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Stonington Flood Vulnerability Study

Town of Stonington, Maine

Submitted to:

Town of Stonington 32 Main Street Stonington, ME 04681

Submitted by:

GEI Consultants, Inc. 5 Milk Street Portland, ME 04101 207-797-8901

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Leila A. Pike, P.E.

Project Manager, Water Resources Engineer

Lissa C. Robinson, P.E., C.G.

Senior Civil Engineer/Hydrogeologist

Table of Contents

Ac	knowled	gements	iii
Exc	ecutive S	Summary	iv
Glo	ossary o	f Terms	X
1.	Intro	duction	1
2.	Meth	odology	2
	2.1	Overview of Methodology	
	2.2	Flood Scenarios	2 2 3
	2.3	Flood Exposure Analysis	3
	2.4	Asset Sensitivity and Adaptation Capacity	4
3.	Resu	ults	6
	3.1	Flood Exposure	7
	3.2	Asset Sensitivity and Adaptive Capacity	7
		3.2.1 Oceanville Road	8
		3.2.2 Sand Beach Road	8
		3.2.3 Burnt Cove Road	8
		3.2.4 Main Street	9
		3.2.5 Ocean Street	9
		3.2.6 Fifield Point Road	9
		3.2.7 Moose Island Causeway	9
		3.2.8 Colwell's Ramp	10
		3.2.9 Rhode Island Ave Outfall Pipe	10
		3.2.10 Pump Stations	11
	3.3	Near-Term, Intermediate-Term, and Long-Term Concern Rankings	11
4.	Next	Steps	13
5.	Refe	rences	14
Tal	bles		
1.		l Rise Projections for Stonington, Maine (based on NOAA, 2017)	2
		Sea Level Rise, Storm, and Tide Cycle Flooding Scenarios	3
		Inerability Results for Oceanville Road – Water Elevations	6
		m, Intermediate-Term, and Long-Term Recommendations	12
т.	1 10a1 - 1 Cl	in, intermediate reini, and hong reini recommendations	14

Stonington Flood Vulnerability Study Town of Stonington, Maine December 2019

Figures

- 1. Location Map
- 2. Main Street Flood Extents for 2030 with a 10-Yr Storm and Int-Rate of SLR
- 3. Main Street Flood Extents for 2050 with a 10-Yr Storm and Int-Rate of SLR
- 4. Main Street Flood Extents for 2100 with a 10-Yr Storm and Int-Rate of SLR
- 5. Moose Island Flood Extents for 2030, 2050, and 2100 with a 10-Yr Storm and Int-Rate of SLR
- 6. Burnt Cove Flood Extents for 2030, 2050, and 2100 with a 10-Yr Storm and Int-Rate of SLR
- 7. Oceanville Rd Flood Extents for 2030, 2050, and 2100 with a 10-Yr Storm and Int-Rate of SLR
- 8. Historical Monthly Mean Sea Levels at NOAA's Bar Harbor Buoy with Projected Rates of SLR

Appendices

- A. Asset Questionnaire
- B. Flood Exposure Vulnerability Tables Roads
- C. Flood Exposure Vulnerability Tables Pump Stations
- D. Flood Exposure Vulnerability Tables Requested Places
- E. Flood Exposure Vulnerability Tables Public Works Points
- F. Flood Exposure Vulnerability Tables Manholes
- G. Ocean Outfall

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Kathleen Billings, Town Manager

Henry Teverow, Economic Development Director

Gay Atkinson, Stonington Water Company Operator

Benjamin Pitts, Stonington Water Company Superintendent

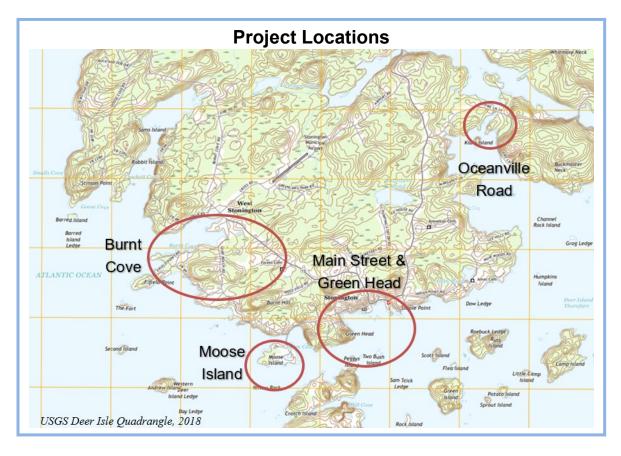
Raelene Pert, Harbormaster

Bill McDowell, Stonington Resident



Executive Summary

This report summarizes the work and findings of Phase I of a two-phase project to study coastal flooding in the Town of Stonington and identify ways to adapt infrastructure at risk, with Phase I being the vulnerability study and Phase II addressing adaptation options. The second phase of the project is expected to be completed by December 31, 2020. This vulnerability study evaluates the risk of flooding in four locations in the Town of Stonington: Main Street and Green Head, Burnt Cove, Moose Island, and Oceanville Road.



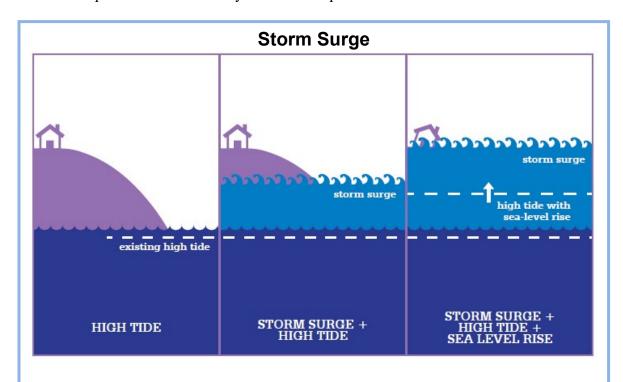
At these four locations in Phase I, we examined flood risk at roads, pump stations, manholes, culverts, the Colwell Ramp, the Sanitary Lab, the Town Garage, and the Rhode Island Ave Outfall Pipe. We called each of these features "assets," and we suggested a timeframe for when the Town of Stonington should undertake adaption options (elevate, floodproof, relocate, etc.) each asset to avoid the potential for damaging effects of coastal flooding. We used time horizons for this study of "near-term" adaptation (by 2030), "intermediate-term" adaptation (by 2050), or "long-term" adaptation (by 2100).

We based the flood risk on storm surge water levels, Sea Level Rise, the likelihood that an asset would be damaged by flooding, how easy it would be to adapt an asset from potential

future flooding, and the relative importance of the assets. We worked with the Advisory Committee to develop community-based values for these risks. Note that this study takes into account flooding originating from the ocean and therefore does not consider flooding due to precipitation, rainfall runoff, or other land-based stream or ground water sources.

The flood risk study used combinations of Sea Level Rise and storm surge to determine if an asset would experience flooding. As explained in the diagram below, storm surge is a short-term rise in the water level that occurs during storms. We examined storms of varying intensities, from "10-year" storms to "500-year" storms. For context, there is a 10% chance of experiencing a storm at least as large as a "10-year" storm in any given year, and there is only a 0.2% chance of experiencing a storm at least as large as a "500-year" storm in any given year. For this study, the storm surge resulting from a 10-year storm was selected to be used in combination with Sea Level Rise to identify flood risk at specific time horizons: 2030, 2050, and 2100.

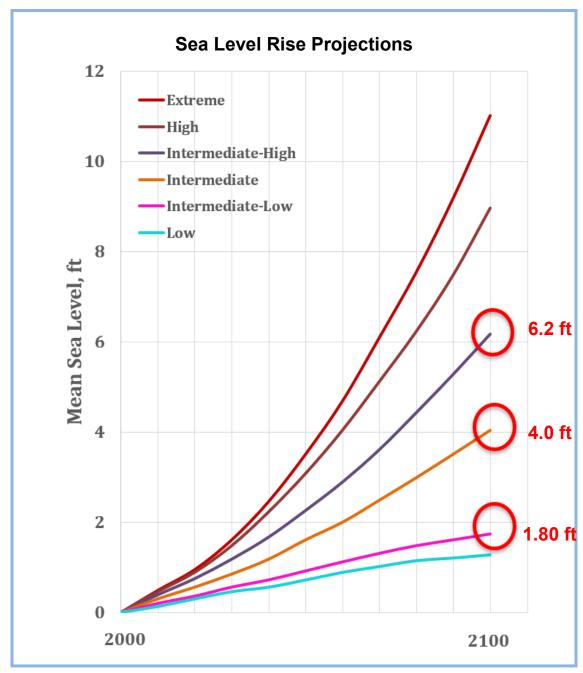
In addition to storm surge and Sea Level Rise, we also evaluated flood levels due to wave action resulting in an even higher overall elevation. FEMA uses wave action when determining their Base Flood Elevations (BFEs) used in Flood Insurance Rate Maps (FIRMs). In our analysis, we refer to these flood elevations as the "1% Flood Elevation" because the predictions for future years do not represent official FEMA BFEs.



Storm surge is the "build-up" of water on top of the typical water elevation that occurs during storms. The diagram above offers a visual of a typical high tide, high tide with storm surge, and high tide with storm surge and sea level rise. (Wallis et al, 2015)

Using guidance from the Advisory Committee, three rates of Sea Level Rise were used in this study, based on the 2017 NOAA projections:

- 1. **Intermediate-Low**, which projects a Sea Level Rise of 1.8 ft by the year 2100
- 2. **Intermediate**, which projects a Sea Level Rise of 4.0 ft by the year 2100
- 3. **Intermediate-High**, which projects a Sea Level Rise of 6.2 ft by the year 2100



Data source: NOAA, 2017

Using the storm surge (10-yr storm) and Sea Level Rise (Intermediate-rate) selected for this study, we categorized assets into groups that warrant adaptation under the 2030, 2050, or 2100 time horizons. We then increased the priority of some assets which the Advisory Committee brought up as critical for the Town of Stonington and assets that are more likely to be damaged from flood exposure than others. We compiled the results into a list which categorizes the assets we suggest the Town focus on for adaptation by 2030, by 2050, and by 2100. We have included a summary of roads, pump stations, Colwell's Ramp, and the Rhode Island Ave. Outfall Pipe in the list below. The complete list can be found in Section 3.3 of the report.

Recommended Adaptation Timeframe						
Near-Term (2030)	Intermediate- Term (2050)	Long-Term (2100)				
	Roads					
Colwell's Ln	Burnt Cove Rd	Bayview St				
Moose Island Cswy	Main St	Rhode Island Ave				
Fifield Point Rd	Ocean St					
Sand Beach Rd						
Whitman Rd						
Oceanville Rd						
	Pump Stations					
PS 8A 79	Atlantic Ave PS	PS 8A 75-1&2				
PS 8B 75	Ocean Street PS	PS 7B 64-2				
PS 4B 47	PS 8A 21	PS 7A 20-1&2				
PS 7A 16	PS 8B 73					
PS 7B 67-1						
	Requested Places					
Colwell Ramp						
Rhode Island Ave.						
Outfall Pipe						

Maps of the flood extents for 2030, 2050, and 2100 conditions in the study areas are displayed below. Due to a higher number of assets, three separate maps were created for the Main Street and Green Head area to show the assets at risk in each scenario. For the other study areas, one map was created which shows all three flood scenario extents.

