to potential impacts) should be designed using the NOAA High SLR projections.
- Increase lowest floor elevation, or freeboard, requirements for all new or substantially improved structures.

- Establish seawall elevation requirements within the City's land development code to be implement for all new or repaired seawalls, both public and private, that addresses SLR. Elevation should consider the King Tide and address projected sea level rise expected to occur within the 30-50 year lifespan of a seawall. Based on this typical lifespan and the ability to adapt seawalls in the future (e.g., raise the height), new seawall requirements should plan for SLR based on the NOAA Intermediate projection. Additionally, per suggestions from the Tampa Bay Regional Planning Council (TBRPC), seawall elevation requirements should be coordinated with Pinellas County and the City of Clearwater to support regional coastal resiliency. A recently formed TBRPC Resilient Shorelines and Spaces workgroup is assessing seawall design standards throughout the region and forthcoming guidance could support the City's efforts to update design requirements.
- Promote low impact development practices on City-owned properties and incentivize these practices for private developments, similar to Pinellas County's approach.
- Consider maintenance and customer service aspects of the City's stormwater program that will be impacted with future SLR. For example, the City will likely experience an increase in the number of calls to customer service to document flooding, thereby creating an added burden on maintenance staff and resources. This burden can be defined as both frequency of the calls but also the time it will take for staff to respond. For example, increased flows and/or more frequent rainfall would increase the transport of sediment and debris into the stormwater system, thereby increasing the complexity of maintenance calls on average.
- Coordinate with Florida Department of Transportation (FDOT) and Pinellas County on State-maintained and County-maintained roadways within the City that are vulnerable to SLR impacts. Coordination should include accommodating future SLR in the design of proposed improvements to reduce vulnerability. For instance, the City should appeal to both FDOT and the County for the ongoing Dunedin Causeway Bridges Project that the design account for updated SLR projections since the evaluations were originally completed.

It is also important to mention that flood adaptation tends to focus on water quantity. However, a truly sustainable resiliency program will also incorporate water quality, ecological, and long-term sustainability considerations. Sustainability considerations include energy-usage for electric components of BMPs and maintenance of ecologic baselines in coastal areas as adaptation strategies are constructed – among many others.

Aging infrastructure will also further stress the City's resources related to adaptation. Integrating considerations for infrastructure that is reaching the end of its useful life is another helpful strategy. For example, corrugated metal (CMP) that may be inundated with tidal waters should be replaced with more appropriate pipe materials that will not degrade due to salt water. Two CMPs, as surveyed by Jones Edmunds for this project, that should be considered for replacement given their proximity to the coast and likelihood of tidal inundation are: RA0400P (48-inch) and RJ0200P (36-inch).



igure 6. Vulnerability to Rainfall-Induced Flooding with 1-foot SLR, Mainland Properties

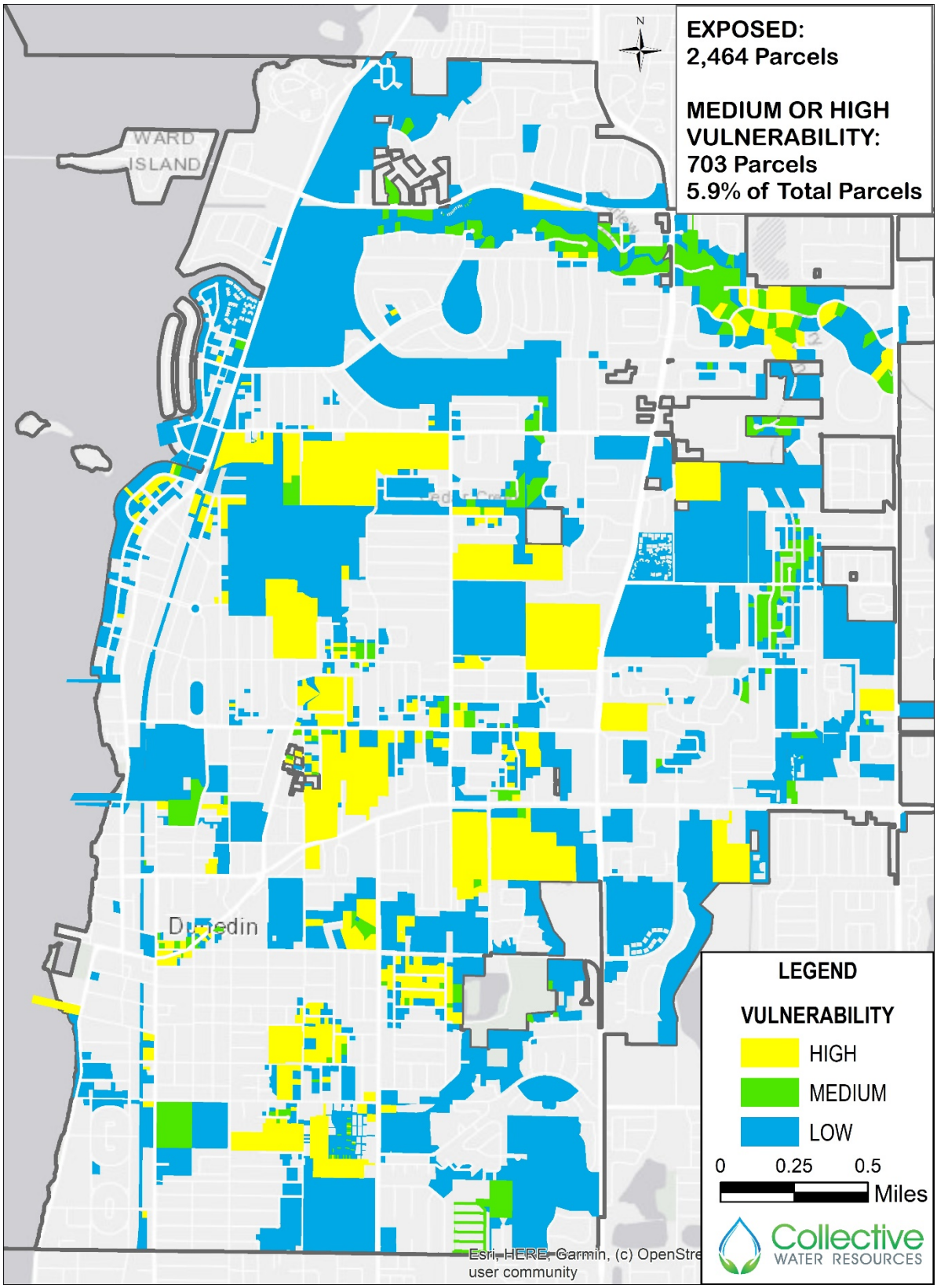


Figure 7. Vulnerability to Rainfall-Induced Flooding with 2-foot SLR, Mainland Properties