We recommend the Town of Stonington use the results from this study, along with the guidance from Phase II of this project, to help guide planning decisions to lessen the impact of coastal flooding on the assets of the Town of Stonington and its citizens.





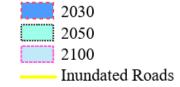


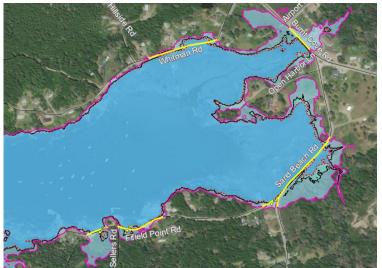


Moose Island

Assets at Risk:

 Moose Island Causeway (2030)

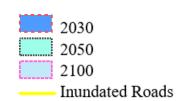




Burnt Cove

Assets at Risk:

- Fifield Point Rd (2030)
- Sand Beach Rd (2030)
- Whitman Rd (2030)
- Burnt Cove Rd (2050)

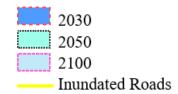


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Oceanville Road

Assets at Risk:

• Oceanville Rd (2030)



Glossary of Terms

1% annual chance storm: Also known as the "100-year storm," this is a storm that has a 1% chance of occurring in any given year. It is also the storm condition that FEMA uses to determine their flood insurance maps.

1% Flood Elevation: Also referred to as the Base Flood Elevation (BFE), this is the water elevation that is expected to be seen during a 1% annual chance storm, or "100-year storm." This elevation is accounts for wave action (wave crests, wave setup, and wave runup) on top of the Still Water Elevation (SWEL).

Assets: Town-owned infrastructure studied in this project, including: roads, pump stations, manholes, culverts, outfalls, the Colwell Ramp, the Sanitary Lab, and the Town Garage.

FEMA: The Federal Emergency Management Agency, responsible for distributing Flood Insurance Rate Maps (FIRMs) and determining present-day 1% Flood Elevations.

FIRMs: Flood Insurance Rate Maps, or maps showing the flood extents and 1% Flood Elevations for present-day conditions, distributed by FEMA.

FIS: Flood Insurance Study, issued by FEMA to accompany the FIRMs and provide details regarding the basis of the 1% Flood Elevations and extents.

HAT: Highest Annual Tide, the highest elevation tidal water elevation in any given year as reported by the Maine Department of Environmental Protection.

Intermediate-Term: By the year 2050.

JONSWAP: The Joint North Sea Wave Project spectra used to define the distribution of energy with frequency within the ocean. The JONSWAP spectra is used in the STWAVE modeling program to develop nearshore wave conditions given offshore storm parameters.

Long-Term: By the year 2100.

MHHW: Mean Higher High Water, the average of the higher high water height of each tidal day observed over the National Tidal Datum Epoch.

MHW: Mean High Water, the average of all the high water heights observed over the National Tidal Datum Epoch.

MLLW: Mean Lower Low Water, the average of the lower low water height of each tidal day observed over the National Tidal Datum Epoch.

Stonington Flood Vulnerability Study Town of Stonington, Maine December 2019

MLW: Mean Low Water, the average of all the low water heights observed over the National Tidal Datum Epoch.

MSL: Mean Sea Level, the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch.

NAVD88: The North American Vertical Datum of 1988, the vertical datum used for all elevations in this report, unless stated otherwise.

Near-Term: By the year 2030.

NOAA: The National Atmospheric and Oceanic Administration, responsible for data buoys providing tidal datums and observed water levels.

SLR: Sea Level Rise

STWAVE: Steady State Spectral Wave, a modeling program that takes offshore storm parameters (SWEL, wave height, wave period, and wind speed), and simulations the propagation to nearshore providing nearshore wave conditions that have been attenuated due to bottom shoaling and wave refraction.

SWEL: Still Water Elevation, or "storm surge." The SWEL is the rise in the static water elevation during storms due to a decrease in atmospheric pressure and an increase in offshore winds. The SWEL does not include the additional water elevation often seen during storms due to wave setup, wave runup, or wave crests.

1. Introduction

The goal of this study is to assess the vulnerability of public infrastructure in the Town of Stonington to flooding from Sea Level Rise (SLR) and coastal storms. This study evaluates the vulnerability of the following "assets" identified by the Advisory Committee: public roads, pump stations, public works assets (such as manholes and culverts), and the Colwell Ramp, Town Garage, Sanitary Lab, and the Rhode Island Ave. Outfall Pipe within four specific areas of the island: Main Street and Green Head, Moose Island, Burnt Cove, and Oceanville, as shown in Fig. 1.

The study uses several flooding scenarios to evaluate risk, including three different projections of SLR, four storm surge scenarios without the effects of waves, one storm condition with the effects of waves, and six stages within the tide cycle. Flood vulnerability is assessed for existing sea levels (i.e., today) and for three future time horizons: near-term (2030), intermediate-term (2050), and long-term (2100). Sea level is the height of water measured at local tide stations relative to a specific point. The goal of this study is to identify assets that are vulnerable within each time-frame to guide local officials and decision makers on which assets to focus on during which time period when adapting to flood risk.

This report documents Phase I of a two-phase project for the Town of Stonington. Following the completion of Phase I, the vulnerability study, Phase II will commence. Phase II will address adaptation options for the vulnerable assets indicated from the results of this study. Phase II is expected to be completed by December 31, 2020.

2. Methodology

2.1 Overview of Methodology

The vulnerability of an asset was evaluated in terms of its exposure to flooding, its sensitivity to damage or inoperability from flooding, and its ability to adapt to a changing climate. A combination of SLR and storm surge data was used to determine an asset's exposure to flooding, described in Section 2.2. Information about each asset's sensitivity to damage and its ability to adapt to a changing climate was gathered through industry knowledge and a questionnaire distributed to asset managers and is described further in Section 2.4.

2.2 Flood Scenarios

Three rates of SLR (Intermediate-Low, Intermediate, and Intermediate-High) from the National Oceanic and Atmospheric Administration's (NOAA's) prediction curves (Sweet et al., 2017), and three future time horizons (2030, 2050, and 2100) were used in this study to determine flood exposure. Still Water Elevations (SWEL) for the present day, 10%, 2%, 1%, and 0.2% annual chance storm conditions and flood elevations for the 1% annual chance storm without SLR (present day conditions) are from the Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) for Hancock County, ME (FEMA, 2016). Note that SWEL elevations are static water elevations and do not include additional water elevation due to wave crests, wave setup, and/or wave runup. However, the "1% Flood Elevation" flooding scenario does include wave action on top of the SWEL.

A wave transformation model was used to determine 1% annual chance flood elevations at future time horizons, discussed in more detail in Section 2.3. In addition to storm scenarios, six points in the tide cycle were included to examine the potential for "sunny day" flooding – flooding that would happen without a storm event. These included Mean Lower Low Water (MLLW), Mean Low Water (MLW), Mean Sea Level (MSL), Mean High Water (MHW), Mean Higher High Water (MHW), and the Highest Annual Tide (HAT).

Table 1 shows the range of SLR projections for each time horizon and Table 2 shows the matrix of SLR, storm, and tide cycle scenarios.

Table 1: Sea Level Rise Projections for Stonington, Maine (based on NOAA, 2017)

Time Period	Projected Range (Low to High)
By 2030	0.58 to 1.2 ft
By 2050	0.92 to 2.3 ft
By 2100	1.8 to 6.2 ft

Table 2: Matrix of Sea Level Rise, Storm, and Tide Cycle Flooding Scenarios

Water Elevations			SLR Projection									
		Existing Water Elevation	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High	
			0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2	
			ft	ft	ft	ft	ft	ft	ft	ft	ft	
1% Floo	od											
Elevation	on											
	0.20%											
SWEL	1%											
SWEL	2%			Nea	r		Medi	ım		Lon	σ	
	10%	Today		Terr	n .						_	
HAT				1 011	11		Terr	n 📗		Teri	n	
MHHW												
MHW												
NAVD88												
MSL												
MLW												
MLLW												

Notes:

- The 1% Flood Elevation, or "Base Flood Elevation," represents the critical wave height on top of the SWEL.
- 2. SWEL is the Still Water Elevation, or "Storm Surge" water level without the consideration of waves.
- 3. 0.2% annual chance = "500-year storm," 1% annual chance = "100-year storm," 2% annual chance = "50-year storm," 10% annual chance = "10-year storm."
- 4. Present Day 1% Flood Elevation and SWELs (Still Water Elevations, or "Storm Surge") values are from FIS for Hancock County (FEMA, 2016).
- 5. Tidal elevations, including Mean Higher High Water (MHHW), Mean High Water (MHW), North American Vertical Datum of 1988 (NAVD88), Mean Sea Level (MSL), Mean Low Water (MLW), and Mean Lower Low Water) are from NOAA Buoy 8414249 (NOAA, 2010).
- 6. Highest Annual Tide (HAT) data is from the Maine DEP (2018).
- 7. 1% annual chance Flood Elevations for years 2030, 2050, and 2100 were determined from an STWAVE wave transformation model created for this project.

2.3 Flood Exposure Analysis

A flood exposure analysis was undertaken to evaluate whether an asset would experience flooding for the selected flood and time horizon scenarios. The worst-case-scenario flood condition expected in this study is the 1% annual chance flood (storm surge and waves) with an intermediate-high level of SLR for the year 2100. Using flood maps created from this analysis, the Advisory Committee was able to finalize a focus list of assets for the study from those identified to be at risk form the worst-case-scenario flood maps.

The worst-case-scenario flood elevations were determined using STWAVE, a wave transformation model, to propagate the 1% annual chance offshore storm conditions (wind speed, wave height, and wave period) to nearshore conditions considering an additional 6.2 ft of SLR on top of the 1% annual chance SWEL. The STWAVE model was updated from

FEMA's (2016) southern wave propagated STWAVE model used to help create the 1% annual chance FIRMs for the Town of Stonington. The model uses a JONSWAP spectrum to propagate the storm conditions from the offshore boundary towards the shore. The model uses a 30 m x 30 m "parent" grid that feeds into a "nested" 5 m x 5 m grid near the study area. Bathymetry and topography data were updated from FEMA's model to include topography up to elevation 30 ft using 2 ft contour data from the State of Maine Office of GIS (2018). The 1% annual chance storm parameters are from FEMA's (2016) flood study with the addition of 6.2 ft to the SWEL to account for the estimated SLR in the year 2100 for the Intermediate-High projection. The flood elevation is based on the controlling wave height (Hc) calculated by multiplying the significant wave height results by 1.6 (FEMA, 2007). The resulting flood elevation was mapped in GIS to identify the worst-case scenario flooding extents, from which a list of assets expected to experience flood inundation was created and finalized by the Advisory Committee.