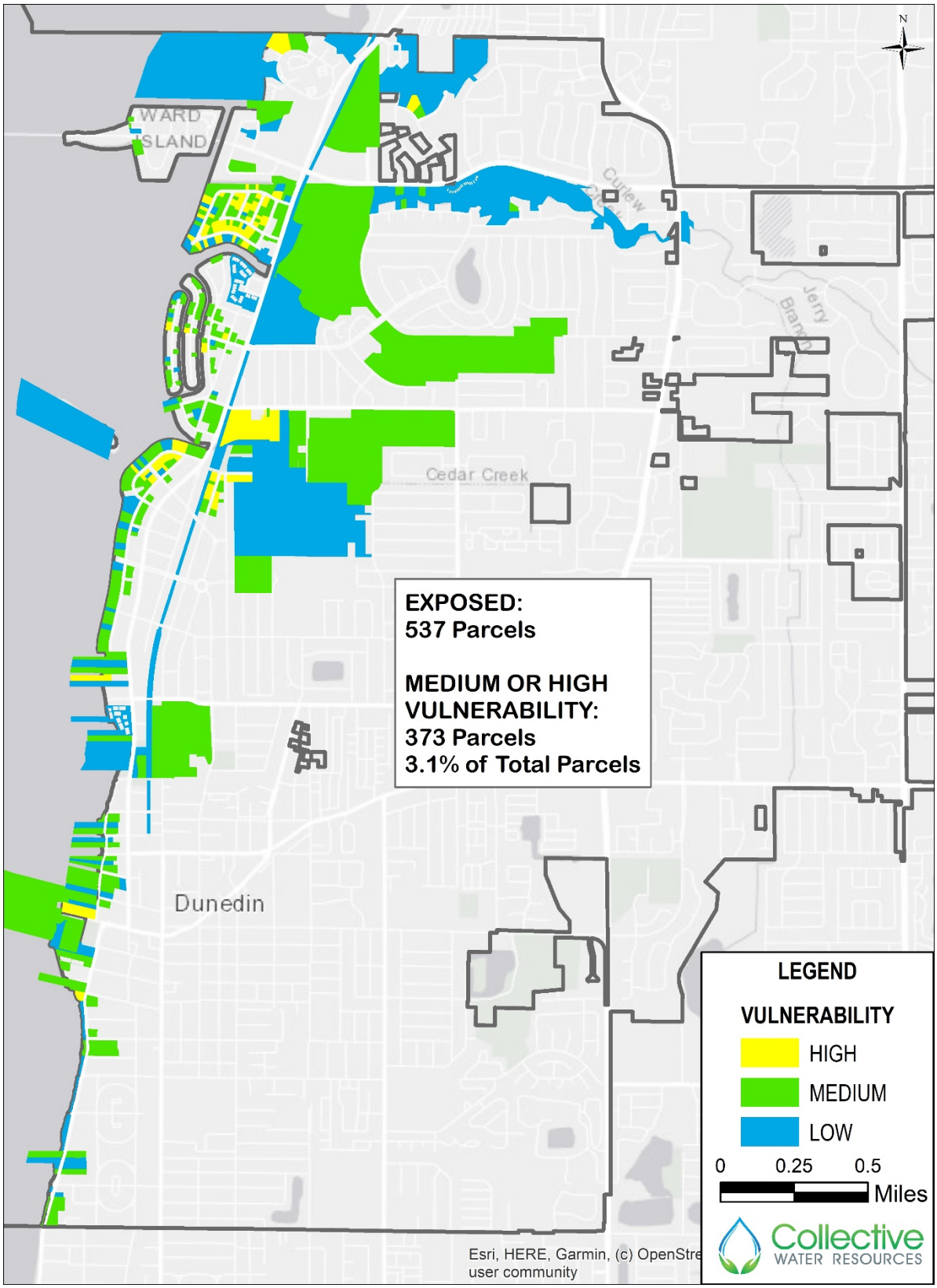


Figure 8. Vulnerability to King Tide with 1-foot SLR, Mainland Properties

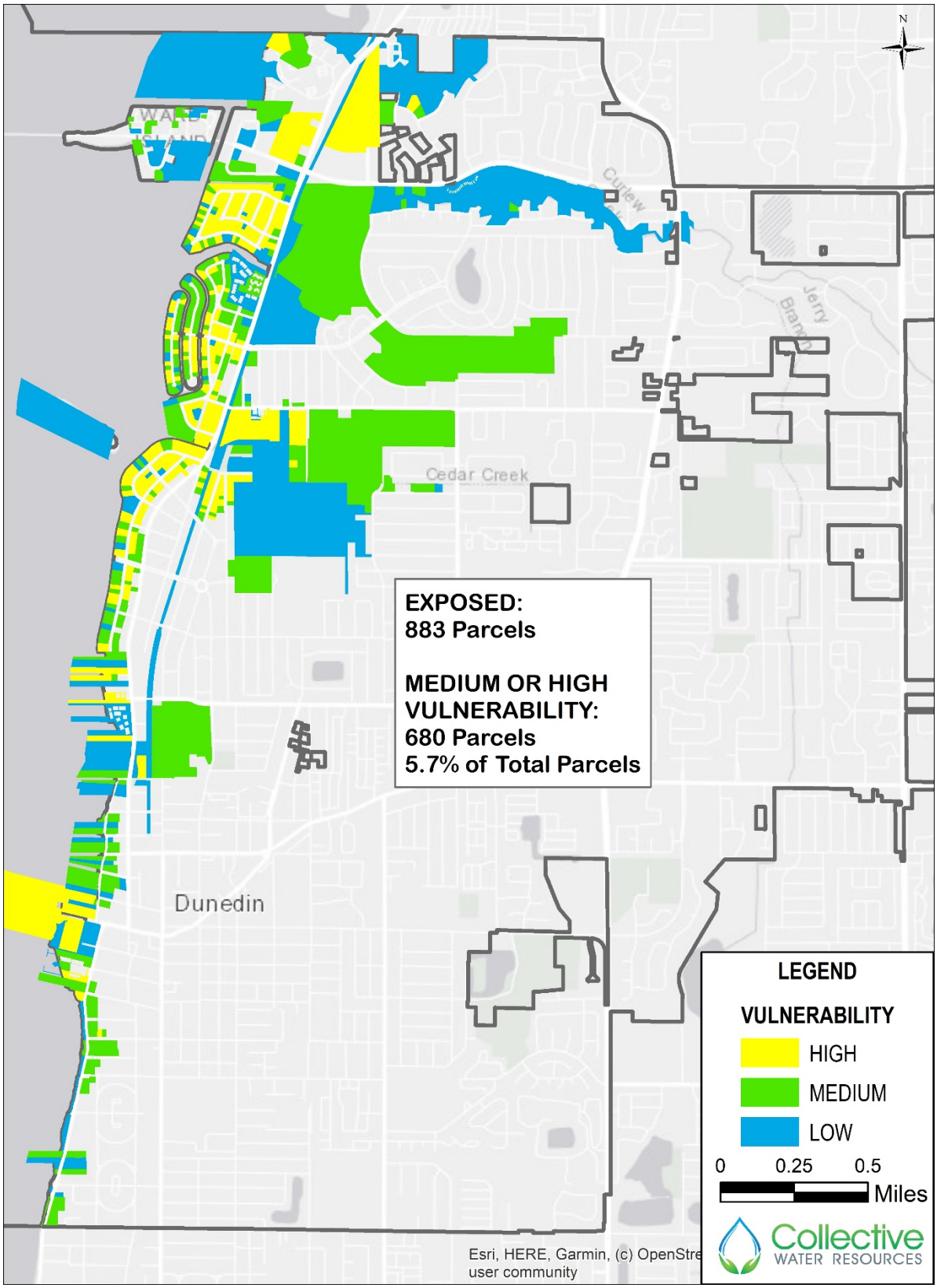


Figure 9. Vulnerability to King Tide with 2-foot SLR, Mainland Properties

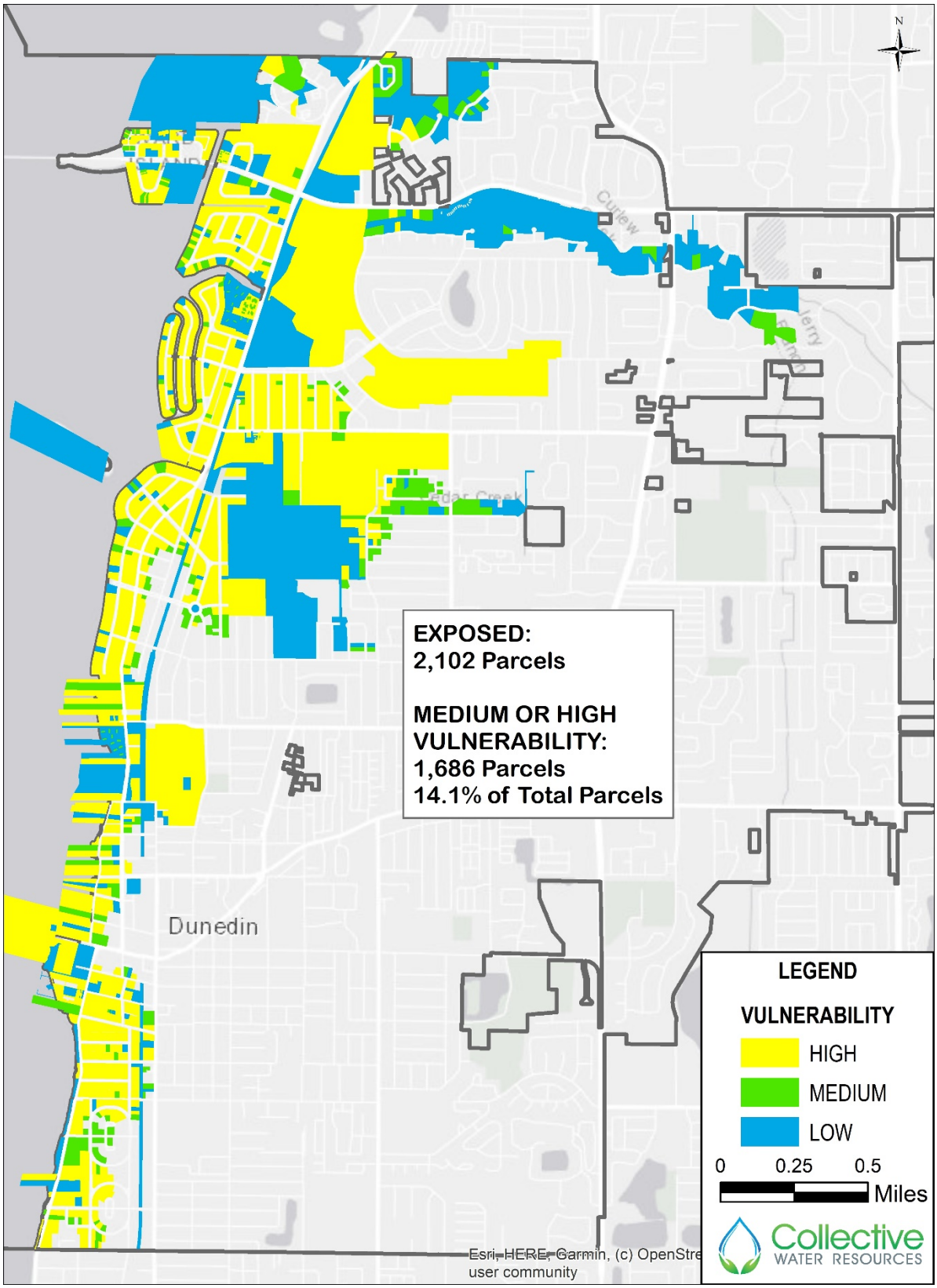


Figure 10. Vulnerability to Storm Surge with 1-foot SLR, Mainland Properties

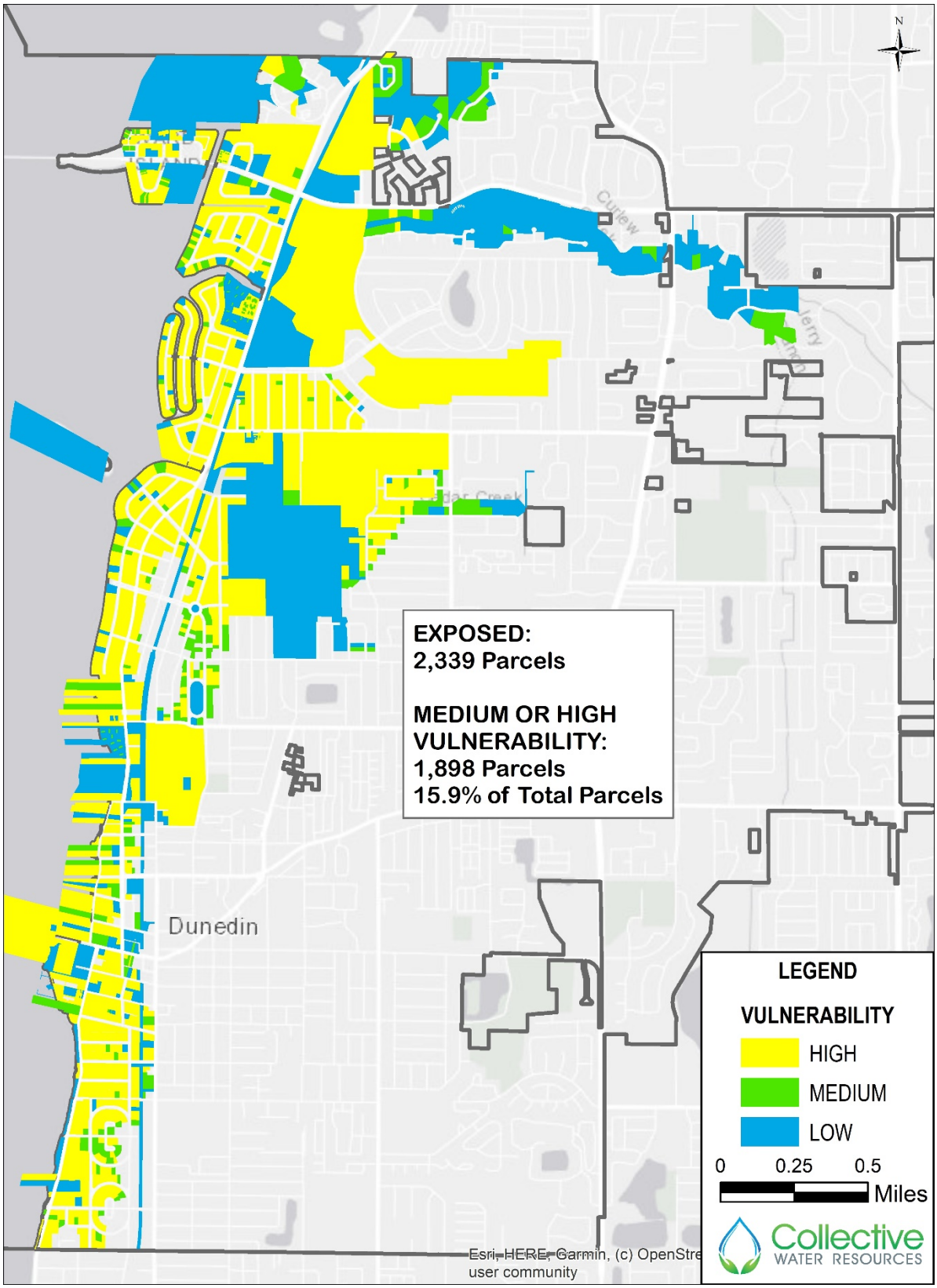


Figure 11. Vulnerability to Storm Surge with 2-foot SLR, Mainland Properties

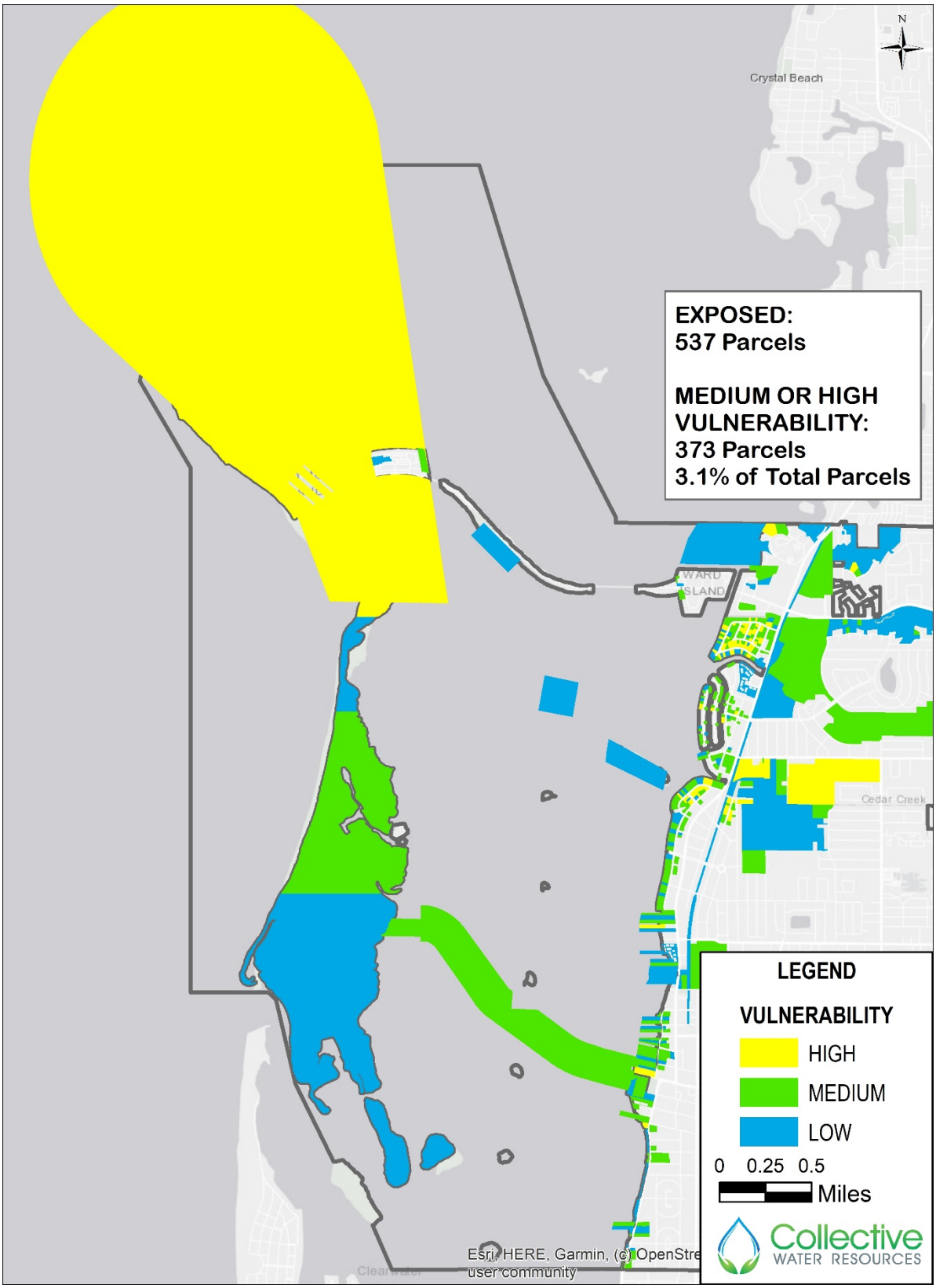


Figure 12. Vulnerability to King Tide with 1-foot SLR, Island Properties

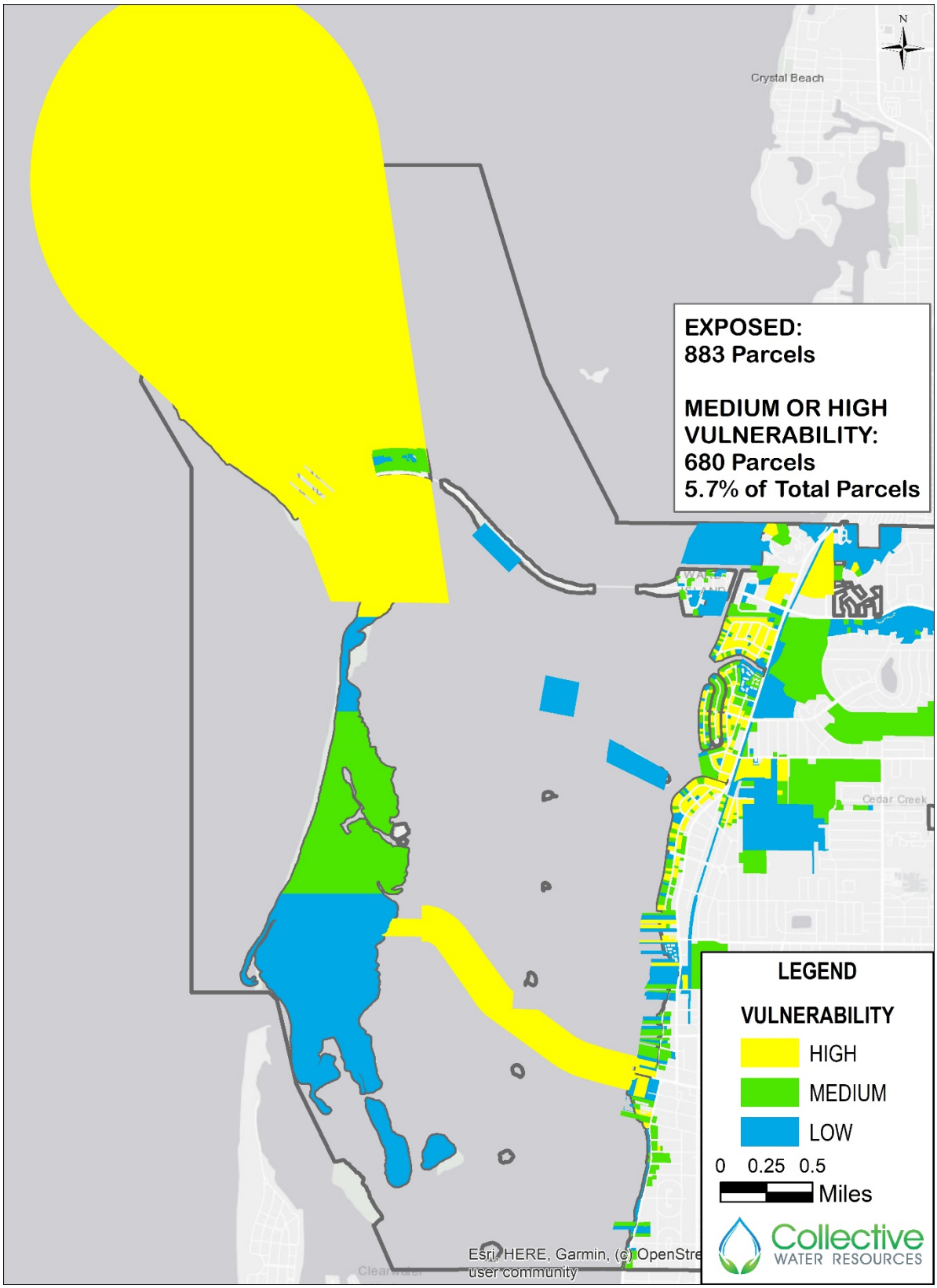


Figure 13. Vulnerability to King Tide with 2-foot SLR, Island Properties

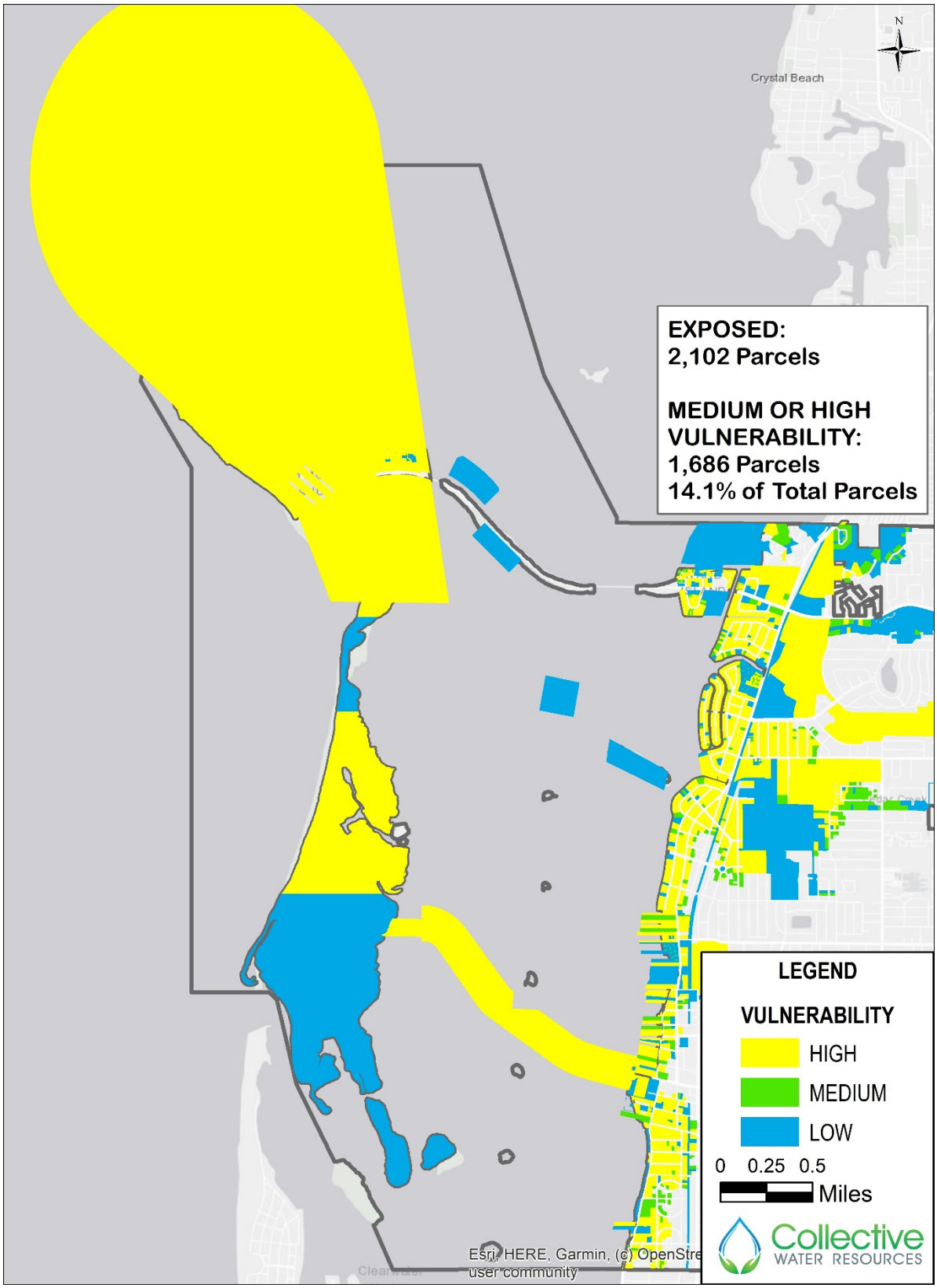


Figure 14. Vulnerability to Storm Surge with 1-foot SLR, Island Properties

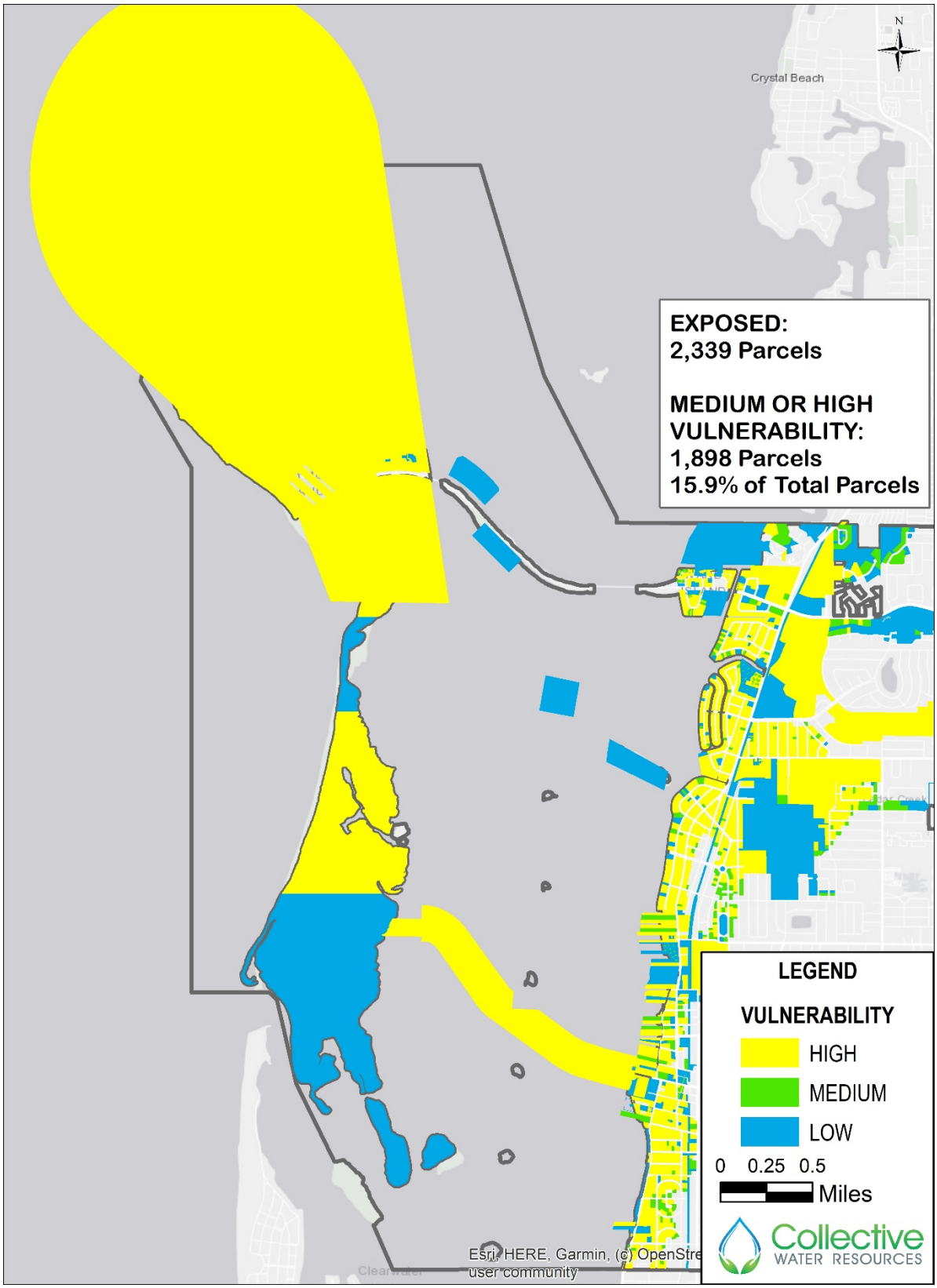


Figure 15. Vulnerability to Storm Surge with 2-foot SLR, Island Properties

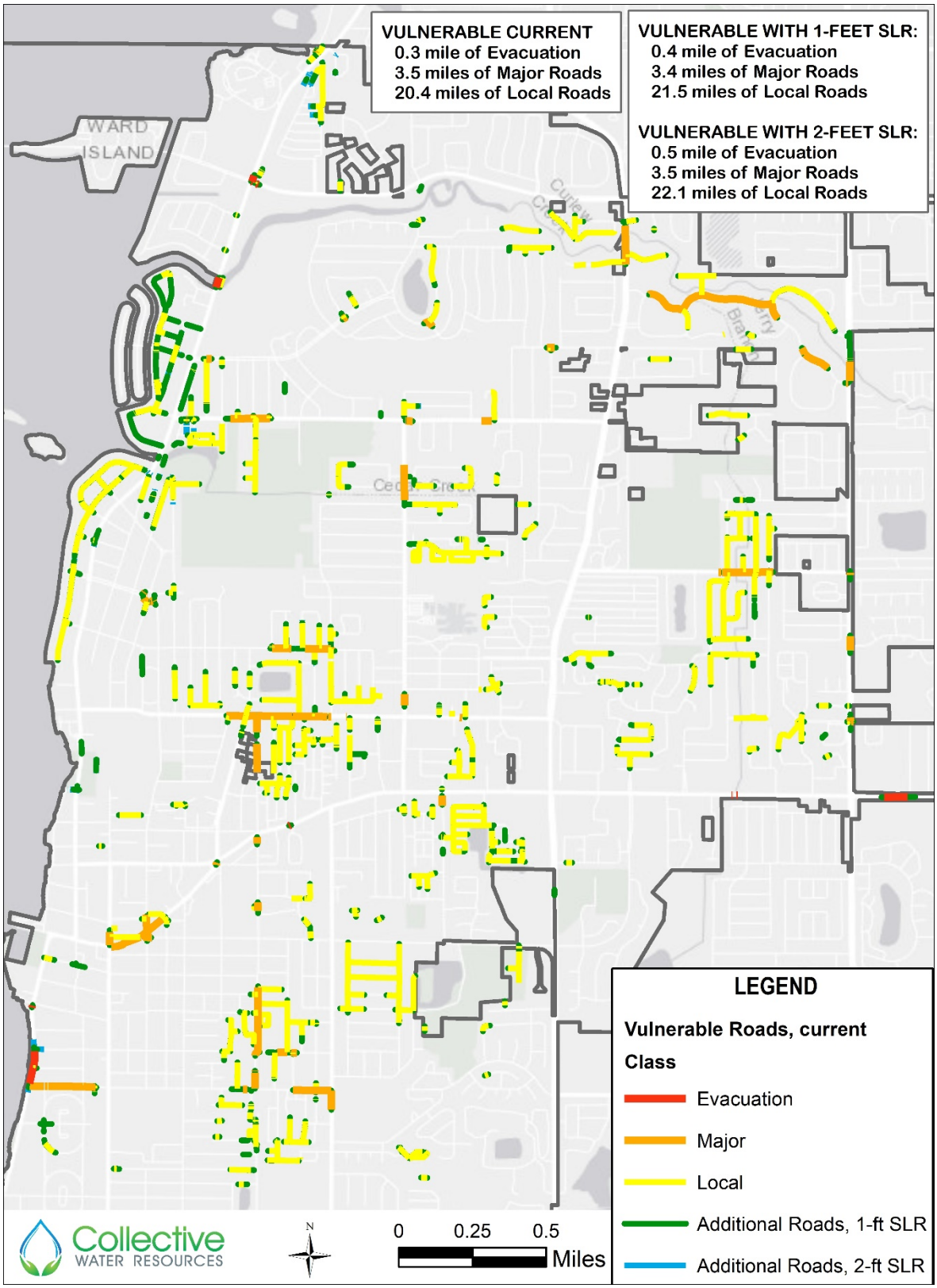


Figure 16. Vulnerability to Rainfall-Induced Flooding Current and with 1-foot or 2-feet SLR, Mainland Roadways

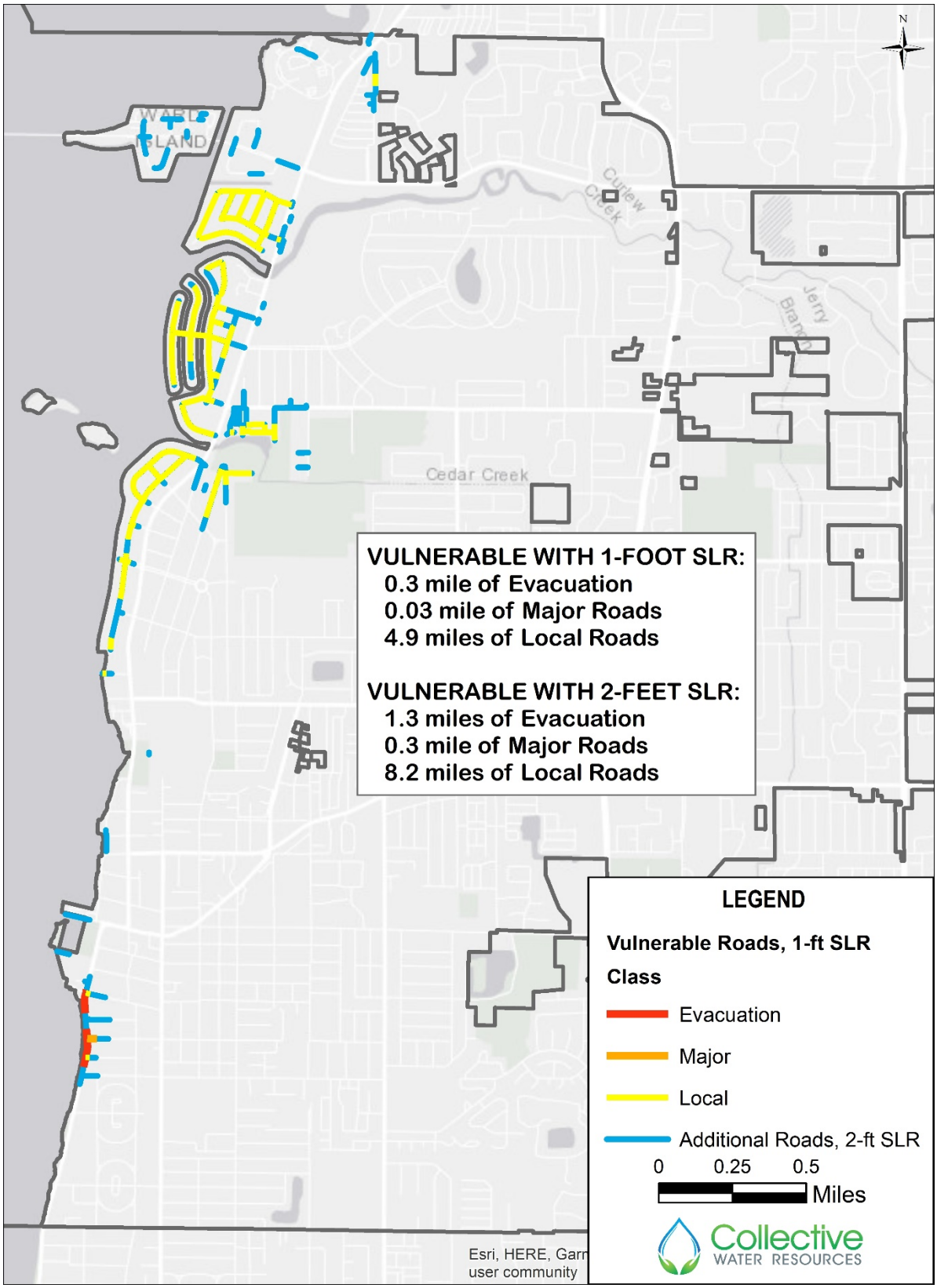


Figure 17. Vulnerability to King Tide with 1-foot and 2-feet SLR, Mainland Roadways

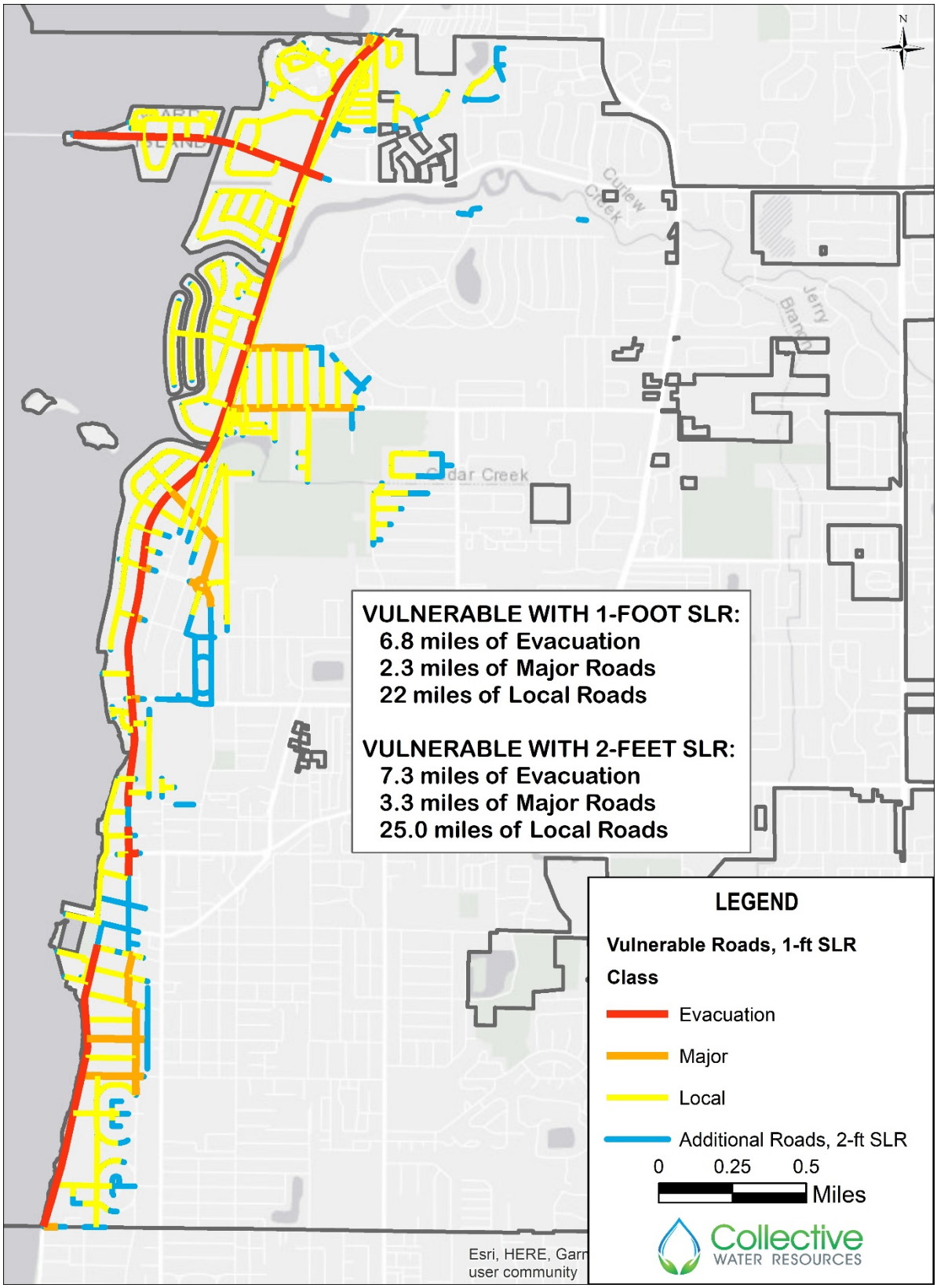


Figure 18. Vulnerability to Storm Surge with 1-foot and 2-feet SLR, Mainland Roadways