The water elevations for other scenarios, except the existing condition taken from the FEMA FIRMs (FEMA, 2016), were calculated by subtracting the difference in water elevations considering SLR for each flooding scenario from that of the worst-case-scenario STWAVE result. The worst-case-scenario condition was chosen for modeling to capture wave propagation with lessened attenuation effects due to fewer ledge outcroppings. While performing a wave transformation model for each flood scenario would provide a more indepth analysis, this simplified method aligns with the scope of the project and provides conservative flood elevation results. It is important to note that the methodology used to calculate the worst-case-scenario flood elevations uses 1% annual chance storm parameters for today's conditions and does not account for any future possible increases in SWEL beyond the Intermediate-High SLR projection or other storm parameters (wind speed, wave height, wave period) that would likely be seen by 2100. Determining future projected storm parameters is beyond the scope of this project.

Terrain and bathymetric elevation data for this study was obtained was obtained from the State of Maine Office of GIS (2018) and the FEMA FIS (2016) modeling data. Elevation data was also obtained from plans of the public works facilities provided by the Town of Stonington (Wright-Pierce, 1990). All elevations are referenced in NAVD88 (ft) unless otherwise indicated.

2.4 Asset Sensitivity and Adaptation Capacity

In addition to flood exposure, an asset's sensitivity to flooding and adaptive capacity was considered in its overall flood vulnerability. An asset's sensitivity evaluates how susceptible the asset is to damage when exposed to flooding. An asset's adaptive capacity is its ability to easily adapt, in terms of price and effort, to flood exposure. A highly sensitive asset with low adaptive capacity is considered vulnerable.

Stonington Flood Vulnerability Study Town of Stonington, Maine December 2019

On top of this, discussions with the Advisory Committee led to a few assets being deemed "essential" to the overall health and safety of Town of Stonington residents. For example, some roads, when inundated, would cut off access for residents to major evacuation routes or other Town Services while other inundated roads would be easily bypassed via another route. Assets requiring special consideration are highlighted in the results section.

For pump stations, the Colwell Ramp, the Town Garage, and the Sanitary Lab, a questionnaire was distributed to asset managers to understand the usage and needs of each asset and develop information about the asset's adaptive capacity. Assets for which questionnaires were not filled out were addressed at in-person project meetings and documented.

The questionnaire template is provided in Appendix A.

3. Results

Once water elevations were calculated for each coastal flooding scenario, vulnerability tables showing water elevations were created for each asset. The vulnerability table for Oceanville Road is provided below as an example. Other vulnerability tables are attached to this memo in Appendices B through F. Cells shaded in red are expected to be inundated for that flood scenario based on the analysis and the terrain data compiled for this study. For today's conditions (the existing water levels), the results suggest that Oceanville Road is expected to experience flooding during a 20-year storm surge level (2% annual chance SWEL), or any storm event more severe. By the year 2030, flooding is expected to occur during a 10-year storm surge event for any of the three rates of SLR chosen for this study. By the year 2050, flooding is expected during the Highest Annual Tide (HAT) for an Intermediate-High rate of SLR. By 2100, flooding is expected on Oceanville Road during Mean High Water (MHW) for both the Intermediate and Intermediate-High rates of SLR.

Table 3: Flood Vulnerability Results for Oceanville Road – Water Elevations

Elevation Reference (NAVD88, ft)			SLR Projection								
		Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
`	(10/17/2005, 11)		0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood E	levation	10.0	10.4	10.7	11.0	10.8	11.4	12.1	11.6	13.9	16.0
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT	HAT		7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW	MHHW		5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low Point Elevation on Oceanville Road of 8.5 ft was used to identify flood inundation conditions											

It is important to note that in some locations in the vulnerability tables in Appendices B through F the results of the flood exposure study show that the 1% flood elevation for existing conditions is higher than the 1% flood elevation in 2030 due to the difference in where the information was derived. Since the 1% flood elevation for existing conditions is from FEMA's FIRMs (FEMA, 2016), the flood elevations are based on transects and the resolution of the results is coarser than the results for the future scenarios derived from this study. In some instances, 1% flood elevations for existing conditions can be based on

locations with a greater flood exposure and result in higher flood elevations than are likely to occur. However, for planning purposes, it is beneficial to report on FEMA's values for the present day 1% flood elevations for assets in this study and so the values were kept in the flood exposure tables.

3.1 Flood Exposure

A threshold criterion of flooding during the 10% SWEL water elevation with an Intermediate rate of SLR was used to categorize each asset into a near-term (2030), intermediate-term (2050), or long-term (2100) concern in terms of flood exposure. Additionally, assets were recategorized if flooding is expected to be less than or equal to 0.1 ft (1.2 inches) during the initial categorization. Using Oceanville Road as an example, the road would be initially categorized into a near-term concern based on inundation expected for the 10% SWEL condition and the Intermediate rate of SLR. However, if upon further inspection the flood elevation for this condition, 9.3 ft, is only determined to overtop the road by 0.1 ft or less, the road would be recategorized into an intermediate-term concern.

Maps showing highlighted assets within each flood exposure concern time period (expected to experience flooding by 2030, 2050, and 2100) are attached to this document in Figs. 2 through 7. The assets were then examined for their sensitivity to flooding and adaptive capacity and further categorized into recommended adaptation time horizons, described below in sections 3.2 and 3.3.

3.2 Asset Sensitivity and Adaptive Capacity

For this study, roads, manholes, and culvert assets were considered to have low sensitivity to flooding unless specified otherwise by the Advisory Committee. In most instances, these assets can be exposed to infrequent and short duration coastal flooding without experiencing significant damage. Damage, such as corrosion of culverts, would be more likely as flooding becomes more frequent. For a similar flooding scenario (frequency, depth of inundation), the circuit breakers and control panels on pump stations are considered to have a higher sensitivity to flood exposure – they are more likely than the other assets studied to be damaged if inundated. It is recommended to prioritize flood-proofing of these features of pump stations before addressing roads that would experience similar flood exposure.

There are several assets that we recommend increasing in priority due to their flood sensitivity, adaptive capacity, or overall importance to the Town of Stonington, as brought up during Advisory Committee meetings. These assets are discussed in more detail in the following sections. In addition, there were two requested assets—the Town Garage and the Sanitary Lab—that are not expected to experience flood exposure by 2100 under the studied storm surge and SLR scenarios presented in this report. It is possible there are other scenarios in which these assets could potentially be impacted.

Additionally, manholes and the public works points, provided in a GIS database by the Town of Stonington and representing features such as pipes and culverts, were not assessed for their asset sensitivity and adaptive capacity in this study due to lack of asset information, and instead are categorized into near-, intermediate-, and long-term concerns based on flood exposure only (see Section 3.3). The terrain data used in this study was not detailed enough to identify culvert inundation and thus it was assumed that when a road segment would be inundated, the culvert within the flood extents would also be inundated. For manholes and public works points, the elevation data relies on the accuracy of the geolocated point provided to us in the GIS databases from the Town and the topographic elevation dataset that we used. Due to the steep nature of Stonington's terrain in some areas, the elevation data may be inaccurate if the horizontal location is not correct or if the terrain data is not refined enough to capture the elevation at the point. Additional topographic surveying was beyond the scope of this project, but we recommend conducting a topographic survey of assets for which a more refined vulnerability table is desired and addressing culverts and manholes when planning adaptation measures for corresponding road segments.

3.2.1 Oceanville Road

Oceanville Road is a low-lying road with water exposure on both sides which, when inundated, isolates Buckmaster Neck and the island of Oceanville from the rest of Stonington. The road is a near-term concern for flood exposure. According to the Advisory Committee, there have been times in recent history when the road has become impassable due to flood inundation. This cuts off the residents on the eastern segment of the road from an evacuation route and emergency services, among potential needs. The option of converting the existing road into a causeway or bridge at vulnerable locations was discussed during Advisory Committee meetings. Of the roads in Stonington, inundation of this road creates a high-risk situation, and adaptation options have the potential to be costly (low adaptive capacity) and have a large impact on the surrounding environment. The results of this study indicate that focus should be made on adapting this road in the near-term.

3.2.2 Sand Beach Road

Sand Beach Road near Burnt Cove is a near-term concern in terms of flood exposure due to inundation expected by 2030 for an Intermediate rate of SLR and a 10-year SWEL. In addition, the inundation of this segment of the road would block a critical transportation route for Stonington residents. Addressing flood exposure should be prioritized for this road segment.

3.2.3 Burnt Cove Road

Burnt Cove Road, between Sand Beach Road and Whitman Road, is in general a long-term concern in terms of flood exposure. However, the inundation of this segment of the road would block a critical transportation link for Stonington residents. The vulnerability table

shows that this segment of Burnt Cove Road is expected to experience flooding by 2050 for several flooding scenarios, including the SWEL of a 50-year storm scenario and an intermediate-high rate of SLR. Due to the importance of this road segment for travel in Stonington, it is recommended to prioritize adapting this road segment in the intermediate-term.

3.2.4 Main Street

Main Street, between the Fish Pier Road and Rhode Island Ave, is in general a long-term concern in terms of flood exposure, however a closer look at the vulnerability tables shows this segment of the street is expected to be exposed to flooding during wave action from a 100-year storm condition by 2030 and by the SWEL of 100-year storms by 2050. Main Street has a high density of residential and commercial properties and it is recommended to prioritize adapting this road segment in the intermediate-term.

3.2.5 Ocean Street

Ocean Street is a near-term concern in terms of flood exposure. The flood exposure is based on a low-point elevation of the road near the address of 8 Ocean Street where there is a riprap revetment along the harbor-side of the road. When looking at the near-term map for the Main Street and Green Head area (Fig. 2), the road appears to be partially inundated on the harbor-side of the road for a 150 ft section but is likely still passable. The lowest elevation on the inland side of the road is approximately 10 ft, which means that impassable conditions would likely not occur for a 10-year storm and Intermediate SLR conditions until 2050. Since this road is not a main thoroughfare or through-route, we suggest focusing on adaptation in the intermediate-term.

3.2.6 Fifield Point Road

Fifield Point Road in the Burnt Cove area of Stonington is a near-term concern in terms of flood exposure. According to the vulnerability tables, low lying portions of this street can expect to experience flooding today during the HAT. By 2050, flooding is likely during MHW with the Intermediate-High rate of SLR. Fifield Point Road is the only access to Fifield Lobster Co. and several other businesses located along the road. A focus should be made on adapting this road in the near-term.

3.2.7 Moose Island Causeway

The Moose Island Causeway is the only access to Moose Island and Billings Diesel and Marine. The causeway is a near-term concern in terms of flood exposure, with flooding expected today during 10-year storm SWEL conditions. However, members of the Advisory Committee noted that the expected flood exposure seen in the flood vulnerability tables does not align with personal knowledge and storm events in recent history. We recommend a

survey of the road elevation to update the flood vulnerability information for this asset, however we would keep the road as a near-term concern.