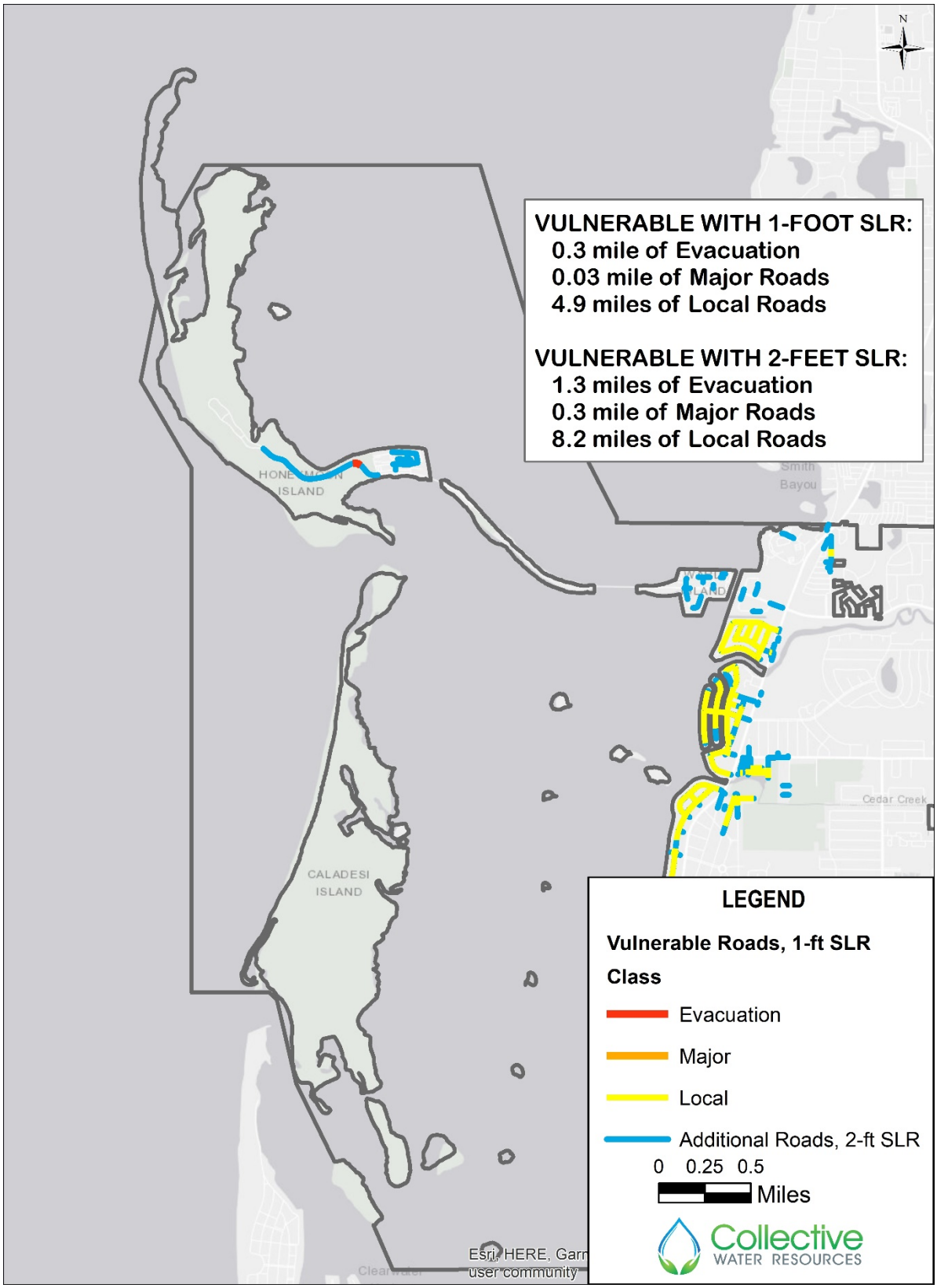


Figure 19. Vulnerability to King Tide with 1-foot and 2-feet SLR, Island Roadways

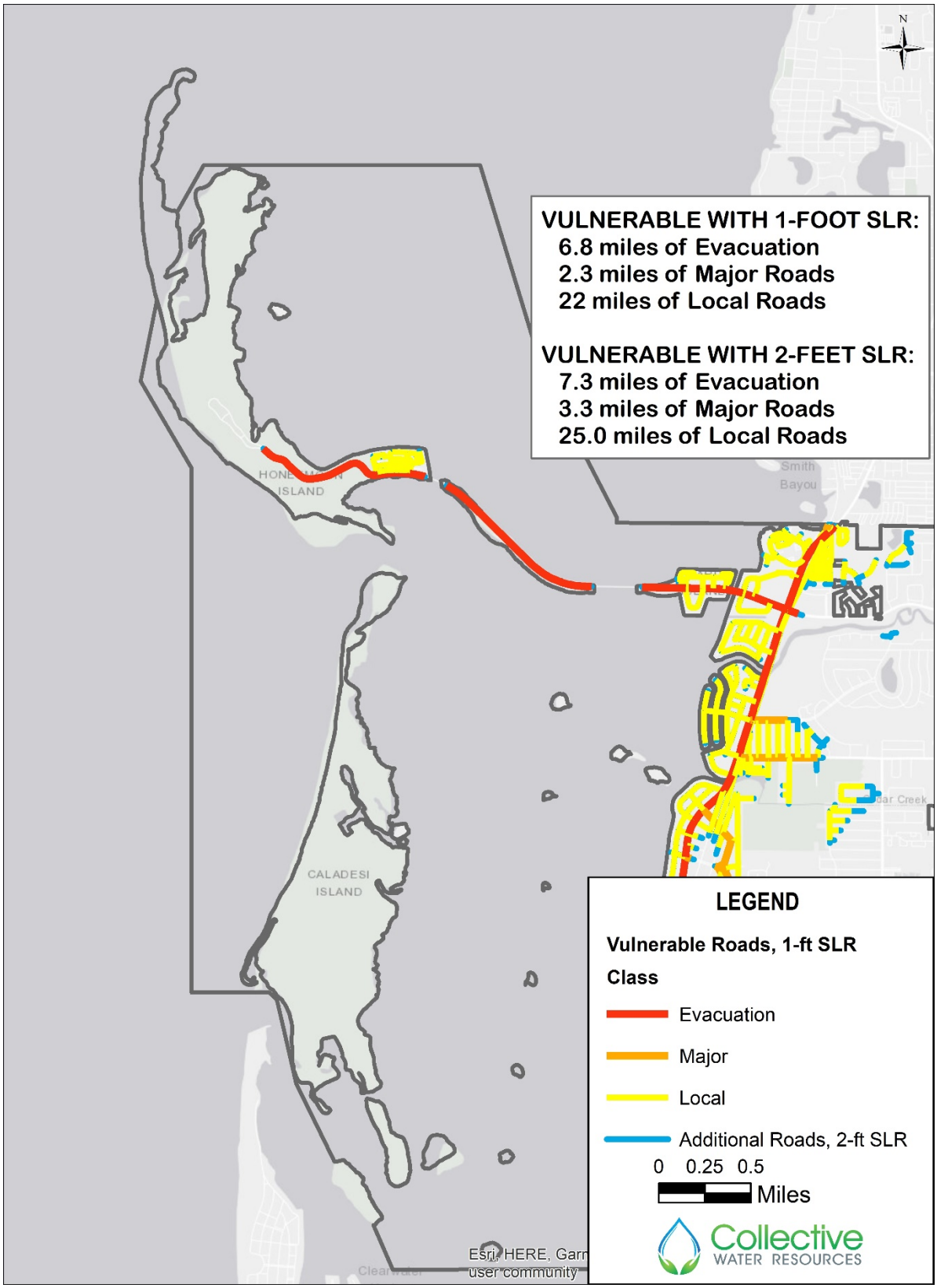


Figure 20. Vulnerability to Storm Surge with 1-foot and 2-feet SLR, Island Roadways

Appendix K-1

Summary of Node Peak Stages for the 100-year/24-hour Simulations

Including current conditions (Jones Edmunds, 2020), 1-foot SLR scenario and 2-feet SLR scenario

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
Alligator1	77.20	77.20	77.20	0.00	0.00
ALLIGATOR_NB1910	90.30	90.30	90.30	0.00	0.00
BNDRY	0.76	1.76	2.76	1.00	2.00
BNDRY5	40.80	40.80	40.80	0.00	0.00
BNDRY6	38.00	38.00	38.00	0.00	0.00
BNDRY_1	0.76	1.76	2.76	1.00	2.00
BNDRY_3	0.76	1.76	2.76	1.00	2.00
BNDRY_4	0.76	1.76	2.76	1.00	2.00
NA0010	2.31	2.38	3.01	0.07	0.70
NA0020	2.66	2.72	3.20	0.06	0.54
NA0030	7.97	8.01	8.11	0.04	0.14
NA0040	11.26	11.30	11.35	0.04	0.09
NA0050	15.75	15.77	15.78	0.02	0.03
NA0060	16.28	16.30	16.31	0.02	0.03
NA0065	20.89	20.91	20.93	0.02	0.04
NA0068	21.07	21.11	21.13	0.04	0.06
NA0070	20.97	20.98	21.01	0.01	0.04
NA0080	20.98	20.99	21.02	0.01	0.04
NA0090	22.35	22.36	22.37	0.01	0.02
NA0100	23.39	23.39	23.40	0.00	0.01
NA0110	25.17	25.17	25.18	0.00	0.01
NA0115	25.18	25.18	25.19	0.00	0.01
NA0116	25.19	25.19	25.20	0.00	0.01
NA0120	26.10	26.10	26.11	0.00	0.01
NA0125	27.31	27.31	27.31	0.00	0.00
NA0130	27.38	27.38	27.38	0.00	0.00
NA0140	28.82	28.82	28.82	0.00	0.00
NA0150	30.22	30.22	30.23	0.00	0.01
NA0160	33.01	33.01	33.01	0.00	0.00
NA0170	36.83	36.83	36.83	0.00	0.00
NA0180	36.88	36.88	36.88	0.00	0.00
NA0185	37.78	37.78	37.78	0.00	0.00
NA0190	38.86	38.86	38.86	0.00	0.00
NA0195	38.99	38.99	38.99	0.00	0.00
NA0200	40.99	40.99	40.99	0.00	0.00
NA0210	41.79	41.79	41.79	0.00	0.00
NA0220	4.08	4.07	4.13	-0.01	0.05
NA0230	6.92	6.92	6.92	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NA0240	8.00	8.00	8.00	0.00	0.00
NA0250	12.75	12.75	12.85	0.00	0.10
NA0260	11.50	11.50	11.50	0.00	0.00
NA0270	11.48	11.48	11.48	0.00	0.00
NA0280	18.35	18.35	18.36	0.00	0.01
NA0290	18.04	18.05	18.06	0.01	0.02
NA0300	3.45	3.71	3.96	0.26	0.51
NA0310	5.02	5.05	5.06	0.03	0.04
NA0320	5.46	5.49	5.50	0.03	0.04
NA0330	5.84	5.86	5.86	0.02	0.02
NA0340	5.92	5.94	6.02	0.02	0.10
NA0350	4.66	4.68	4.70	0.02	0.04
NA0360	4.52	4.61	4.64	0.09	0.12
NA0370	6.52	6.52	6.52	0.00	0.00
NA0380	8.34	8.35	8.36	0.01	0.02
NA0390	25.28	25.28	25.28	0.00	0.00
NA0400	10.82	10.90	10.96	0.08	0.14
NA0410	10.81	10.89	10.95	0.08	0.14
NA0420	11.22	11.23	11.24	0.01	0.02
NA0430	14.41	14.44	14.45	0.03	0.04
NA0440	15.94	15.95	15.95	0.01	0.01
NA0450	16.06	16.07	16.08	0.01	0.02
NA0470	15.76	15.77	15.79	0.01	0.03
NA0480	15.76	15.77	15.79	0.01	0.03
NA0485	24.51	24.70	24.70	0.19	0.19
NA0490	25.33	25.57	25.57	0.24	0.24
NA0500	20.97	20.99	21.01	0.02	0.04
NA0505	22.25	22.26	22.29	0.01	0.04
NA0510	23.21	23.22	23.22	0.01	0.01
NA0512	23.39	23.39	23.40	0.00	0.01
NA0514	23.61	23.61	23.62	0.00	0.01
NA0516	23.84	23.84	23.85	0.00	0.01
NA0520	18.82	18.82	18.82	0.00	0.00
NA0530	18.64	18.64	18.65	0.00	0.01
NA0540	18.50	18.55	18.56	0.05	0.06
NA0550	23.46	23.46	23.46	0.00	0.00
NA0560	23.08	23.08	23.08	0.00	0.00
NA0570	32.09	32.20	32.20	0.11	0.11

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NA0580	24.01	24.02	24.02	0.01	0.01
NA0590	27.27	27.27	27.27	0.00	0.00
NA0600	27.89	27.89	27.89	0.00	0.00
NA0605	27.87	27.87	27.87	0.00	0.00
NA0610	27.87	27.87	27.87	0.00	0.00
NA0620	30.05	30.05	30.05	0.00	0.00
NA0630	23.24	23.24	23.25	0.00	0.01
NA0640	23.81	23.81	23.81	0.00	0.00
NA0645	24.40	24.40	24.40	0.00	0.00
NA0650	24.40	24.40	24.40	0.00	0.00
NA0655	24.29	24.29	24.29	0.00	0.00
NA0660	24.39	24.39	24.39	0.00	0.00
NA0665	24.39	24.39	24.39	0.00	0.00
NA0670	28.77	28.77	28.77	0.00	0.00
NA0680	28.79	28.79	28.79	0.00	0.00
NA0690	25.17	25.17	25.18	0.00	0.01
NA0700	24.97	24.97	24.98	0.00	0.01
NA0710	26.45	26.45	26.45	0.00	0.00
NA0720	24.99	25.00	25.01	0.01	0.02
NA0730	24.98	24.98	24.98	0.00	0.00
NA0740	25.18	25.18	25.19	0.00	0.01
NA0750	25.37	25.37	25.38	0.00	0.01
NA0760	25.38	25.38	25.39	0.00	0.01
NA0765	25.47	25.47	25.47	0.00	0.00
NA0770	25.99	25.99	25.99	0.00	0.00
NA0775	26.32	26.32	26.31	0.00	-0.01
NA0780	28.26	28.26	28.26	0.00	0.00
NA0785	29.42	29.42	29.42	0.00	0.00
NA0790	30.80	30.80	30.80	0.00	0.00
NA0800	37.03	37.03	37.03	0.00	0.00
NA0810	29.12	29.12	29.12	0.00	0.00
NA0820	36.60	36.60	36.60	0.00	0.00
NA0830	31.48	31.48	31.48	0.00	0.00
NA0840	32.08	32.08	32.08	0.00	0.00
NA0850	29.13	29.13	29.13	0.00	0.00
NA0860	38.74	38.74	38.74	0.00	0.00
NA0870	42.01	42.01	42.01	0.00	0.00
NA0880	25.38	25.38	25.38	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NA0890	25.38	25.38	25.38	0.00	0.00
NA0900	25.19	25.19	25.20	0.00	0.01
NA0910	25.42	25.42	25.42	0.00	0.00
NA0920	25.38	25.38	25.38	0.00	0.00
NA0930	25.39	25.39	25.39	0.00	0.00
NA0940	26.35	26.35	26.35	0.00	0.00
NA0950	30.74	30.74	30.74	0.00	0.00
NA0960	26.40	26.40	26.40	0.00	0.00
NA0970	61.01	61.01	61.01	0.00	0.00
NA0980	28.32	28.37	28.31	0.05	-0.01
NA0990	30.81	30.81	30.81	0.00	0.00
NA1000	33.25	33.25	33.25	0.00	0.00
NA1010	53.29	53.29	53.29	0.00	0.00
NA1020	53.47	53.47	53.47	0.00	0.00
NA1030	51.74	51.74	51.74	0.00	0.00
NA1040	51.47	51.47	51.47	0.00	0.00
NA1050	54.17	54.17	54.17	0.00	0.00
NA1060	55.07	55.07	55.07	0.00	0.00
NA1070	58.15	58.15	58.15	0.00	0.00
NA1080	57.63	57.63	57.63	0.00	0.00
NA1085	39.14	39.14	39.14	0.00	0.00
NA1090	37.19	37.17	37.18	-0.02	-0.01
NA1100	31.03	31.03	31.03	0.00	0.00
NA1110	33.72	33.72	33.72	0.00	0.00
NA1120	43.15	43.15	43.15	0.00	0.00
NA1130	53.88	53.88	53.88	0.00	0.00
NA1140	55.53	55.53	55.53	0.00	0.00
NA1150	54.85	54.85	54.85	0.00	0.00
NA1160	52.83	52.83	52.83	0.00	0.00
NA1170	53.15	53.15	53.15	0.00	0.00
NA1178	56.88	56.88	56.88	0.00	0.00
NA1180	57.50	57.50	57.50	0.00	0.00
NA1190	61.11	61.11	61.11	0.00	0.00
NA1200	28.45	28.45	28.46	0.00	0.01
NA1210	33.06	33.06	33.06	0.00	0.00
NA1220	34.76	34.76	34.76	0.00	0.00
NA1230	34.73	34.73	34.73	0.00	0.00
NA1240	37.74	37.74	37.74	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NA1250	38.87	38.86	38.87	-0.01	0.00
NA1260	43.56	43.56	43.56	0.00	0.00
NA1270	41.92	41.92	41.92	0.00	0.00
NA1280	45.99	45.99	45.99	0.00	0.00
NA1290	36.84	36.84	36.84	0.00	0.00
NA1300	36.84	36.83	36.83	-0.01	-0.01
NA1310	39.35	39.35	39.35	0.00	0.00
NA1320	44.10	44.10	44.10	0.00	0.00
NA1995	25.18	25.18	25.19	0.00	0.01
NB2000	25.19	25.19	25.20	0.00	0.01
NB2010	26.28	26.28	26.28	0.00	0.00
NB2020	27.46	27.46	27.46	0.00	0.00
NB2030	31.05	31.04	31.04	-0.01	-0.01
NB2040	31.05	31.05	31.05	0.00	0.00
NB2045	31.52	31.52	31.52	0.00	0.00
NB2050	31.71	31.71	31.71	0.00	0.00
NB2060	34.40	34.40	34.40	0.00	0.00
NB2070	35.15	35.15	35.15	0.00	0.00
NB2080	35.53	35.53	35.53	0.00	0.00
NB2085	36.95	36.95	36.95	0.00	0.00
NB2090	37.09	37.09	37.09	0.00	0.00
NB2100	39.31	39.31	39.31	0.00	0.00
NB2105	39.50	39.50	39.50	0.00	0.00
NB2110	39.71	39.71	39.71	0.00	0.00
NB2120	39.78	39.78	39.78	0.00	0.00
NB2130	42.41	42.41	42.41	0.00	0.00
NB2140	42.53	42.53	42.53	0.00	0.00
NB2150	42.80	42.80	42.80	0.00	0.00
NB2155	44.05	44.05	44.05	0.00	0.00
NB2160	44.14	44.14	44.14	0.00	0.00
NB2170	44.36	44.36	44.36	0.00	0.00
NB2175	45.29	45.29	45.29	0.00	0.00
NB2180	45.89	45.89	45.89	0.00	0.00
NB2185	45.91	45.91	45.91	0.00	0.00
NB2190	46.15	46.15	46.15	0.00	0.00
NB2195	46.33	46.32	46.33	-0.01	0.00
NB2200	46.16	46.16	46.16	0.00	0.00
NB2210	25.18	25.18	25.19	0.00	0.01