3.2.8 Colwell's Ramp

Colwell's Ramp, the public boat ramp located on Colwell's Lane, is a near-term concern in terms of flood exposure. The top of the ramp is expected to experience flooding during a 50-year storm SWEL for today's water elevations and for a 10-year event SWEL by 2030. In addition to the ramp itself, the landing where Colwell's Ramp is located would have a similar flood exposure as it is at a similar elevation. Since this is a public water access point, a focus should be made on adapting the ramp and landing in the near-term.

3.2.9 Rhode Island Ave Outfall Pipe

The wastewater outfall pipe off Rhode Island Avenue was designed in 1990 by Wright-Pierce. At the time, the invert elevation of the upstream end of the outfall pipe was indicated in the Wright-Pierce plan set to have an elevation at 6.2 ft above MSL (Appendix G) based on a 1970 bench mark indicated as a "standard U.C.S. & G.S disk" located in Stonington, Maine at the end of Atlantic Avenue. It is likely that this bench mark and its vertical datum relate to the Superseded Epoch of 1960 to 1978 based on the bench mark date of 1970 rather than the Present Epoch that spans from 1983 to 2001. A search of the bench mark on the U.S. Coast & Geodetic Survey (now called the National Geodetic Survey) at the location indicated on the Wright-Pierce map set suggests the bench mark was not part of the National Geodetic Survey program or that it no longer exists. With no data sheets readily available for this bench mark, GEI was unable convert the elevation of the bench mark from the superseded epoch to the present epoch.

To evaluate potential flood exposure, GEI estimated the elevation of the outfall pipe invert, indicated by Wright Pierce at elevation 6.2 ft MSL, to NAVD88 by converting the bench mark from MSL to NAVD88 and by assuming no difference in the two epochs. This estimated conversion resulted in an outfall pipe invert elevation of 5.9 ft. It is likely that there is a difference in elevation between the two epochs and we recommend that the outfall invert be surveyed by a licensed surveyor and a more current elevation and datum be established to more accurately evaluate the flood exposure.

The flood exposure analysis used this 2019 elevation, based on GEI's conversion of the bench mark from Mean Sea Level (MSL) to NAVD88, indicates potential for prolonged water elevations above this outfall invert, which could lead to wastewater back-up in the wastewater treatment system.

By 2030, it is expected to be inundated during HAT for the Intermediate Rate of SLR, and by 2050 it is expected to experience flooding by MHHW for the Intermediate rate of SLR. This means that during prolonged periods of storm surge where water elevations are above

MHHW and HAT levels, the system could likely experience saltwater intrusion and/or a decrease in performance. In addition to performing an updated survey of the outfall pipe invert, it is recommended to have a wastewater systems design engineer review the current use and storage capacity of the system and potential implications future sea water elevations might have on performance. We recommend a closer analysis of this asset take place in the near-term.

3.2.10 Pump Stations

From the flood exposure study, two pump stations were identified as near-term concerns, three as intermediate-term concerns, and four as long-term concerns. The circuit breakers and control panels of pump stations are particularly vulnerable to damage from flood inundation. In addition, increased infiltration and inflow from the surrounding area from higher water elevations could stress the system or cause backup along the inflowing pipes, among other potential issues. Advisory Committee members noted that some of the pump stations listed as intermediate-term concerns have seemed at risk during coastal storms in recent memory. We recommend elevating the three intermediate-term concern pump stations to near-term concerns and the four long-term concern pump stations to intermediate-term concerns due to the potential damage to the electrical equipment that could result from flood inundation. Along these lines, we recommended elevating the "future concern" pump stations – those that do not meet the threshold of concern due to flood exposure by 2100 – to long-term concerns.

3.3 Near-Term, Intermediate-Term, and Long-Term Concern Rankings

Assets were categorized into near-term, intermediate-term, and long-term concerns based on their flood exposure, flood sensitivity (where measured), and adaptive capacity (where measured). In addition, conversations with the Advisory Committee led to further categorization, as explained in Sections 3.1 and 3.2 above. The final recommended timelines for when to implement adaptation measures for assets vulnerable to coastal flooding is presented below in Table 4. Assets not listed in the tables below are not expected to experience flooding by the year 2100 under the given SLR and storm surge scenarios.

Table 4. Near-Term, Intermediate-Term, and Long-Term Recommendations

Near-Term (2030)	Intermediate-Term (2050)	Long-Term (2100)
ROADS	<u>ROADS</u>	<u>ROADS</u>
Colwell's Ln	Ocean St	Bayview St
Moose Island Cswy	Burnt Cove Rd	Rhode Island Ave
Fifield Point Rd	Main St	PUMP STATIONS
Sand Beach Rd	PUMP STATIONS	PS 8A 75-1&2
Whitman Rd	Atlantic Ave PS	PS 7B 64-2
Oceanville Rd	Ocean Street PS	PS 7A 20-1&2
PUMP STATIONS	PS 8A 21	PUBLIC WORKS POINTS
PS 8A 79	PS 8B 73	ID21
PS 8B 75	PUBLIC WORKS POINTS	ID68
PS 4B 47	ID60	ID61
PS 7A 16	ID62	ID38
PS 7B 67-1	MANHOLES	ID54
REQUESTED PLACES	SMH 007	ID58
Colwell Ramp	SMH 073	MANHOLES
Rhode Island Ave. Outfall Pipe	SMH 074	SMH 001
PUBLIC WORKS POINTS	SMH 104	SMH 003
ID63		SMH 040
ID67		SMH 041
ID70		SMH 105
ID72		SMH 124
ID73		SMH 125
ID74		SMH 126
ID75		SMH A
ID64		SMH B
ID65		
ID66		
ID78		
ID79		
<u>MANHOLES</u>		
SMH 002		
SMH 006		
SMH 103		

4. Next Steps

We recommend the Town of Stonington use the results from this study, along with the forthcoming adaptation analysis from Phase II of this project, to help guide planning decisions to lessen the impact of coastal flooding on the assets of the Town of Stonington and its citizens.

Elevations for this study were derived from publicly available sources, but a more refined flood exposure analysis for any asset can be obtained by having the asset elevations surveyed by a professional surveyor.

We recommend that the Town of Stonington develop a monitoring program to monitor flooding extents experienced during coastal storms and develop a database to compare the advance of coastal storm flood extents with time. This can be done by compiling available tide gage data and/or by installing a new fixed gage. As an example, the City of Portland, Maine, in partnership with the USACE, FEMA, NOAA, and others recently installed a gage with information about historic events such as the 1978 storm along with predictions of high and low SLR. In addition, we recommend monitoring SLR with time to track the rate of SLR experienced compared to the predicted rates used in this study.

It is important to note that in any given year actual sea levels from waves, tides, surge or other condition

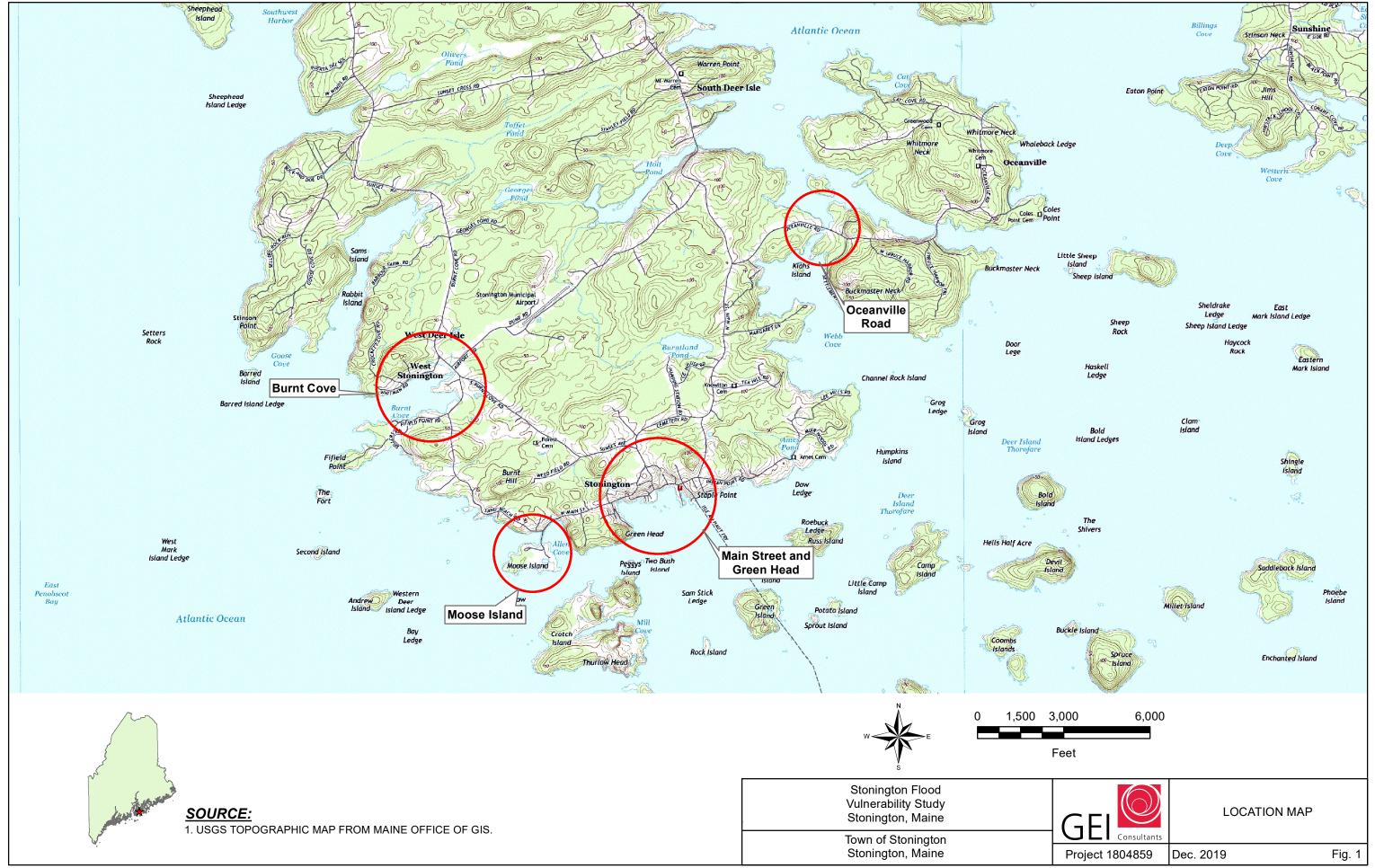


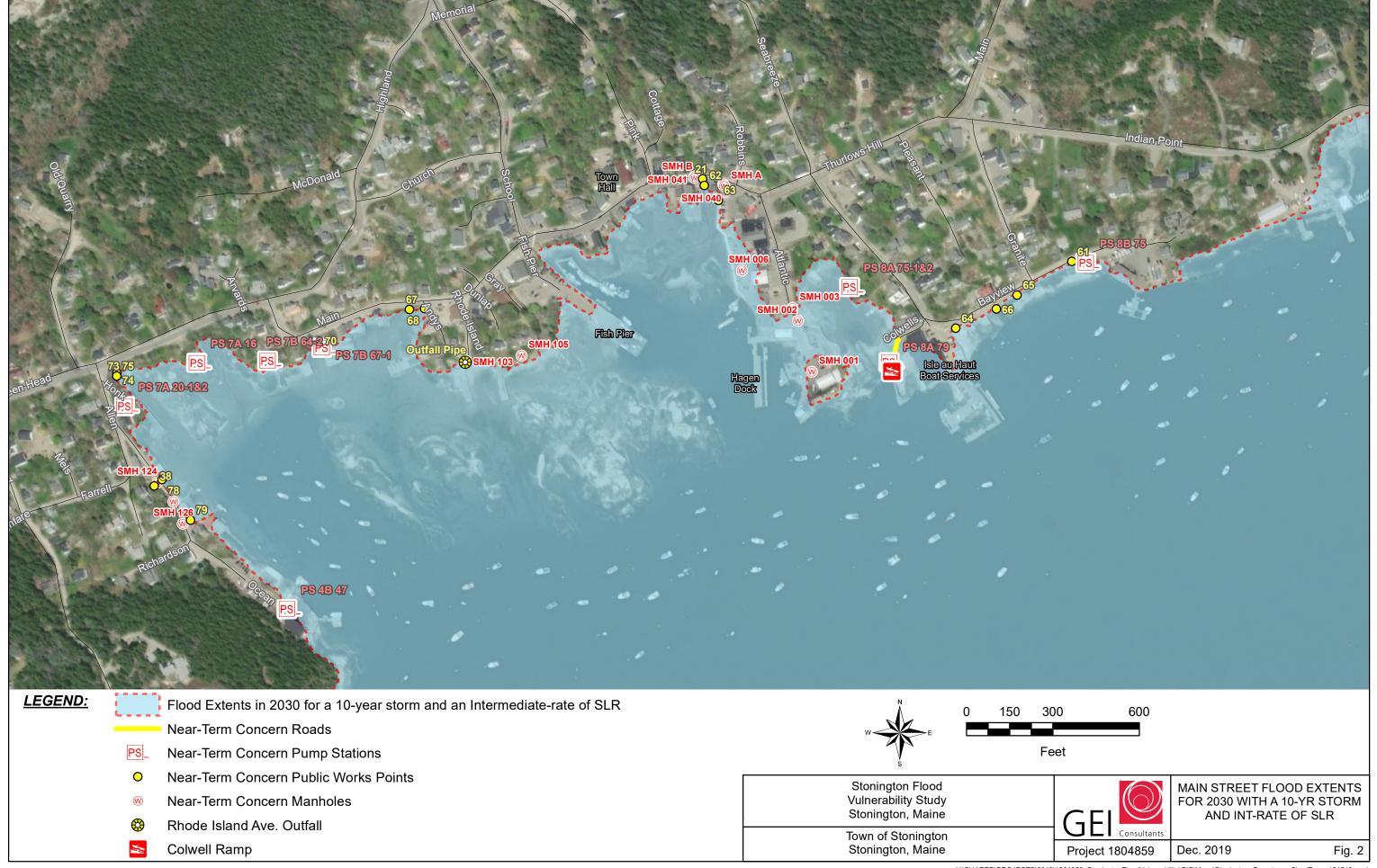
City of Portland, Maine Gage

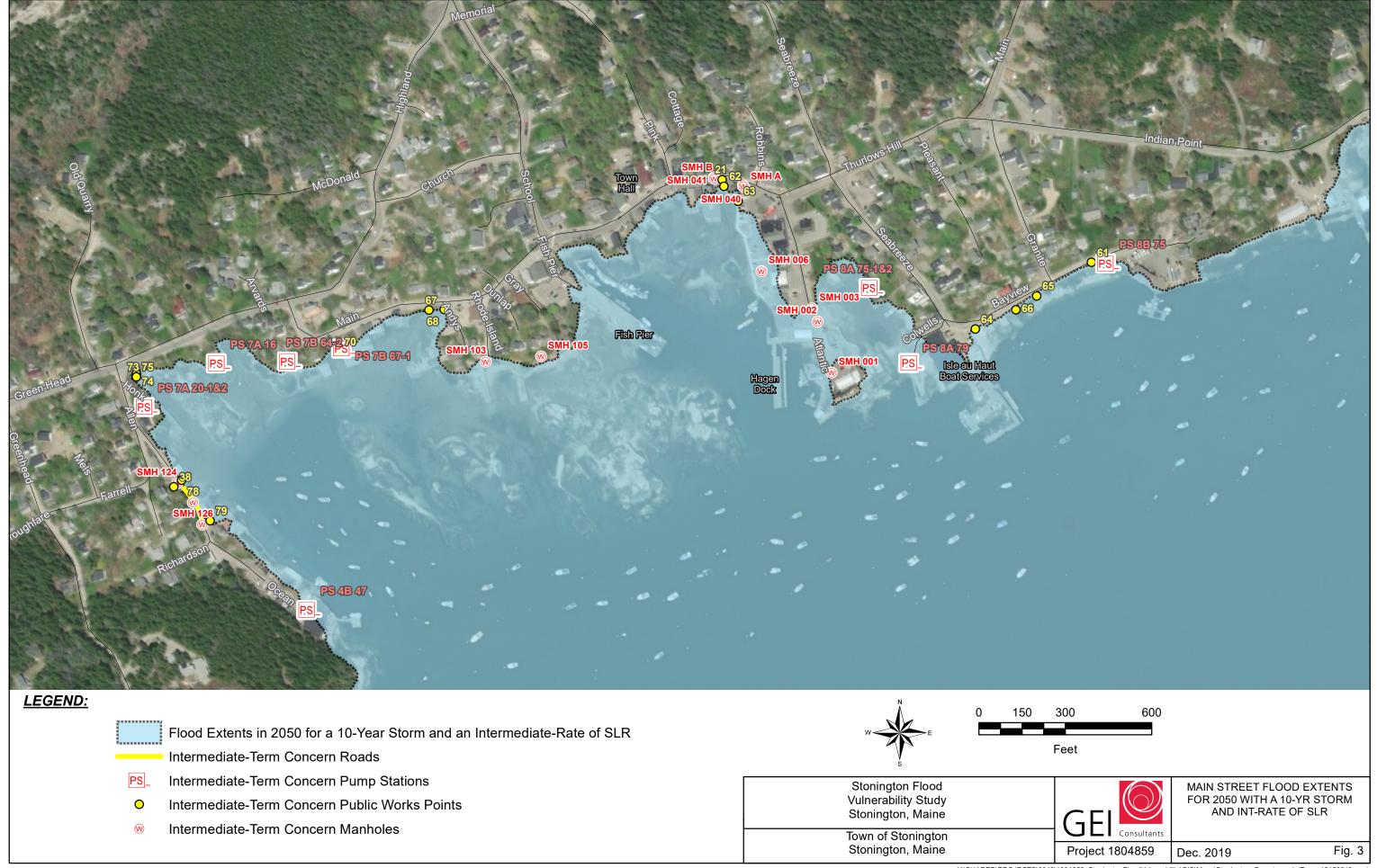
can be higher than the highest predicted level or lower than the lowest predicted level, as seen in the attached Fig. 8. The timelines provided in this study are estimates to help the Town of Stonington in capital improvement planning, however, it is likely the Town would experience actual flooding events before or after any of the timelines suggested in this document. Phase II of this study will have an emphasis on designs that are adaptable and not sensitive to flooding to account for the irregularity of sea levels.