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NB2220	27.45	27.45	27.45	0.00	0.00
NB2230	42.13	42.13	42.13	0.00	0.00
NB2240	42.29	42.29	42.29	0.00	0.00
NB2250	35.17	35.17	35.17	0.00	0.00
NB2260	42.37	42.37	42.37	0.00	0.00
NB2270	31.81	31.81	31.81	0.00	0.00
NB2280	31.06	31.06	31.06	0.00	0.00
NB2290	31.13	31.13	31.13	0.00	0.00
NB2300	42.87	42.87	42.87	0.00	0.00
NB2310	46.65	46.65	46.65	0.00	0.00
NB2320	46.62	46.62	46.62	0.00	0.00
NB2330	42.89	42.89	42.89	0.00	0.00
NB2340	46.40	46.40	46.40	0.00	0.00
NB2350	44.97	44.97	44.97	0.00	0.00
NB2360	45.50	45.50	45.50	0.00	0.00
NB2370	35.88	35.88	35.88	0.00	0.00
NB2380	47.59	47.59	47.59	0.00	0.00
NB2390	52.06	52.06	52.06	0.00	0.00
NB2400	38.07	38.07	38.07	0.00	0.00
NB2410	50.07	50.07	50.07	0.00	0.00
NB2420	49.66	49.66	49.66	0.00	0.00
NB2430	51.96	51.96	51.96	0.00	0.00
NB2440	40.00	40.00	40.00	0.00	0.00
NB2450	40.64	40.64	40.64	0.00	0.00
NB2460	58.28	58.28	58.28	0.00	0.00
NB2470	38.83	38.83	38.83	0.00	0.00
NB2480	38.86	38.86	38.86	0.00	0.00
NB2490	43.00	43.00	43.00	0.00	0.00
NB2500	53.17	53.17	53.17	0.00	0.00
NB2510	42.89	42.89	42.89	0.00	0.00
NB2520	47.84	47.84	47.84	0.00	0.00
NB2530	49.95	49.95	49.95	0.00	0.00
NB2540	53.78	53.78	53.78	0.00	0.00
NB2550	53.96	53.96	53.96	0.00	0.00
NB2560	53.03	53.03	53.03	0.00	0.00
NB2570	56.00	56.00	56.00	0.00	0.00
NB2580	56.84	56.84	56.84	0.00	0.00
NB2590	43.47	43.47	43.47	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NB2600	45.11	45.11	45.11	0.00	0.00
NB2620	46.79	46.79	46.79	0.00	0.00
NB2630	53.49	53.49	53.49	0.00	0.00
NB2640	63.04	63.04	63.04	0.00	0.00
NB2650	64.19	64.19	64.19	0.00	0.00
NB2660	60.73	60.73	60.73	0.00	0.00
NB2670	64.60	64.60	64.60	0.00	0.00
NB2680	68.85	68.85	68.85	0.00	0.00
NB2690	70.33	70.33	70.33	0.00	0.00
NB2700	62.48	62.48	62.48	0.00	0.00
NB2710	65.66	65.66	65.66	0.00	0.00
NB2725	43.83	43.83	43.83	0.00	0.00
NB2730	48.35	48.35	48.35	0.00	0.00
NB2740	45.58	45.58	45.57	0.00	-0.01
NB2750	45.17	45.17	45.17	0.00	0.00
NB2760	45.82	45.82	45.82	0.00	0.00
NB2770	44.58	44.58	44.58	0.00	0.00
NB2780	45.04	45.04	45.04	0.00	0.00
NB2790	45.03	45.03	45.03	0.00	0.00
NB2800	45.18	45.18	45.18	0.00	0.00
NB2810	46.25	46.25	46.25	0.00	0.00
NB2820	51.59	51.59	51.59	0.00	0.00
NB2830	57.25	57.25	57.25	0.00	0.00
NB2835	57.99	57.99	57.99	0.00	0.00
NB2840	63.80	63.80	63.80	0.00	0.00
NB2850	65.55	65.55	65.55	0.00	0.00
NB2855	62.73	62.73	62.73	0.00	0.00
NB2860	65.22	65.22	65.22	0.00	0.00
NB2870	67.16	67.16	67.16	0.00	0.00
NB2880	65.39	65.38	65.38	-0.01	-0.01
NB2890	67.92	67.92	67.92	0.00	0.00
NB2900	68.16	68.17	68.16	0.01	0.00
NB2910	68.22	68.22	68.22	0.00	0.00
NB2920	69.00	69.00	69.00	0.00	0.00
NB2930	68.14	68.14	68.14	0.00	0.00
NB2940	68.95	68.95	68.95	0.00	0.00
NB2950	68.21	68.21	68.21	0.00	0.00
NB2960	70.86	70.86	70.86	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NB2970	73.28	73.28	73.28	0.00	0.00
NB2972	71.30	71.30	71.30	0.00	0.00
NB2980	70.21	70.21	70.21	0.00	0.00
NB2990	71.24	71.24	71.24	0.00	0.00
NB3000	47.08	47.09	47.09	0.01	0.01
NB3010	48.43	48.43	48.43	0.00	0.00
NB3015	56.18	56.18	56.18	0.00	0.00
NB3020	47.04	47.04	47.04	0.00	0.00
NB3030	47.07	47.07	47.07	0.00	0.00
NB3040	48.21	48.21	48.21	0.00	0.00
NB3050	47.76	47.76	47.76	0.00	0.00
NB3060	45.91	45.91	45.91	0.00	0.00
NB3070	47.87	47.87	47.87	0.00	0.00
NB3075	56.14	56.14	56.15	0.00	0.01
NB3080	56.31	56.31	56.31	0.00	0.00
NB3090	58.53	58.53	58.53	0.00	0.00
NB3100	49.06	49.06	49.06	0.00	0.00
NB3110	49.58	49.58	49.58	0.00	0.00
NB3120	57.30	57.30	57.30	0.00	0.00
NB3130	46.17	46.17	46.17	0.00	0.00
NB3140	46.17	46.16	46.16	-0.01	-0.01
NB3150	46.17	46.17	46.17	0.00	0.00
NB3160	47.91	47.91	47.91	0.00	0.00
NB3170	46.20	46.20	46.20	0.00	0.00
NB3180	46.20	46.19	46.19	-0.01	-0.01
NB3190	46.16	46.16	46.16	0.00	0.00
NB3200	46.16	46.16	46.16	0.00	0.00
NB3210	46.16	46.16	46.16	0.00	0.00
NB3220	46.17	46.17	46.17	0.00	0.00
NB3230	46.17	46.17	46.17	0.00	0.00
NB3250	46.20	46.20	46.20	0.00	0.00
NB3260	51.84	51.84	51.84	0.00	0.00
NB3270	48.11	48.11	48.11	0.00	0.00
NB3280	65.68	65.68	65.68	0.00	0.00
NB3310	47.17	47.17	47.17	0.00	0.00
NB3320	46.36	46.36	46.36	0.00	0.00
NB3330	50.83	50.83	50.83	0.00	0.00
NB3340	51.83	51.83	51.83	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NB3350	56.65	56.65	56.65	0.00	0.00
NB3360	64.32	64.32	64.32	0.00	0.00
NC3395	47.21	47.22	47.21	0.01	0.00
NC3400	50.17	50.17	50.17	0.00	0.00
NC3410	52.85	52.85	52.85	0.00	0.00
NC3420	53.77	53.77	53.77	0.00	0.00
NC3430	54.24	54.24	54.25	0.00	0.01
NC3435	58.96	58.96	58.96	0.00	0.00
NC3440	59.29	59.29	59.29	0.00	0.00
NC3450	66.77	66.76	66.77	-0.01	0.00
NC3452	66.79	66.80	66.80	0.01	0.01
NC3454	66.94	66.94	66.94	0.00	0.00
NC3455	75.95	75.94	75.95	-0.01	0.00
NC3456	67.04	67.04	67.04	0.00	0.00
NC3458	67.16	67.16	67.16	0.00	0.00
NC3460	76.61	76.60	76.61	-0.01	0.00
NC3470	78.10	78.10	78.10	0.00	0.00
NC3480	78.94	78.94	78.95	0.00	0.01
NC3490	79.15	79.15	79.15	0.00	0.00
NC3500	80.06	80.06	80.06	0.00	0.00
NC3510	51.64	51.64	51.64	0.00	0.00
NC3520	57.64	57.64	57.64	0.00	0.00
NC3530	60.14	60.14	60.14	0.00	0.00
NC3540	62.03	62.03	62.03	0.00	0.00
NC3550	63.44	63.44	63.44	0.00	0.00
NC3560	64.29	64.29	64.29	0.00	0.00
NC3565	66.74	66.74	66.74	0.00	0.00
NC3568	66.19	66.19	66.19	0.00	0.00
NC3570	65.86	65.86	65.86	0.00	0.00
NC3580	67.28	67.28	67.28	0.00	0.00
NC3590	67.80	67.80	67.80	0.00	0.00
NC3600	67.18	67.18	67.18	0.00	0.00
NC3610	67.01	67.01	67.01	0.00	0.00
NC3620	66.98	66.98	66.98	0.00	0.00
NC3630	66.72	66.72	66.72	0.00	0.00
NC3640	50.39	50.39	50.39	0.00	0.00
NC3650	52.98	52.98	52.98	0.00	0.00
NC3660	53.77	53.77	53.77	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NC3670	56.70	56.70	56.70	0.00	0.00
NC3680	58.76	58.76	58.76	0.00	0.00
NC3690	59.09	59.09	59.09	0.00	0.00
NC3700	58.53	58.53	58.53	0.00	0.00
NC3720	60.82	60.82	60.82	0.00	0.00
NC3730	60.26	60.26	60.26	0.00	0.00
NC3740	61.52	61.52	61.52	0.00	0.00
NC3745	60.64	60.64	60.64	0.00	0.00
NC3750	60.41	60.41	60.41	0.00	0.00
NC3760	60.44	60.44	60.44	0.00	0.00
NC3770	79.13	79.13	79.13	0.00	0.00
NC3780	79.14	79.13	79.14	-0.01	0.00
NC3800	83.63	83.63	83.63	0.00	0.00
NC3810	79.78	79.78	79.78	0.00	0.00
NC3820	80.14	80.14	80.14	0.00	0.00
NC3830	81.00	81.00	81.00	0.00	0.00
NC3840	81.43	81.43	81.43	0.00	0.00
NC3850	83.05	83.05	83.05	0.00	0.00
NC3860	83.33	83.33	83.33	0.00	0.00
NC3865	82.82	82.82	82.81	0.00	-0.01
NC3870	83.08	83.08	83.08	0.00	0.00
NC3880	83.79	83.79	83.79	0.00	0.00
NC3890	83.39	83.39	83.39	0.00	0.00
NC3895	84.38	84.37	84.39	-0.01	0.01
NC3900	86.99	86.99	86.99	0.00	0.00
NC3910	86.68	86.68	86.68	0.00	0.00
NC3920	85.46	85.46	85.46	0.00	0.00
NC3930	85.53	85.53	85.53	0.00	0.00
NC3940	87.09	87.09	87.09	0.00	0.00
NC3950	90.11	90.11	90.11	0.00	0.00
NC3960	91.54	91.54	91.54	0.00	0.00
NC3970	89.65	89.65	89.65	0.00	0.00
NC3980	87.58	87.58	87.58	0.00	0.00
ND4000	42.62	42.62	42.62	0.00	0.00
ND4010	44.63	44.63	44.63	0.00	0.00
ND4020	47.37	47.37	47.37	0.00	0.00
ND4030	50.76	50.76	50.76	0.00	0.00
ND4040	54.16	54.16	54.16	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
ND4045	54.43	54.43	54.43	0.00	0.00
ND4050	55.33	55.33	55.33	0.00	0.00
ND4060	55.51	55.51	55.51	0.00	0.00
ND4070	56.87	56.87	56.87	0.00	0.00
ND4080	58.98	58.98	58.98	0.00	0.00
ND4090	60.12	60.12	60.12	0.00	0.00
ND4095	60.98	60.98	60.98	0.00	0.00
ND4100	63.73	63.73	63.73	0.00	0.00
ND4110	69.42	69.42	69.42	0.00	0.00
ND4120	70.98	70.98	70.98	0.00	0.00
ND4140	71.07	71.07	71.07	0.00	0.00
ND4142	72.47	72.47	72.47	0.00	0.00
ND4145	70.22	70.22	70.22	0.00	0.00
ND4150	72.01	72.01	72.01	0.00	0.00
ND4160	72.31	72.31	72.31	0.00	0.00
ND4165	72.58	72.58	72.58	0.00	0.00
ND4170	73.75	73.75	73.75	0.00	0.00
ND4175	73.76	73.76	73.76	0.00	0.00
ND4180	74.57	74.57	74.57	0.00	0.00
ND4200	47.17	47.17	47.17	0.00	0.00
ND4210	49.08	49.08	49.08	0.00	0.00
ND4220	60.88	60.88	60.88	0.00	0.00
ND4230	65.16	65.16	65.16	0.00	0.00
ND4240	64.50	64.50	64.50	0.00	0.00
ND4250	66.04	66.04	66.04	0.00	0.00
ND4260	66.31	66.31	66.31	0.00	0.00
ND4270	67.89	67.89	67.89	0.00	0.00
ND4280	62.16	62.16	62.16	0.00	0.00
ND4290	69.39	69.39	69.39	0.00	0.00
ND4300	60.28	60.28	60.28	0.00	0.00
ND4310	60.11	60.11	60.11	0.00	0.00
ND4320	60.94	60.94	60.94	0.00	0.00
ND4330	65.48	65.48	65.48	0.00	0.00
ND4340	65.10	65.10	65.10	0.00	0.00
ND4350	63.35	63.35	63.35	0.00	0.00
ND4370	63.80	63.80	63.80	0.00	0.00
ND4380	65.85	65.85	65.85	0.00	0.00
ND4390	64.49	64.49	64.49	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
ND4400	67.65	67.65	67.65	0.00	0.00
ND4410	66.37	66.37	66.37	0.00	0.00
ND4420	68.65	68.65	68.65	0.00	0.00
ND4430	70.15	70.15	70.15	0.00	0.00
ND4440	70.42	70.42	70.42	0.00	0.00
ND4450	70.28	70.28	70.28	0.00	0.00
ND4460	70.97	70.97	70.97	0.00	0.00
ND4470	72.01	72.01	72.01	0.00	0.00
ND4480	72.41	72.41	72.41	0.00	0.00
ND4490	72.32	72.32	72.32	0.00	0.00
ND4500	73.13	73.13	73.13	0.00	0.00
ND4510	72.04	72.04	72.04	0.00	0.00
ND4511	72.03	72.03	72.03	0.00	0.00
ND4512	72.14	72.14	72.14	0.00	0.00
ND4513	72.12	72.12	72.12	0.00	0.00
ND4514	72.04	72.04	72.04	0.00	0.00
ND4515	72.04	72.04	72.04	0.00	0.00
ND4516	71.99	71.99	71.99	0.00	0.00
ND4517	71.90	71.90	71.90	0.00	0.00
ND4520	72.93	72.94	72.93	0.01	0.00
ND4530	74.57	74.57	74.57	0.00	0.00
ND4540	73.24	73.24	73.24	0.00	0.00
ND4550	74.59	74.59	74.59	0.00	0.00
ND4560	77.62	77.62	77.62	0.00	0.00
ND4570	76.38	76.37	76.38	-0.01	0.00
ND4580	78.14	78.14	78.14	0.00	0.00
ND4590	78.69	78.69	78.69	0.00	0.00
ND4600	78.24	78.24	78.24	0.00	0.00
ND4610	82.39	82.39	82.39	0.00	0.00
NE5000	41.00	41.00	41.00	0.00	0.00
NE5005	41.03	41.03	41.03	0.00	0.00
NE5010	41.68	41.68	41.68	0.00	0.00
NE5020	43.32	43.32	43.32	0.00	0.00
NE5025	45.57	45.57	45.57	0.00	0.00
NE5030	47.11	47.11	47.11	0.00	0.00
NE5040	47.73	47.73	47.73	0.00	0.00
NE5050	46.58	46.58	46.58	0.00	0.00
NE5060	47.90	47.90	47.90	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NE5065	52.74	52.75	52.74	0.01	0.00
NE5070	52.71	52.71	52.71	0.00	0.00
NE5075	58.53	58.53	58.53	0.00	0.00
NE5080	52.71	52.71	52.71	0.00	0.00
NE5090	55.54	55.54	55.54	0.00	0.00
NE5100	52.75	52.75	52.75	0.00	0.00
NE5110	42.97	42.97	42.97	0.00	0.00
NE5115	45.51	45.51	45.51	0.00	0.00
NE5120	52.75	52.75	52.75	0.00	0.00
NE5130	55.67	55.67	55.67	0.00	0.00
NE5140	52.34	52.34	52.34	0.00	0.00
NE5150	57.46	57.46	57.46	0.00	0.00
NE5160	58.85	58.85	58.85	0.00	0.00
NE5170	67.55	67.55	67.55	0.00	0.00
NE5180	67.81	67.81	67.81	0.00	0.00
NE5190	68.49	68.49	68.49	0.00	0.00
NE5200	53.89	53.89	53.89	0.00	0.00
NE5210	59.95	59.95	59.95	0.00	0.00
NE5220	63.18	63.18	63.18	0.00	0.00
NE5230	54.24	54.24	54.24	0.00	0.00
NE5240	59.16	59.16	59.16	0.00	0.00
NE5245	61.24	61.24	61.24	0.00	0.00
NE5250	64.28	64.28	64.28	0.00	0.00
NE5260	67.05	67.05	67.05	0.00	0.00
NE5270	65.04	65.04	65.04	0.00	0.00
NE5280	67.13	67.13	67.13	0.00	0.00
NE5290	68.75	68.75	68.75	0.00	0.00
NE5300	69.88	69.88	69.88	0.00	0.00
NE5310	70.29	70.29	70.29	0.00	0.00
NE5320	66.66	66.66	66.66	0.00	0.00
NE5325	66.65	66.65	66.65	0.00	0.00
NE5340	65.06	65.06	65.06	0.00	0.00
NE5350	66.89	66.89	66.89	0.00	0.00
NE5360	69.64	69.64	69.64	0.00	0.00
NE5370	67.51	67.51	67.51	0.00	0.00
NE5380	67.51	67.51	67.51	0.00	0.00
NE5390	72.65	72.65	72.65	0.00	0.00
NE5400	77.48	77.48	77.48	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NE5410	73.97	73.97	73.97	0.00	0.00
NE5420	75.13	75.13	75.13	0.00	0.00
NE5430	79.14	79.14	79.14	0.00	0.00
NE5440	80.51	80.51	80.51	0.00	0.00
NE5450	57.91	57.91	57.91	0.00	0.00
NE5460	60.53	60.53	60.53	0.00	0.00
NE5470	57.83	57.83	57.83	0.00	0.00
NE5480	56.94	56.94	56.94	0.00	0.00
NE5490	57.86	57.86	57.86	0.00	0.00
NE5500	56.96	56.96	56.96	0.00	0.00
NE5510	57.79	57.79	57.79	0.00	0.00
NE5520	57.88	57.88	57.88	0.00	0.00
NE5530	57.99	57.99	57.99	0.00	0.00
NE5540	61.57	61.57	61.57	0.00	0.00
NE5826	61.87	61.87	61.87	0.00	0.00
NF5600	39.61	39.61	39.61	0.00	0.00
NF5610	39.61	39.61	39.61	0.00	0.00
NF5620	39.61	39.61	39.61	0.00	0.00
NF5630	39.61	39.61	39.61	0.00	0.00
NF5640	50.51	50.51	50.51	0.00	0.00
NF5650	41.18	41.18	41.18	0.00	0.00
NF5660	53.67	53.67	53.67	0.00	0.00
NF5670	43.26	43.26	43.26	0.00	0.00
NF5680	49.37	49.37	49.37	0.00	0.00
NF5690	40.91	40.90	40.90	-0.01	-0.01
NF5700	44.25	44.25	44.25	0.00	0.00
NF5710	50.14	50.14	50.14	0.00	0.00
NF5720	59.99	59.99	59.99	0.00	0.00
NF5730	58.01	58.01	58.01	0.00	0.00
NF5740	60.98	60.98	60.98	0.00	0.00
NF5750	39.61	39.61	39.61	0.00	0.00
NF5760	39.61	39.61	39.61	0.00	0.00
NF5770	40.44	40.44	40.44	0.00	0.00
NF5780	40.39	40.39	40.39	0.00	0.00
NF5790	42.41	42.41	42.41	0.00	0.00
NF5800	46.42	46.42	46.42	0.00	0.00
NF5805	49.26	49.27	49.26	0.01	0.00
NF5810	54.94	54.94	54.94	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NF5820	57.51	57.51	57.51	0.00	0.00
NF5828	60.94	60.94	60.94	0.00	0.00
NF5830	61.34	61.34	61.34	0.00	0.00
NF5840	60.75	60.75	60.75	0.00	0.00
NF5850	38.78	38.78	38.78	0.00	0.00
NF5860	39.61	39.61	39.61	0.00	0.00
NF5870	39.61	39.61	39.61	0.00	0.00
NF5880	47.44	47.44	47.44	0.00	0.00
NF5890	51.10	51.10	51.10	0.00	0.00
NF5900	48.87	48.87	48.87	0.00	0.00
NF5910	48.87	48.87	48.87	0.00	0.00
NF5920	56.32	56.32	56.32	0.00	0.00
NF5930	56.65	56.65	56.65	0.00	0.00
NF5940	59.70	59.70	59.70	0.00	0.00
NF5950	63.01	63.01	63.01	0.00	0.00
NG6000	42.61	42.61	42.61	0.00	0.00
NG6005	46.82	46.82	46.82	0.00	0.00
NG6010	48.53	48.53	48.53	0.00	0.00
NG6020	51.62	51.62	51.62	0.00	0.00
NG6025	51.71	51.71	51.71	0.00	0.00
NG6030	51.79	51.79	51.79	0.00	0.00
NG6035	52.24	52.23	52.23	-0.01	-0.01
NG6040	52.29	52.29	52.29	0.00	0.00
NG6045	52.90	52.90	52.90	0.00	0.00
NG6050	55.41	55.41	55.41	0.00	0.00
NG6055	55.78	55.78	55.78	0.00	0.00
NG6058	58.05	58.05	58.05	0.00	0.00
NG6060	58.41	58.41	58.41	0.00	0.00
NG6070	59.04	59.04	59.04	0.00	0.00
NG6080	60.10	60.09	60.09	-0.01	-0.01
NG6090	61.64	61.64	61.64	0.00	0.00
NG6092	63.29	63.29	63.29	0.00	0.00
NG6095	69.41	69.41	69.41	0.00	0.00
NG6100	69.67	69.67	69.67	0.00	0.00
NG6105	71.83	71.83	71.83	0.00	0.00
NG6110	46.88	46.88	46.88	0.00	0.00
NG6120	56.02	56.02	56.02	0.00	0.00
NG6130	63.74	63.74	63.74	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NG6140	51.80	51.80	51.80	0.00	0.00
NG6145	58.47	58.47	58.47	0.00	0.00
NG6150	58.52	58.52	58.52	0.00	0.00
NG6160	61.40	61.40	61.40	0.00	0.00
NG6170	69.71	69.71	69.71	0.00	0.00
NG6175	62.19	62.19	62.19	0.00	0.00
NG6180	60.94	60.94	60.94	0.00	0.00
NG6185	64.19	64.19	64.19	0.00	0.00
NG6190	63.08	63.08	63.08	0.00	0.00
NG6200	66.57	66.57	66.57	0.00	0.00
NG6210	68.11	68.11	68.11	0.00	0.00
NG6220	61.59	61.59	61.59	0.00	0.00
NG6230	67.18	67.18	67.18	0.00	0.00
NG6240	67.06	67.06	67.06	0.00	0.00
NG6250	67.37	67.37	67.37	0.00	0.00
NG6255	66.36	66.36	66.36	0.00	0.00
NG6260	67.90	67.90	67.90	0.00	0.00
NG6270	67.87	67.87	67.87	0.00	0.00
NG6280	71.09	71.09	71.09	0.00	0.00
NG6290	73.36	73.36	73.36	0.00	0.00
NG6300	73.49	73.49	73.49	0.00	0.00
NG6310	75.27	75.27	75.27	0.00	0.00
NG6320	77.38	77.38	77.38	0.00	0.00
NG6330	80.35	80.35	80.35	0.00	0.00
NG6340	70.20	70.20	70.20	0.00	0.00
NG6350	70.98	70.98	70.98	0.00	0.00
NG6360	72.28	72.28	72.28	0.00	0.00
NG6370	73.23	73.23	73.23	0.00	0.00
NG6380	78.52	78.52	78.52	0.00	0.00
NG6390	87.22	87.22	87.22	0.00	0.00
NG6400	87.64	87.64	87.64	0.00	0.00
NG6410	90.22	90.22	90.22	0.00	0.00
NG6420	89.83	89.83	89.83	0.00	0.00
NG6425	92.17	92.17	92.17	0.00	0.00
NG6430	90.24	90.24	90.24	0.00	0.00
NG6440	90.59	90.59	90.59	0.00	0.00
NG6450	92.18	92.18	92.18	0.00	0.00
NG6455	91.93	91.93	91.93	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NG6460	92.66	92.66	92.66	0.00	0.00
NG6470	94.14	94.14	94.14	0.00	0.00
NG6480	93.78	93.78	93.78	0.00	0.00
NG6490	89.84	89.84	89.84	0.00	0.00
NG6500	74.75	74.75	74.75	0.00	0.00
NG6510	73.82	73.82	73.82	0.00	0.00
NG6520	74.76	74.76	74.76	0.00	0.00
NG6530	75.52	75.52	75.52	0.00	0.00
NG6540	76.47	76.47	76.47	0.00	0.00
NG6550	81.09	81.09	81.09	0.00	0.00
NG6560	83.29	83.29	83.29	0.00	0.00
NG6570	96.37	96.37	96.37	0.00	0.00
NG6580	95.01	95.01	95.01	0.00	0.00
NG6590	96.33	96.33	96.33	0.00	0.00
NG6600	95.15	95.15	95.15	0.00	0.00
NH7000	51.61	51.62	51.62	0.01	0.01
NH7010	54.64	54.64	54.64	0.00	0.00
NH7020	55.71	55.71	55.71	0.00	0.00
NH7025	71.93	71.93	71.93	0.00	0.00
NH7030	72.05	72.05	72.05	0.00	0.00
NH7040	74.12	74.12	74.12	0.00	0.00
NH7045	74.99	74.99	74.99	0.00	0.00
NH7050	75.44	75.44	75.44	0.00	0.00
NH7055	78.41	78.41	78.41	0.00	0.00
NH7060	72.79	72.79	72.79	0.00	0.00
NH7065	74.23	74.23	74.23	0.00	0.00
NH7070	74.60	74.60	74.60	0.00	0.00
NH7072	78.35	78.35	78.35	0.00	0.00
NH7075	75.62	75.62	75.62	0.00	0.00
NH7080	75.78	75.78	75.78	0.00	0.00
NH7085	75.93	75.93	75.93	0.00	0.00
NH7090	77.27	77.27	77.27	0.00	0.00
NH7095	77.35	77.35	77.35	0.00	0.00
NH7100	51.64	51.64	51.64	0.00	0.00
NH7110	51.61	51.61	51.61	0.00	0.00
NH7120	59.69	59.69	59.69	0.00	0.00
NH7130	78.03	78.03	78.03	0.00	0.00
NH7135	78.03	78.03	78.03	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NH7140	78.04	78.04	78.04	0.00	0.00
NH7150	78.26	78.26	78.26	0.00	0.00
NH7160	82.08	82.08	82.08	0.00	0.00
NH7170	85.47	85.47	85.47	0.00	0.00
NH7180	82.50	82.50	82.50	0.00	0.00
NH7190	90.80	90.80	90.80	0.00	0.00
NH7195	78.35	78.35	78.35	0.00	0.00
NH7200	82.37	82.37	82.37	0.00	0.00
NH7210	81.69	81.69	81.69	0.00	0.00
NH7220	81.01	81.01	81.01	0.00	0.00
NH7230	80.21	80.21	80.21	0.00	0.00
NH7240	79.33	79.33	79.33	0.00	0.00
NH7250	79.34	79.34	79.34	0.00	0.00
NH7260	82.86	82.86	82.86	0.00	0.00
NH7270	84.19	84.19	84.20	0.00	0.01
NH7280	79.58	79.57	79.58	-0.01	0.00
NH7290	88.18	88.18	88.18	0.00	0.00
NH7300	90.06	90.06	90.06	0.00	0.00
NH7310	91.91	91.91	91.91	0.00	0.00
NH7320	87.20	87.20	87.20	0.00	0.00
NI1805	61.40	61.39	61.39	-0.01	-0.01
NI7900	1.93	2.43	3.17	0.50	1.24
NI8000	6.40	6.42	6.44	0.02	0.04
NI8001	3.58	3.69	4.01	0.11	0.43
NI8002	5.28	5.29	5.30	0.01	0.02
NI8003	5.42	5.43	5.45	0.01	0.03
NI8004	6.22	6.23	6.26	0.01	0.04
NI8005	7.52	7.53	7.55	0.01	0.03
NI8008	7.52	7.54	7.55	0.02	0.03
NI8010	8.28	8.29	8.29	0.01	0.01
NI8014	9.62	9.62	9.63	0.00	0.01
NI8015	9.62	9.63	9.63	0.01	0.01
NI8020	10.45	10.45	10.45	0.00	0.00
NI8025	11.40	11.40	11.40	0.00	0.00
NI8030	14.75	14.75	14.75	0.00	0.00
NI8035	17.29	17.29	17.30	0.00	0.01
NI8037	19.38	19.38	19.39	0.00	0.01
NI8039	25.35	25.35	25.35	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NI8040	25.58	25.57	25.58	-0.01	0.00
NI8045	25.72	25.72	25.72	0.00	0.00
NI8049	30.70	30.70	30.70	0.00	0.00
NI8050	41.21	41.21	41.21	0.00	0.00
NI8054	41.65	41.65	41.65	0.00	0.00
NI8055	42.32	42.32	42.32	0.00	0.00
NI8060	44.84	44.84	44.84	0.00	0.00
NI8065	46.75	46.75	46.75	0.00	0.00
NI8070	48.04	48.04	48.04	0.00	0.00
NI8075	51.21	51.21	51.21	0.00	0.00
NI8080	51.84	51.84	51.84	0.00	0.00
NI8083	54.50	54.50	54.50	0.00	0.00
NI8085	57.60	57.60	57.60	0.00	0.00
NI8090	59.18	59.18	59.18	0.00	0.00
NI8095	60.01	60.01	60.01	0.00	0.00
NI8100	61.20	61.20	61.20	0.00	0.00
NI8106	61.40	61.40	61.40	0.00	0.00
NI8110	61.48	61.48	61.48	0.00	0.00
NI8112	61.48	61.48	61.48	0.00	0.00
NI8120	63.06	63.06	63.06	0.00	0.00
NI8130	0.96	2.08	3.16	1.12	2.20
NI8135	4.06	4.43	4.98	0.37	0.92
NI8137	3.59	3.96	4.36	0.37	0.77
NI8140	3.69	4.13	4.33	0.44	0.64
NI8145	6.28	6.30	6.30	0.02	0.02
NI8150	4.54	4.78	4.98	0.24	0.44
NI8155	4.76	4.79	4.99	0.03	0.23
NI8160	4.89	5.35	6.25	0.46	1.36
NI8180	5.33	5.82	6.84	0.49	1.51
NI8190	5.51	5.96	6.97	0.45	1.46
NI8200	10.45	10.45	10.45	0.00	0.00
NI8210	11.38	11.38	11.38	0.00	0.00
NI8220	14.51	14.51	14.51	0.00	0.00
NI8225	11.40	11.40	11.40	0.00	0.00
NI8230	17.26	17.26	17.26	0.00	0.00
NI8240	25.36	25.36	25.36	0.00	0.00
NI8250	25.59	25.59	25.59	0.00	0.00
NI8260	25.64	25.64	25.64	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NI8270	25.73	25.73	25.73	0.00	0.00
NI8280	34.30	34.30	34.30	0.00	0.00
NI8290	25.74	25.74	25.74	0.00	0.00
NI8300	39.13	39.13	39.13	0.00	0.00
NI8310	44.90	44.90	44.90	0.00	0.00
NI8320	45.10	45.11	45.10	0.01	0.00
NI8330	48.79	48.79	48.79	0.00	0.00
NI8340	51.95	51.95	51.95	0.00	0.00
NI8350	50.84	50.84	50.84	0.00	0.00
NI8360	41.14	41.14	41.14	0.00	0.00
NI8370	45.04	45.04	45.04	0.00	0.00
NI8380	45.03	45.03	45.02	0.00	-0.01
NI8390	48.16	48.16	48.16	0.00	0.00
NI8400	49.78	49.78	49.78	0.00	0.00
NI8410	44.85	44.85	44.85	0.00	0.00
NI8420	45.01	45.01	45.01	0.00	0.00
NI8430	52.64	52.64	52.64	0.00	0.00
NI8440	57.80	57.80	57.80	0.00	0.00
NI8450	47.25	47.25	47.25	0.00	0.00
NI8460	65.05	65.05	65.05	0.00	0.00
NI8470	46.16	46.16	46.16	0.00	0.00
NI8475	46.07	46.06	46.06	-0.01	-0.01
NI8478	54.56	54.57	54.56	0.01	0.00
NI8480	55.43	55.43	55.43	0.00	0.00
NI8490	47.36	47.36	47.36	0.00	0.00
NI8500	47.92	47.92	47.92	0.00	0.00
NI8510	58.50	58.50	58.50	0.00	0.00
NI8520	56.74	56.74	56.74	0.00	0.00
NI8525	56.59	56.59	56.59	0.00	0.00
NI8530	56.74	56.74	56.74	0.00	0.00
NI8535	68.64	68.64	68.64	0.00	0.00
NI8540	46.12	46.12	46.12	0.00	0.00
NI8550	52.70	52.70	52.70	0.00	0.00
NI8560	54.68	54.68	54.68	0.00	0.00
NI8570	53.86	53.86	53.86	0.00	0.00
NI8580	55.83	55.83	55.83	0.00	0.00
NI8590	56.51	56.51	56.51	0.00	0.00
NI8600	57.84	57.84	57.84	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NI8610	58.87	58.87	58.87	0.00	0.00
NI8620	58.80	58.80	58.80	0.00	0.00
NI8630	59.83	59.83	59.83	0.00	0.00
NI8640	59.41	59.41	59.41	0.00	0.00
NI8650	62.70	62.70	62.70	0.00	0.00
NI8660	62.70	62.70	62.70	0.00	0.00
NI8670	62.71	62.71	62.71	0.00	0.00
NI8680	57.60	57.60	57.60	0.00	0.00
NI8690	60.80	60.80	60.80	0.00	0.00
NI8700	61.22	61.22	61.22	0.00	0.00
NI8710	63.75	63.75	63.75	0.00	0.00
NI8720	64.17	64.17	64.17	0.00	0.00
NI8730	66.60	66.60	66.60	0.00	0.00
NI8740	65.00	65.00	65.00	0.00	0.00
NI8745	63.92	63.92	63.92	0.00	0.00
NI8750	67.45	67.45	67.45	0.00	0.00
NI8760	71.43	71.43	71.43	0.00	0.00
NI8770	65.08	65.08	65.08	0.00	0.00
NI8780	59.99	59.99	59.99	0.00	0.00
NI8790	56.79	56.79	56.79	0.00	0.00
NI8800	60.60	60.60	60.60	0.00	0.00
NI8810	60.94	60.92	60.94	-0.02	0.00
NI8820	62.44	62.44	62.44	0.00	0.00
NI8830	62.82	62.82	62.82	0.00	0.00
NI8840	63.55	63.55	63.55	0.00	0.00
NI8845	53.82	53.80	53.81	-0.02	-0.01
NI8850	63.70	63.70	63.70	0.00	0.00
NI8860	68.46	68.46	68.46	0.00	0.00
NI8870	62.79	62.80	62.79	0.01	0.00
NI8880	61.49	61.49	61.49	0.00	0.00
NI8890	61.40	61.40	61.40	0.00	0.00
NI8900	62.62	62.62	62.62	0.00	0.00
NI8910	62.73	62.73	62.73	0.00	0.00
NI8920	68.68	68.68	68.68	0.00	0.00
NI8930	67.95	67.95	67.95	0.00	0.00
NI8940	70.33	70.33	70.33	0.00	0.00
NI8950	70.23	70.23	70.23	0.00	0.00
NI8960	62.09	62.09	62.09	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NI8970	68.11	68.11	68.11	0.00	0.00
NI8980	72.07	72.07	72.07	0.00	0.00
NI8990	75.84	75.84	75.84	0.00	0.00
NI9000	0.80	1.89	2.79	1.09	1.99
NI9010	4.18	4.25	4.41	0.07	0.23
NI9120	4.50	4.88	5.36	0.38	0.86
NI9130	8.33	8.50	8.55	0.17	0.22
NI9140	4.19	4.25	4.42	0.06	0.23
NI9150	4.76	5.13	5.62	0.37	0.86
NI9160	4.76	5.13	5.62	0.37	0.86
NI9170	5.22	5.30	5.62	0.08	0.40
NI9180	4.76	5.13	5.62	0.37	0.86
NI9190	5.38	5.47	5.63	0.09	0.25
NI9200	4.76	5.14	5.62	0.38	0.86
NI9210	4.92	5.14	5.62	0.22	0.70
NI9220	8.22	8.22	8.22	0.00	0.00
NI9230	5.42	5.48	5.64	0.06	0.22
NI9240	6.95	6.95	6.95	0.00	0.00
NI9250	6.13	6.14	6.14	0.01	0.01
NI9260	25.88	25.88	25.88	0.00	0.00
NI9270	5.78	5.84	5.89	0.06	0.11
NI9280	5.79	5.85	5.91	0.06	0.12
NI9290	5.79	5.85	5.90	0.06	0.11
NI9300	4.85	4.87	4.90	0.02	0.05
NI9310	7.91	7.92	7.93	0.01	0.02
NI9320	7.92	7.93	7.94	0.01	0.02
NI9325	7.50	7.51	7.52	0.01	0.02
NI9326	6.73	6.74	6.75	0.01	0.02
NI9330	6.85	6.93	6.93	0.08	0.08
NI9340	6.72	6.73	6.74	0.01	0.02
NI9350	4.53	4.73	4.79	0.20	0.26
NI9360	7.92	7.93	7.94	0.01	0.02
NI9370	5.94	6.03	6.08	0.09	0.14
NI9380	5.80	5.86	5.91	0.06	0.11
NI9390	7.92	7.93	7.94	0.01	0.02
NI9400	5.80	5.86	5.91	0.06	0.11
NI9410	6.45	6.66	6.73	0.21	0.28
NI9420	7.21	7.23	7.23	0.02	0.02