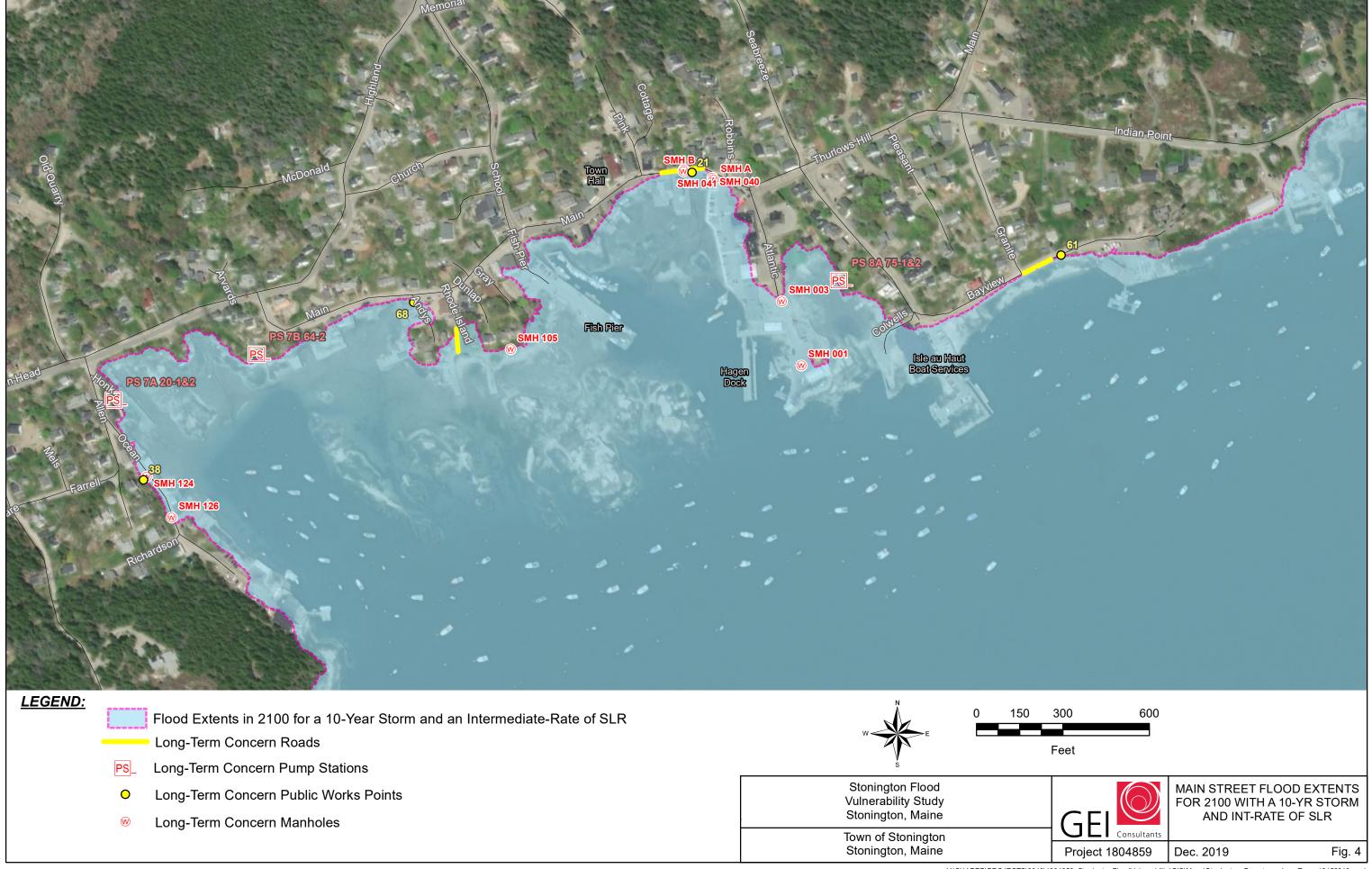
5. References

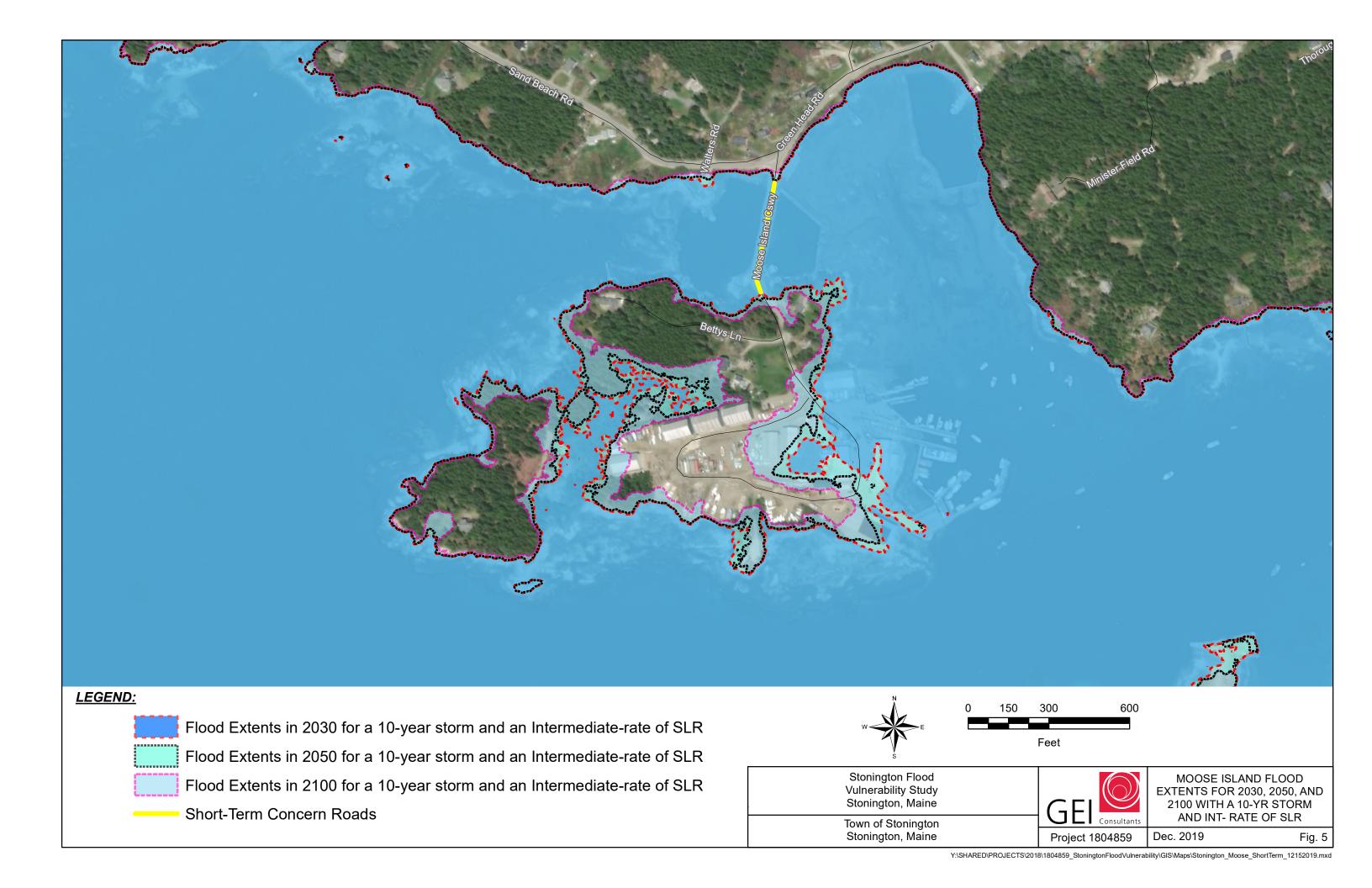
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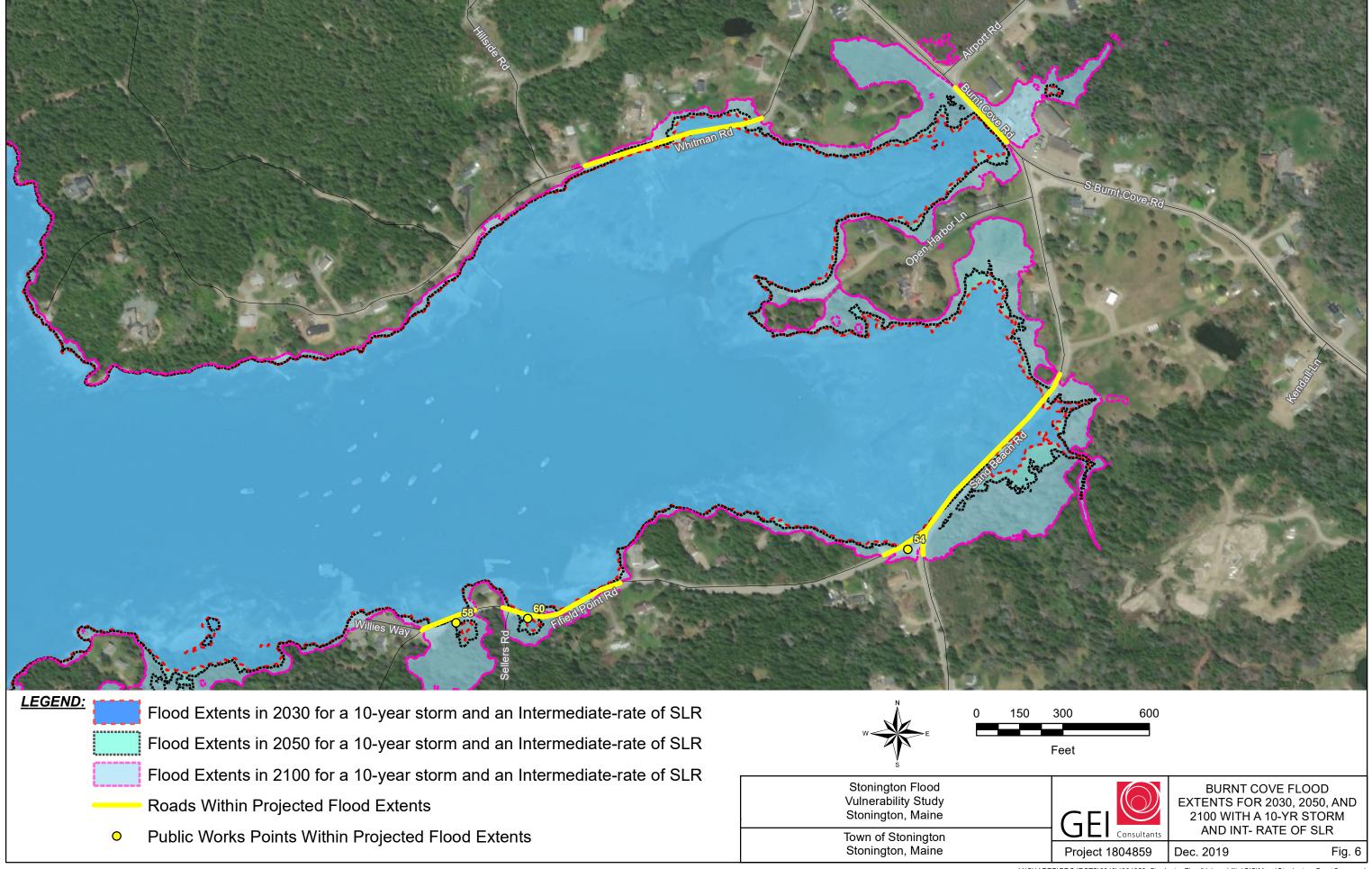


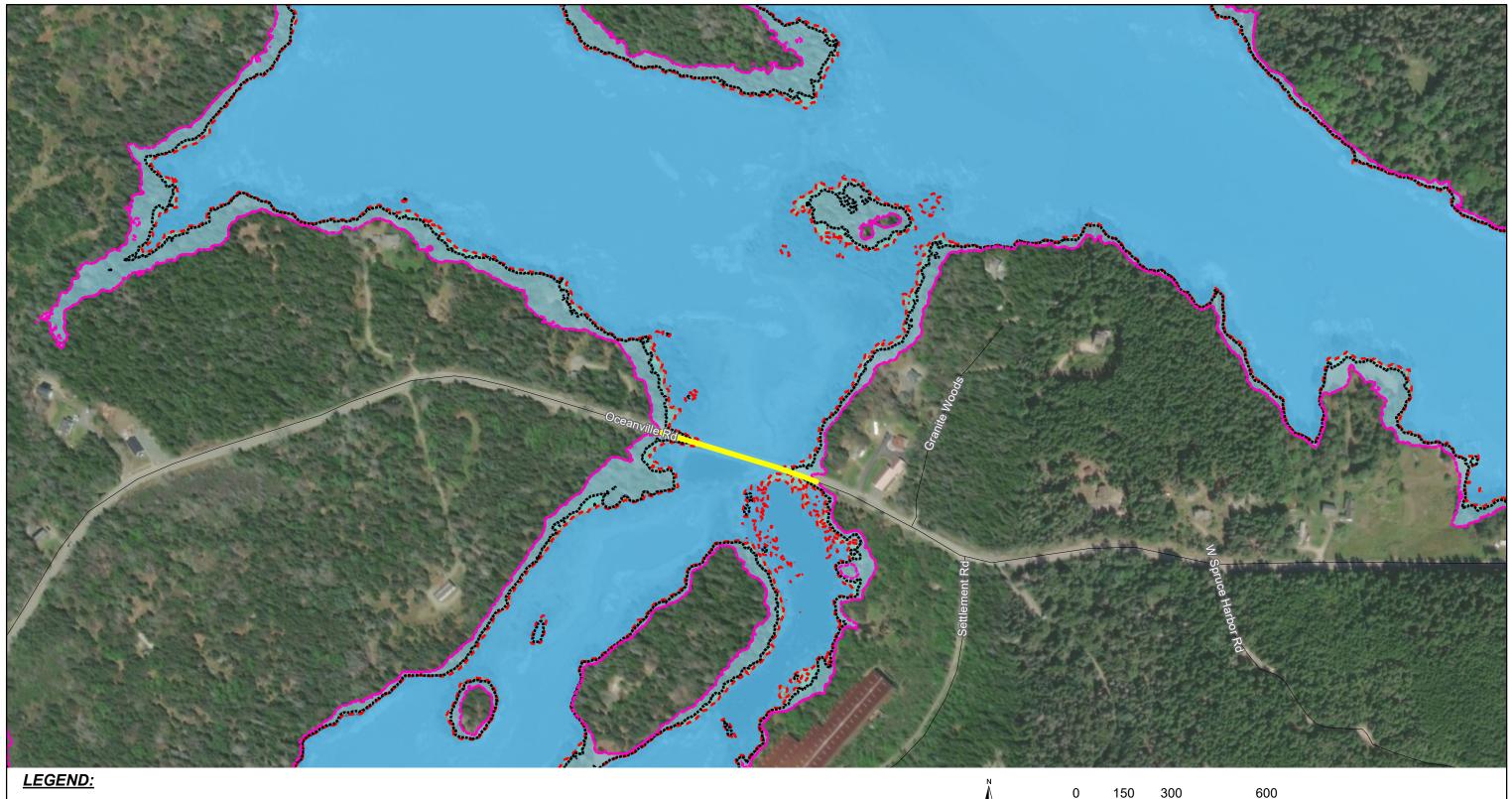












Flood Extents in 2030 for a 10-year storm and an Intermediate-rate of SLR Flood Extents in 2050 for a 10-year storm and an Intermediate-rate of SLR Flood Extents in 2100 for a 10-year storm and an Intermediate-rate of SLR Roads Within Projected Flood Extents