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NI9430	8.28	8.28	8.29	0.00	0.01
NI9440	5.79	5.85	5.91	0.06	0.12
NI9445	8.28	8.28	8.29	0.00	0.01
NI9450	8.28	8.28	8.29	0.00	0.01
NI9460	9.65	9.66	9.66	0.01	0.01
NI9465	9.78	9.79	9.79	0.01	0.01
NI9470	5.79	5.85	5.90	0.06	0.11
NI9480	5.76	5.83	5.88	0.07	0.12
NI9490	5.73	5.80	5.85	0.07	0.12
NI9495	5.77	5.84	5.89	0.07	0.12
NI9498	5.79	5.85	5.91	0.06	0.12
NI9500	5.79	5.86	5.91	0.07	0.12
NI9510	6.10	6.10	6.10	0.00	0.00
NI9515	10.29	10.29	10.29	0.00	0.00
NI9520	10.44	10.44	10.44	0.00	0.00
NI9530	10.44	10.44	10.44	0.00	0.00
NI9540	10.43	10.43	10.43	0.00	0.00
NI9550	9.65	9.66	9.66	0.01	0.01
NI9560	24.15	24.15	24.15	0.00	0.00
NI9570	28.14	28.14	28.14	0.00	0.00
NI9580	30.76	30.76	30.76	0.00	0.00
NI9590	34.27	34.27	34.27	0.00	0.00
NI9600	33.88	33.88	33.88	0.00	0.00
NI9610	39.01	39.01	39.01	0.00	0.00
NI9615	24.84	24.84	24.84	0.00	0.00
NI9616	25.91	25.91	25.91	0.00	0.00
NI9620	28.57	28.57	28.57	0.00	0.00
NI9630	31.76	31.76	31.76	0.00	0.00
NI9640	30.21	30.21	30.21	0.00	0.00
NI9650	35.19	35.19	35.19	0.00	0.00
NI9660	38.10	38.10	38.10	0.00	0.00
NI9670	39.08	39.08	39.08	0.00	0.00
NI9680	38.00	38.00	38.00	0.00	0.00
NI9690	40.36	40.36	40.36	0.00	0.00
NI9700	35.99	35.99	35.99	0.00	0.00
NI9710	45.06	45.06	45.06	0.00	0.00
NI9720	35.98	35.98	35.98	0.00	0.00
NI9730	38.73	38.73	38.73	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NI9740	44.96	44.96	44.96	0.00	0.00
NI9750	50.51	50.51	50.51	0.00	0.00
NI9760	7.92	7.93	7.94	0.01	0.02
NI9765	7.91	7.92	7.93	0.01	0.02
NI9770	9.39	9.47	9.48	0.08	0.09
NJ0110	3.58	3.75	4.15	0.17	0.57
NJ0120	3.90	4.05	4.37	0.15	0.47
NJ0140	5.03	5.23	5.28	0.20	0.25
NJ0160	5.21	5.24	5.26	0.03	0.05
NJ0180	3.78	3.95	4.33	0.17	0.55
NJ0200	3.79	3.96	4.34	0.17	0.55
NJ0220	3.80	3.97	4.35	0.17	0.55
NJ0240	8.99	8.99	9.00	0.00	0.01
NJ0260	7.97	7.98	7.98	0.01	0.01
NJ0280	4.03	4.16	4.42	0.13	0.39
NJ0300	5.19	5.21	5.24	0.02	0.05
NJ0320	5.24	5.26	5.28	0.02	0.04
NJ0340	6.55	6.58	6.58	0.03	0.03
NJ0360	17.58	17.58	17.58	0.00	0.00
NJ0380	6.91	6.93	6.93	0.02	0.02
NJ0400	6.96	6.98	6.99	0.02	0.03
NJ0420	7.01	7.03	7.04	0.02	0.03
NJ0440	7.06	7.08	7.09	0.02	0.03
NJ0450	8.65	8.66	8.66	0.01	0.01
NJ0460	15.23	15.27	15.34	0.04	0.11
NJ0480	15.24	15.28	15.35	0.04	0.11
NJ0500	15.30	15.32	15.37	0.02	0.07
NJ0520	15.43	15.44	15.46	0.01	0.03
NJ0540	17.07	17.08	17.09	0.01	0.02
NJ0560	17.07	17.07	17.08	0.00	0.01
NJ0580	17.16	17.16	17.17	0.00	0.01
NJ0600	18.07	18.07	18.07	0.00	0.00
NJ0620	18.27	18.27	18.28	0.00	0.01
NJ0640	18.73	18.73	18.73	0.00	0.00
NJ0660	18.73	18.73	18.73	0.00	0.00
NJ0680	19.50	19.50	19.50	0.00	0.00
NJ0700	19.61	19.61	19.61	0.00	0.00
NJ0720	17.27	17.27	17.27	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NJ0740	15.25	15.29	15.36	0.04	0.11
NJ0760	15.25	15.29	15.36	0.04	0.11
NJ0780	15.27	15.30	15.37	0.03	0.10
NJ0790	15.26	15.30	15.37	0.04	0.11
NJ0800	15.28	15.31	15.38	0.03	0.10
NJ0820	19.24	19.24	19.24	0.00	0.00
NJ0840	19.18	19.18	19.18	0.00	0.00
NJ0860	19.67	19.67	19.67	0.00	0.00
NJ0880	21.42	21.42	21.42	0.00	0.00
NJ0900	28.90	28.90	28.90	0.00	0.00
NJ0920	20.01	20.01	20.01	0.00	0.00
NJ0940	20.38	20.38	20.38	0.00	0.00
NJ0960	22.58	22.58	22.58	0.00	0.00
NJ0980	21.69	21.69	21.69	0.00	0.00
NJ1000	20.32	20.32	20.32	0.00	0.00
NJ1020	20.61	20.61	20.61	0.00	0.00
NJ1040	21.32	21.32	21.32	0.00	0.00
NJ1060	21.43	21.43	21.43	0.00	0.00
NJ1080	24.96	24.96	24.96	0.00	0.00
NJ1100	26.28	26.28	26.28	0.00	0.00
NJ1120	27.09	27.09	27.09	0.00	0.00
NJ1160	34.43	34.43	34.43	0.00	0.00
NJ1180	38.90	38.90	38.90	0.00	0.00
NJ1220	10.70	10.71	10.71	0.01	0.01
NJ1240	10.43	10.45	10.45	0.02	0.02
NJ1250	12.39	12.41	12.41	0.02	0.02
NJ1260	10.51	10.52	10.52	0.01	0.01
NJ1280	22.65	22.66	22.66	0.01	0.01
NJ1300	23.66	23.66	23.66	0.00	0.00
NJ1320	31.76	31.76	31.76	0.00	0.00
NJ1340	23.70	23.70	23.70	0.00	0.00
NJ1360	28.20	28.20	28.20	0.00	0.00
NJ1380	40.31	40.31	40.31	0.00	0.00
NJ1400	38.27	38.27	38.27	0.00	0.00
NJ1420	24.66	24.66	24.66	0.00	0.00
NJ1440	42.72	42.69	42.72	-0.03	0.00
NJ1460	52.92	52.92	52.92	0.00	0.00
NJ1480	42.74	42.75	42.75	0.01	0.01