Stonington Flood Vulnerability Study Stonington, Maine

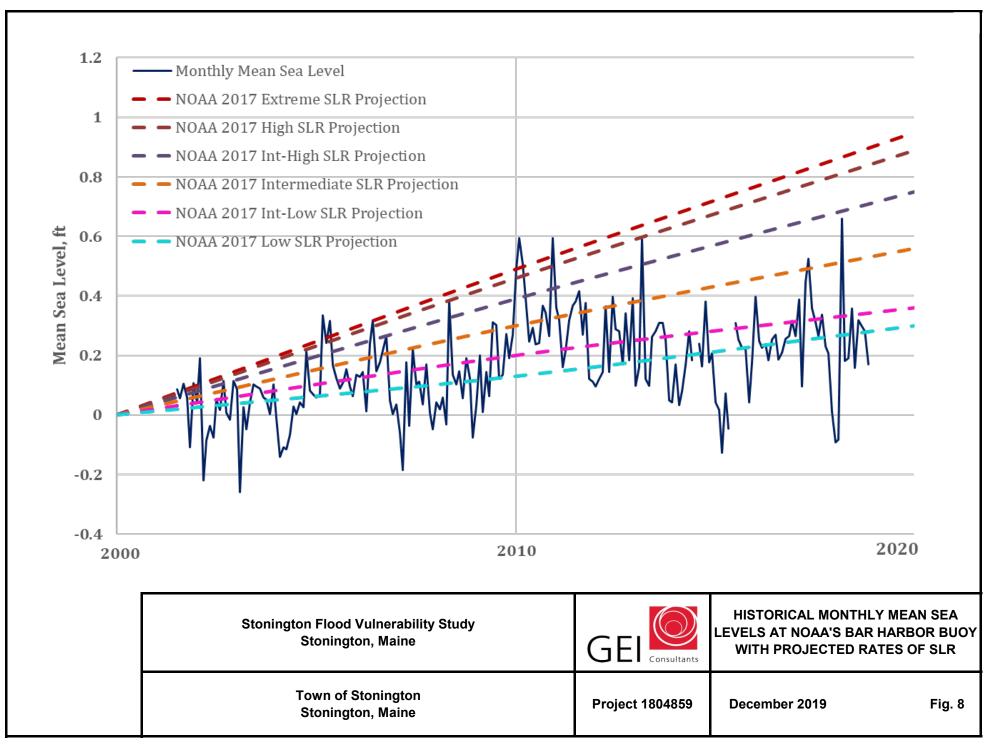
Town of Stonington Stonington, Maine



OCEANVILLE RD FLOOD EXTENTS FOR 2030, 2050, AND

Project 1804859 Dec. 2019

2100 WITH A 10-YR STORM AND INT- RATE OF SLR



Appendix A

Asset Questionnaire

Stonington Flood Vulnerability Study

Asset Manager Questionnaire¹

Ma	anaging A	gency:		Date:				
As	sset Mana	ger Name(s):		Phone:				
As	sset:							
ass mo ans ass	sets in Stoni st, it could swer questi	ington. Thank you for taking take 1 hour to answer 30 quo ons, followed by ranking deg h sea level rise (SLR) and sto	information on how sea level the time to respond to this se estions. The tool asks several rees of sensitivity, adaptive co orm surges (SS). Lastly, the t	ries of questions. At yes or no and short apacity, and risk factors				
	e first set of quem surge prep		ning process and will help get us thi	nking about sea level rise and				
1.	Are there ef	Forts underway to address SLR/SS	(emergency or climate efforts) at y	our agency or organization?				
	□ No	□ Yes,						
2.	What is you	e level of awareness of SLR?						
	□ None	☐ Low, heard/read of SLR	☐ Moderate, involved in trainin	g/project □ High, expert				
3.	What is you	general workplace's awareness o	f sea level rise?					
	☐ None	\square Low, heard/read of SLR	☐ Moderate, involved in trainin	g/project ☐ High, expert				
4.	Please descr improve/wo		of the asset. Are there existing stree	sses, are they likely to				
5.	Has the asse repair?		an unplanned stress e.g., weather-re					
	□ No	☐ Yes. How long did the disrup	tion last?					
6.	When was th	ne last repair or update?						

¹ Adopted from: BVB Consulting LLC (2017). Marin Shoreline Sea Level Rise Vulnerability Assessment, Appendix A: Vulnerability Assessment Interview Tool. County of Marin, CA.

7.	Is any major maintenance or re	epair planned? 🗆 N	lo □ Y	es, when?		
8.	Were/are any permits from the or other flood prevention measure.	_	-		-	ons 5, 6, 7
	DOCUMES.					
For	POSURES the second set of questions, ple act the asset. Impacts the asset			ving sea level rise ar	nd storm surge eff	ects could
	Permanent Flooding		•	High wind impacts		
	Temporary Flooding		•	Shoreline erosion	<i>'</i> C :	
	• Rising Water Table		•	Saltwater Intrusion	Corrosion	
The	e following questions address se sitivity assessment, sensitivity in pupted. Please indicate if the as No Sensitivity: Not impai Low Sensitivity: Minimal minimal disruption. Medium Sensitivity: Som maintain most functions. High Sensitivity: Greatly require significant repairs Maximum Sensitivity: Per	s defined as the deg set will be sensitive red, damaged, or di ly impaired, damage ewhat impaired, dat impaired, damaged and disruption cou	gree an asset of e for each expo- srupted sed, or disrupted maged, or disrupted , or disrupted ld impact publi	could be damaged or obsure according to the ed. The asset may required. The asset may with complete loss of	the service it properties levels: equire minor repairs by require repairs or shut-down. The	rs or suffer
Usi	ng the definitions of sensitivity					
0		_	Low	Med	High	Max
9.	Temporary flooding?					
	Permanent flooding?	_				
	Shoreline erosion?					
	Water table rising?		Ш			
	Saltwater intrusion/corrosion?					
14.	High winds?					

	nsitive to any of these exp vice, hours of system shute	•	• •		imple, %
	TIVE CAPACITY				
Adaptive capacity is	of adaptive capacity of the defined as the <i>ability of all OUT human intervention</i> .	n asset to recover	from the damage	or disruption form	n the elements it
	Adaptive Capacity: Asset i	is able to tolerate	[impact], no need	for intervention.	
High Adap need for sig	tive Capacity: Asset is able gnificant intervention or me y be replaced, repaired.	e to tolerate [impa	ct] and cope with	the consequences	
	daptive Capacity: Asset is tive routes, no restoration p			-	•
No Adaptiv location.	e Capacity: Asset is not al	ole to tolerate [imp	pact]. Not repaira	ble or replaceable	in current
-	above, please indication the tivity exposures. [insert ap				oderate, high,
	No	Low	Med	High	Max
16					
17					
18					
	t as having High or Maxim ving No, Low, or Medium				
	ids destruction and unsafe				

19. What, if any, adaptation or preparation actions have been incorporated into managing the asset for flooding and/or storms?

20.	What ideas do you or	r your agency have for new	adaptation or prep	paration actions?	
Phy	rsical:				
C	:_1.				
Soc	iai:				
Fina	ancial:				
Pol	itical:				
					ences for the asset and those
		ses to these questions will hou may not know the answer			
	·	e asset as an economic gene	_		
	□ Very		□ Not	\$	
	•		□ Not	Φ	
22.	What is the value to	•			
	☐ High	☐ Medium	☐ Low	☐ None	
23.		Features that are at-grade or cal equipment, pumps, utili			
	□ No	□ Yes,			
24.	What would be the c	ost to repair/replace the ass	et?		
	☐ High	☐ Medium	☐ Low	\$	
25.	How many people co	ould be affected?			
	☐ Region	☐ Community	☐ Neighborhoo	d □ Site	□ None

26. Are any underrepresented/v	ulnerable populations affected?
□ No □ Ye	es, (mark all that apply)
	☐ People with limited mobility or disability
	☐ Renters
	☐ People of racial or ethnic minority
	☐ Low income people
	☐ People over 75 years old
	☐ Households lacking vehicle
	☐ Other
27. Are there health impacts?	□ No □ Yes,
28. Are there safety impacts?	□ No □ Yes,
Thank you. This concludes the	assessment questions for this asset. Is there anything else you would like to share?

Appendix B

Flood Exposure Vulnerability Tables – Roads

General Notes for All Tables:

- 1. The 1% Flood Elevation, or "Base Flood Elevation," represents the critical wave height on top of the SWEL.
- 2. SWEL is the Still Water Elevation, or "Storm Surge" water level without the consideration of waves.
- 3. 0.2% annual chance = "500-year storm," 1% annual chance = "100-year storm," 2% annual chance = "50-year storm," 10% annual chance = "10-year storm."
- 4. Present Day 1% Flood Elevation and SWELs (Still Water Elevations, or "Storm Surge") values are from FIS for Hancock County (FEMA, 2016).
- 5. Tidal elevations, including Mean Higher High Water (MHHW), Mean High Water (MHW), North American Vertical Datum of 1988 (NAVD88), Mean Sea Level (MSL), Mean Low Water (MLW), and Mean Lower Low Water) are from NOAA Buoy 8414249 (NOAA, 2010).
- 6. Highest Annual Tide (HAT) data is from the Maine DEP (2018).
- 7. 1% annual chance Flood Elevations for years 2030, 2050, and 2100 were determined from an STWAVE wave transformation model created for this project.

Airport Rd.

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood Elevation		11.0	9.9	10.2	10.5	10.3	10.9	11.6	11.1	13.4	15.5
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 12.7	ft was u	sed to id	dentify f	lood ini	ındatior	ı conditi	ions		

Bayview St.