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NJ1490	15.50	15.51	15.51	0.01	0.01
NJ1500	17.31	17.34	17.35	0.03	0.04
NJ1520	17.31	17.35	17.35	0.04	0.04
NJ1540	18.31	18.33	18.34	0.02	0.03
NJ1560	20.66	20.69	20.70	0.03	0.04
NJ1580	22.36	22.36	22.37	0.00	0.01
NJ1590	23.13	23.13	23.13	0.00	0.00
NJ1600	23.64	23.64	23.64	0.00	0.00
NJ1620	18.32	18.35	18.35	0.03	0.03
NJ1630	26.61	26.61	26.61	0.00	0.00
NJ1640	29.15	29.15	29.15	0.00	0.00
NJ1660	32.92	32.92	32.92	0.00	0.00
NJ1680	51.55	51.55	51.55	0.00	0.00
NJ1700	18.34	18.36	18.36	0.02	0.02
NJ1720	18.60	18.60	18.60	0.00	0.00
NJ1740	22.34	22.37	22.37	0.03	0.03
NJ1760	22.43	22.46	22.46	0.03	0.03
NJ1780	27.78	27.81	27.81	0.03	0.03
NJ1800	38.12	38.13	38.13	0.01	0.01
NJ1820	18.18	18.20	18.20	0.02	0.02
NJ1840	17.32	17.35	17.36	0.03	0.04
NJ1880	8.70	8.74	8.75	0.04	0.05
NJ1920	12.59	12.62	12.64	0.03	0.05
NJ1940	13.87	13.88	13.89	0.01	0.02
NJ1960	14.37	14.37	14.38	0.00	0.01
NJ1980	14.08	14.13	14.21	0.05	0.13
NJ2000	14.08	14.14	14.22	0.06	0.14
NJ2020	14.10	14.15	14.23	0.05	0.13
NJ2040	8.38	8.39	8.39	0.01	0.01
NJ2060	4.69	4.88	5.02	0.19	0.33
NJ2080	4.72	4.89	5.03	0.17	0.31
NJ2100	5.45	5.51	5.51	0.06	0.06
NJ2120	5.82	5.87	5.88	0.05	0.06
NJ2180	16.07	16.07	16.07	0.00	0.00
NJ2200	6.33	6.36	6.37	0.03	0.04
NJ2220	4.03	4.16	4.41	0.13	0.38
NJ2240	7.63	7.96	7.98	0.33	0.35
NJ2260	8.61	9.06	9.09	0.45	0.48

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NJ2300	8.39	8.40	8.40	0.01	0.01
NJ2320	9.71	9.73	9.75	0.02	0.04
NJ2330	11.19	11.19	11.19	0.00	0.00
NJ2340	19.49	19.49	19.49	0.00	0.00
NJ2350	7.01	7.03	7.04	0.02	0.03
NJ2360	7.40	7.41	7.42	0.01	0.02
NJ2370	6.43	6.45	6.46	0.02	0.03
NK0090	14.54	14.54	14.54	0.00	0.00
NK0100	15.11	15.11	15.11	0.00	0.00
NK0110	15.59	15.59	15.59	0.00	0.00
NK0120	16.46	16.46	16.46	0.00	0.00
NK0140	17.48	17.48	17.48	0.00	0.00
NK0160	17.49	17.49	17.49	0.00	0.00
NK0180	17.68	17.68	17.68	0.00	0.00
NK0200	17.82	17.82	17.83	0.00	0.01
NK0220	18.32	18.32	18.33	0.00	0.01
NK0240	18.67	18.67	18.67	0.00	0.00
NK0260	19.23	19.23	19.23	0.00	0.00
NK0280	18.88	18.88	18.88	0.00	0.00
NK0285	18.88	18.88	18.88	0.00	0.00
NK0300	18.88	18.88	18.89	0.00	0.01
NK0320	18.91	18.91	18.91	0.00	0.00
NK0360	18.94	18.94	18.94	0.00	0.00
NK0400	30.75	30.75	30.75	0.00	0.00
NK0420	25.86	25.86	25.86	0.00	0.00
NK0480	21.02	21.02	21.02	0.00	0.00
NK0500	26.91	26.91	26.91	0.00	0.00
NK0520	29.07	29.07	29.07	0.00	0.00
NK0540	30.81	30.81	30.81	0.00	0.00
NK0560	31.80	31.80	31.80	0.00	0.00
NK0580	18.93	18.93	18.94	0.00	0.01
NK0620	18.93	18.93	18.93	0.00	0.00
NK0640	22.06	22.06	22.06	0.00	0.00
NK0660	17.94	17.94	17.94	0.00	0.00
NK0670	15.81	15.80	15.81	-0.01	0.00
NK0680	16.37	16.37	16.37	0.00	0.00
NK0690	17.84	17.84	17.84	0.00	0.00
NK0700	21.40	21.40	21.40	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NK0720	16.92	16.92	16.92	0.00	0.00
NK0740	17.92	17.91	17.92	-0.01	0.00
NK0760	18.99	19.00	18.98	0.01	-0.01
NK0780	18.93	18.93	18.93	0.00	0.00
NK0800	19.25	19.25	19.25	0.00	0.00
NK0820	18.91	18.91	18.91	0.00	0.00
NK0825	18.92	18.92	18.93	0.00	0.01
NK0840	19.12	19.12	19.12	0.00	0.00
NK0850	20.75	20.74	20.75	-0.01	0.00
NK0860	22.58	22.58	22.59	0.00	0.01
NK0880	23.45	23.45	23.45	0.00	0.00
NK0900	23.45	23.45	23.46	0.00	0.01
NK0920	23.97	23.97	23.97	0.00	0.00
NK0940	26.41	26.41	26.41	0.00	0.00
NK0960	28.83	28.83	28.83	0.00	0.00
NK0980	29.84	29.84	29.84	0.00	0.00
NK1000	31.14	31.14	31.14	0.00	0.00
NK1020	31.88	31.88	31.88	0.00	0.00
NK1040	31.70	31.70	31.70	0.00	0.00
NK1060	37.30	37.30	37.30	0.00	0.00
NK1080	35.00	35.00	35.00	0.00	0.00
NK1100	32.18	32.18	32.18	0.00	0.00
NK1120	33.41	33.41	33.41	0.00	0.00
NK1140	35.40	35.40	35.40	0.00	0.00
NK1160	32.60	32.60	32.60	0.00	0.00
NK1180	34.91	34.91	34.91	0.00	0.00
NK1200	37.12	37.12	37.12	0.00	0.00
NK1220	37.07	37.07	37.07	0.00	0.00
NK1240	38.70	38.70	38.70	0.00	0.00
NK1260	24.15	24.15	24.16	0.00	0.01
NK1270	24.22	24.22	24.24	0.00	0.02
NK1280	27.66	27.66	27.66	0.00	0.00
NK1300	50.78	50.78	50.78	0.00	0.00
NK1320	44.44	44.44	44.44	0.00	0.00
NK1340	24.24	24.24	24.28	0.00	0.04
NK1350	24.28	24.28	24.29	0.00	0.01
NK1355	24.31	24.32	24.33	0.01	0.02
NK1360	24.30	24.29	24.33	-0.01	0.03

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NK1380	24.25	24.25	24.24	0.00	-0.01
NK1400	24.28	24.28	24.28	0.00	0.00
NK1420	26.54	26.54	26.54	0.00	0.00
NK1440	28.27	28.27	28.27	0.00	0.00
NK1460	28.02	28.02	28.02	0.00	0.00
NK1480	22.44	22.44	22.44	0.00	0.00
NK1500	22.44	22.44	22.44	0.00	0.00
NK1520	22.44	22.44	22.44	0.00	0.00
NK1540	23.86	23.86	23.86	0.00	0.00
NK1560	25.71	25.71	25.71	0.00	0.00
NK1580	24.35	24.35	24.35	0.00	0.00
NK1590	25.24	25.24	25.24	0.00	0.00
NK1600	27.84	27.84	27.84	0.00	0.00
NK1620	28.06	28.06	28.06	0.00	0.00
NK1640	28.07	28.07	28.07	0.00	0.00
NK1660	37.42	37.42	37.42	0.00	0.00
NK1680	28.07	28.07	28.07	0.00	0.00
NK1700	28.24	28.24	28.24	0.00	0.00
NK1720	29.34	29.34	29.34	0.00	0.00
NK1740	28.24	28.24	28.24	0.00	0.00
NK1760	28.24	28.24	28.24	0.00	0.00
NK1780	28.25	28.25	28.25	0.00	0.00
NK1800	28.66	28.66	28.66	0.00	0.00
NK1820	31.59	31.59	31.59	0.00	0.00
NK1840	32.87	32.87	32.87	0.00	0.00
NK1860	32.46	32.46	32.46	0.00	0.00
NK1880	28.39	28.39	28.39	0.00	0.00
NK1900	44.22	44.22	44.22	0.00	0.00
NK1920	28.30	28.30	28.30	0.00	0.00
NK1940	28.24	28.24	28.24	0.00	0.00
NK1960	29.70	29.70	29.70	0.00	0.00
NK1980	29.06	29.06	29.06	0.00	0.00
NK2000	36.40	36.40	36.40	0.00	0.00
NK2020	49.87	49.87	49.87	0.00	0.00
NK2040	50.23	50.23	50.23	0.00	0.00
NK2060	55.49	55.49	55.49	0.00	0.00
NK2080	55.53	55.53	55.53	0.00	0.00
NK2100	28.83	28.83	28.83	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NK2120	28.87	28.87	28.87	0.00	0.00
NK2140	28.88	28.88	28.88	0.00	0.00
NK2150	29.02	29.02	29.02	0.00	0.00
NK2160	29.20	29.20	29.20	0.00	0.00
NK2180	29.21	29.21	29.21	0.00	0.00
NK2200	29.45	29.45	29.45	0.00	0.00
NK2220	30.00	30.00	30.00	0.00	0.00
NK2240	30.12	30.12	30.12	0.00	0.00
NK2260	31.70	31.70	31.70	0.00	0.00
NK2270	29.03	29.03	29.03	0.00	0.00
NK2280	33.13	33.13	33.13	0.00	0.00
NK2300	33.82	33.82	33.82	0.00	0.00
NK2320	39.64	39.64	39.64	0.00	0.00
NK2340	26.66	26.66	26.66	0.00	0.00
NK2360	23.96	23.96	23.95	0.00	-0.01
NK2380	24.19	24.19	24.18	0.00	-0.01
NK2400	24.19	24.19	24.18	0.00	-0.01
NK2420	24.19	24.19	24.18	0.00	-0.01
NK2440	17.78	17.78	17.78	0.00	0.00
NK2460	30.30	30.30	30.30	0.00	0.00
NK2480	25.32	25.32	25.32	0.00	0.00
NK2490	35.53	35.53	35.53	0.00	0.00
NK2500	36.93	36.93	36.93	0.00	0.00
NK2510	32.27	32.27	32.27	0.00	0.00
NL0120	4.53	4.96	5.19	0.43	0.66
NL0140	5.90	6.46	6.84	0.56	0.94
NL0150	8.04	8.39	8.64	0.35	0.60
NL0160	12.76	12.76	12.76	0.00	0.00
NL0180	15.58	15.58	15.58	0.00	0.00
NL0200	8.25	8.45	8.55	0.20	0.30
NL0210	8.22	8.44	8.56	0.22	0.34
NL0220	10.98	11.00	11.03	0.02	0.05
NL0240	10.37	10.42	10.53	0.05	0.16
NL0260	9.54	9.78	9.81	0.24	0.27
NL0280	8.61	8.71	8.86	0.10	0.25
NL0300	17.87	17.87	17.87	0.00	0.00
NL0320	4.93	5.01	5.05	0.08	0.12
NL0340	4.86	4.95	5.00	0.09	0.14

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NL0360	4.24	4.39	4.48	0.15	0.24
NL0380	4.18	4.35	4.45	0.17	0.27
NL0400	4.06	4.22	4.35	0.16	0.29
NL0420	4.04	4.21	4.34	0.17	0.30
NL0440	3.97	4.18	4.31	0.21	0.34
NL0460	3.95	4.15	4.26	0.20	0.31
NL0480	4.31	4.71	4.83	0.40	0.52
NL0500	7.57	7.64	7.66	0.07	0.09
NL0520	3.95	4.35	4.55	0.40	0.60
NL0540	3.79	4.29	4.56	0.50	0.77
NL0560	3.58	4.28	4.47	0.70	0.89
NL0580	3.77	4.08	4.22	0.31	0.45
NL0600	4.33	4.99	5.10	0.66	0.77
NL0620	3.74	4.21	4.36	0.47	0.62
NL0640	4.97	5.53	5.64	0.56	0.67
NL0660	3.70	4.52	4.74	0.82	1.04
NL0670	3.05	4.31	4.57	1.26	1.52
NL0680	2.96	4.31	4.57	1.35	1.61
NM0120	3.77	3.81	3.89	0.04	0.12
NM0140	2.31	3.32	3.92	1.01	1.61
NM0160	4.29	5.26	5.87	0.97	1.58
NM0180	6.29	6.94	7.30	0.65	1.01
NM0200	8.14	8.48	8.63	0.34	0.49
NM0220	15.76	15.75	15.76	-0.01	0.00
NM0240	5.84	6.03	6.21	0.19	0.37
NM0260	8.16	8.38	8.59	0.22	0.43
NM0280	4.44	5.39	5.98	0.95	1.54
NM0300	3.44	3.45	3.49	0.01	0.05
NM0320	3.69	3.71	3.74	0.02	0.05
NM0340	9.59	9.59	9.60	0.00	0.01
NM0360	13.14	13.14	13.14	0.00	0.00
NM0380	5.27	5.30	5.33	0.03	0.06
NM0400	11.81	11.72	11.93	-0.09	0.12
NM0420	15.50	15.49	15.52	-0.01	0.02
NM0440	15.53	15.53	15.55	0.00	0.02
NM0460	16.43	16.43	16.43	0.00	0.00
NM0480	20.92	20.92	20.92	0.00	0.00
NM0500	28.47	28.47	28.47	0.00	0.00

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NM0520	35.81	35.81	35.81	0.00	0.00
NM0540	7.80	7.54	8.05	-0.26	0.25
NM0560	5.33	5.20	5.62	-0.13	0.29
NM0580	12.71	12.71	12.71	0.00	0.00
NM0600	18.32	18.32	18.32	0.00	0.00
NM0620	5.03	5.36	5.72	0.33	0.69
NM0640	9.49	9.76	9.84	0.27	0.35
NM0650	10.32	10.53	10.73	0.21	0.41
NM0660	11.09	11.11	11.12	0.02	0.03
NM0680	13.70	13.72	13.72	0.02	0.02
NM0700	11.10	11.11	11.12	0.01	0.02
NM0740	15.72	15.82	15.85	0.10	0.13
NM0750	17.29	17.31	17.33	0.02	0.04
NM0760	17.29	17.32	17.33	0.03	0.04
NM0780	18.07	18.10	18.11	0.03	0.04
NM0800	15.73	15.82	15.86	0.09	0.13
NM0820	18.18	18.18	18.18	0.00	0.00
NM0840	5.18	5.26	5.30	0.08	0.12
NM0860	1.21	2.55	3.79	1.34	2.58
NM0880	4.15	5.34	5.50	1.19	1.35
NM0900	6.08	6.38	6.45	0.30	0.37
NM0920	10.76	10.99	11.04	0.23	0.28
NM0930	10.25	10.25	10.27	0.00	0.02
NM0940	1.80	2.40	3.40	0.60	1.60
NM0950	30.76	30.76	30.76	0.00	0.00
NN0120	3.68	3.92	5.30	0.24	1.62
NN0130	3.74	3.98	5.37	0.24	1.63
NN0140	3.92	4.22	5.67	0.30	1.75
NN0160	5.08	5.23	6.16	0.15	1.08
NN0170	15.07	15.07	15.07	0.00	0.00
NN0180	10.35	10.36	10.38	0.01	0.03
NN0190	17.27	17.27	17.27	0.00	0.00
NN0200	13.88	13.88	13.88	0.00	0.00
NN0220	13.18	13.18	13.18	0.00	0.00
NN0240	14.72	14.72	14.72	0.00	0.00
NN0260	8.84	8.85	8.87	0.01	0.03
NN0280	8.54	8.60	8.64	0.06	0.10
NN0300	4.42	4.49	4.56	0.07	0.14

	NODE MAXIMUM STAGE (ft, NAVD88)				
Node	CURRENT 100-YEAR/24-HOUR	100-YEAR/24-HOUR with 1-FOOT SLR	100-YEAR/24-HOUR with 2-FOOT SLR	(1-FOOT SLR) - CURRENT	(2-FEET SLR) - CURRENT
NN0320	13.58	13.65	13.70	0.07	0.12
NN0340	10.60	10.62	10.63	0.02	0.03
NN0360	18.99	19.02	19.11	0.03	0.12
NN0380	18.91	18.92	18.94	0.01	0.03
NN0400	16.25	16.76	17.02	0.51	0.77
NN0405	16.23	16.74	17.00	0.51	0.77
NN0420	17.78	17.93	18.01	0.15	0.23
NN0440	17.40	17.48	17.54	0.08	0.14
NN0460	19.16	19.18	19.20	0.02	0.04
NN0470	9.77	9.86	9.94	0.09	0.17
SC_N0790	13.31	13.31	13.31	0.00	0.00
SC_N1030	10.13	10.13	10.13	0.00	0.00