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	13.0	14.4	14.6	15.0	14.7	15.4	16.1	15.5	17.8	20.0
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ition of 11.6 f	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons		

Burnt Cove Rd.

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood Elevation		11.0	9.9	10.2	10.5	10.3	10.9	11.6	11.1	13.4	15.5
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL	·	-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW	MLLW -5.6				-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
MLLW -5.6 -5.0 -4.7 -4.4 -4.7 -4.0 -3.3 -3.9 -1.6 0.6 Note: Low Point Elevation of 11.0 ft was used to identify flood inundation conditions											

Colwell's Ln.

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	13.0	15.9	16.2	16.5	16.2	16.9	17.6	17.1	19.4	21.5
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 8.4 ft	was use	d to ide	ntify flo	od inun	dation c	condition	ns		

Fifield Point Rd.

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	15.0	9.9	10.2	10.5	10.3	10.9	11.6	11.1	13.4	15.5
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 6.3 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns	-	

Indian Point Rd.

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	100, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood Elevation		14.0	13.2	13.5	13.8	13.6	14.3	14.9	14.4	16.7	18.8
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
-	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ation of 13.4 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

Main St.

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	11.0	13.2	13.5	13.9	13.6	14.3	14.9	14.4	16.7	18.9
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW -5.6 -5.0 -4.7						-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ation of 11.3 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

Moose Island Cswy.

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	13.0	15.1	15.4	15.7	15.5	16.2	16.8	16.3	18.6	20.7
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 8.1 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns		

Ocean St.

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	11.0	12.5	12.8	13.1	12.9	13.5	14.2	13.7	16.0	18.1
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	SWEL 1%		9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL	·	-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	e: Low Point Elevation of 8.6 ft was used to identify flood inundation conditions										

Oceanville Rd.

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	10.0	10.4	10.7	11.0	10.8	11.4	12.1			16.0
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	WEL 1% 9.3 2% 9.0		9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 8.5 ft	was use	d to ide	ntify flo	od inun	dation c	condition	ns		

Pink St.

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.4	12.7	13.0	12.8	13.5	14.1	13.6	15.9	18.0
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL	·	-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low Point Elevation of 12.6 ft was used to identify flood inundation conditions											

Rhode Island Ave.

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	12.0	14.4	14.7	15.0	14.8 15.4 16.1 15.6 17.9 10.8 11.5 12.2 11.6 12.0		20.0			
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 10.0 f	10.0 ft was used to identify flood inundation conditions								

Robbins St.

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.7	13.0	13.3	13.0	13.7	14.4	13.9	16.2	18.3
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL	·	-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low Point Elevation of 13.4 ft was used to identify flood inundation conditions											

Sand Beach Rd. - Burnt Cove

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	11.0	9.9	10.2	10.5	10.3	10.9	11.6	11.1				
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2		
CWEI	SWEL 1%		9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	tion of 9.0 ft	was use	d to ide	ntify flo	od inun	dation c	conditio					

Whitman Rd.

						SLF	R Projec	ction			
Eleva Refei	rence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVI	988 , ft)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% BFE	2	12.0	9.9	10.2	10.5	10.3	10.9	11.6	11.1	13.4	15.5
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT	10% HAT	6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD8	8	0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Lo	w Point E	levation of 8.8	Ift was i	used to i	identify f	lood ini	ındation	conditio	ons		

Appendix C

Flood Exposure Vulnerability Tables – Pump Stations

General Notes for All Tables:

- 1. The 1% Flood Elevation, or "Base Flood Elevation," represents the critical wave height on top of the SWEL.
- 2. SWEL is the Still Water Elevation, or "Storm Surge" water level without the consideration of waves.
- 3. 0.2% annual chance = "500-year storm," 1% annual chance = "100-year storm," 2% annual chance = "50-year storm," 10% annual chance = "10-year storm."
- 4. Present Day 1% Flood Elevation and SWELs (Still Water Elevations, or "Storm Surge") values are from FIS for Hancock County (FEMA, 2016).
- 5. Tidal elevations, including Mean Higher High Water (MHHW), Mean High Water (MHW), North American Vertical Datum of 1988 (NAVD88), Mean Sea Level (MSL), Mean Low Water (MLW), and Mean Lower Low Water) are from NOAA Buoy 8414249 (NOAA, 2010).
- 6. Highest Annual Tide (HAT) data is from the Maine DEP (2018).
- 7. 1% annual chance Flood Elevations for years 2030, 2050, and 2100 were determined from an STWAVE wave transformation model created for this project.

Atlantic Avenue Pump Station

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	88, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	11.0	12.9	13.2	13.5	13.2	13.9	14.6	14.1	16.4	18.5		
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1		
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	ition of 12.0 ft	t was us	ed to id	entify fl	ood inu	ndation	conditi					

Bay View Street Pump Station

						SLR	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	NA	15.0	15.3	15.6	15.4	16.1	16.7	16.2	18.5	20.6		
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1		
SW/FI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	tion of 17.7 ft	t was us	ed to id	entify fl	ood inu	ndation						

Main Street Pump Station

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	11.1	11.4	11.7	11.5	12.2	12.8	12.3	14.6	16.7
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL	·	-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low Point Elevation of 13.9 ft was used to identify flood inundation conditions											

Ocean Street Pump Station

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	NA	10.0	10.3	10.7	10.4	11.1	11.7	11.2	13.5	15.6		
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1		
SWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	tion of 11.2 f	t was us	ed to id	entify fl	ood inu	ndation	condition	L L				

PS 4B 47

						SLF	R Projec	ction						
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High			
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2			
			ft	ft	ft	ft	ft	ft	ft	ft	ft			
1% Flood	Elevation	12.0	10.9	11.2	11.5	11.2	11.9	12.6	12.1	14.4	16.5			
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1			
CWEI	WEL 1%		9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5			
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2			
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6			
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8			
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2			
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8			
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2			
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9			
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9			
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6			
Note: Low	Point Eleva	ition of 9.6 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns					

PS 7A 16

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, IL)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.4	12.7	13.0	12.8	13.4	14.1	13.6	15.9	18.0
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SW/FI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 9.7 ft	was use	d to ide	ntify flo	od inun	dation c	condition	ns		

PS 7A 20-1&2

						SLF	R Projec	ction						
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High			
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2			
			ft	ft	ft	ft	ft	ft	ft	ft	ft			
1% Flood	Elevation	NA	10.2	10.5	10.8	10.6	11.3	11.9	11.4	13.7	15.8			
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1			
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5			
SWEL	2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2			
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6			
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8			
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2			
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8			
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2			
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9			
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9			
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6			
Note: Low	Point Eleva	ation of 12.9 ft	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons	<u> </u>				

PS 7B 64-2

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.6	12.9	13.2	12.9	13.6	14.3	13.8	16.1	18.2
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Note: Low Point Elevation of 14.6 ft was used to identify flood inundation conditions										

PS 7B 67-1

						SLF	R Projec	ction						
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High			
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2			
			ft	ft	ft	ft	ft	ft	ft	ft	ft			
1% Flood	Elevation	12.0	13.9	14.2	14.6	14.3	15.0	15.6	15.1	17.4	19.5			
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1			
CWEI	WEL 1% 9.3 2% 9.0		9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5			
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2			
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6			
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8			
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2			
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8			
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2			
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9			
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9			
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6			
Note: Low	Point Eleva	ition of 9.3 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns					

PS 8A 21

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	13.5	13.8	14.1	13.8	14.5	15.2	14.6	16.9	19.1
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	e: Low Point Elevation of 11.9 ft was used to identify flood inundation conditions										

PS 8A 75-1&2

						SLF	R Projec	ction				
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High	
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2	
			ft	ft	ft	ft	ft	ft	ft	ft	ft	
1% Flood	Elevation	NA	13.6	13.9	14.2	13.9	14.6	15.3	14.8	17.1	19.2	
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1	
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5	
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2	
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6	
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8	
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2	
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8	
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2	
MSL	·	-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9	
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9	
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	9 -1.6 0.		
Note: Low Point Elevation of 15.4 ft was used to identify flood inundation conditions												

PS 8A 79

						SLR	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	13.0	15.6	15.9	16.2	16.0	16.7	17.3	16.8	19.1	21.2		
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1		
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%		9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	tion of 8.6 ft	was use	d to ide	ntify flo	od inun	dation c	condition					

PS 8B 73

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	13.0	15.2	15.5	15.8	15.6	16.3	16.9	16.4	18.7	20.8
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW	<u> </u>	-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 10.9 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons	•	

PS 8B 75

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	13.0	14.4	14.7	15.0	14.8	15.4	16.1	15.6	17.9	20.0
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 9.1 ft	was used to identify flood inundation conditions								

Appendix D

Flood Exposure Vulnerability Tables – Requested Places

General Notes for All Tables:

- 1. The 1% Flood Elevation, or "Base Flood Elevation," represents the critical wave height on top of the SWEL.
- 2. SWEL is the Still Water Elevation, or "Storm Surge" water level without the consideration of waves.
- 3. 0.2% annual chance = "500-year storm," 1% annual chance = "100-year storm," 2% annual chance = "50-year storm," 10% annual chance = "10-year storm."
- 4. Present Day 1% Flood Elevation and SWELs (Still Water Elevations, or "Storm Surge") values are from FIS for Hancock County (FEMA, 2016).
- 5. Tidal elevations, including Mean Higher High Water (MHHW), Mean High Water (MHW), North American Vertical Datum of 1988 (NAVD88), Mean Sea Level (MSL), Mean Low Water (MLW), and Mean Lower Low Water) are from NOAA Buoy 8414249 (NOAA, 2010).
- 6. Highest Annual Tide (HAT) data is from the Maine DEP (2018).
- 7. 1% annual chance Flood Elevations for years 2030, 2050, and 2100 were determined from an STWAVE wave transformation model created for this project.

Colwell Ramp

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	13.0	14.8	15.1	15.4	15.2	15.8	16.5	16.0	18.3	20.4		
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2		
CWEI	L 1% 9.3 2% 9.0		9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	tion of 8.8 ft	was use	d to ide	ntify flo	od inun	dation c	condition					

Outfall Pipe

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	12.0	13.9	14.2	14.5	14.3	14.9	15.6	15.1	17.4	19.5
	0.20%	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1	16.2
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%		9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 5.9 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns		

Sanitary Lab

						SLF	R Projec	ction				
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High	
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2	
			ft	ft	ft	ft	ft	ft	ft	ft	ft	
1% Flood	Elevation	NA	14.5	14.8	15.1	14.8	15.5	16.2	15.7	18.0	20.1	
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1	
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5	
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2	
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6	
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8	
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2	
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8	
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2	
MSL	·	-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9	
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9	
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	9 -1.6 0.		
Note: Low Point Elevation of 19.6 ft was used to identify flood inundation conditions												

Town Garage

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	0.20%	10.0	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ntion of 27.3 ft was used to identify flood inundation conditions									

Appendix E

Flood Exposure Vulnerability Tables – Public Works Points

General Notes for All Tables:

- 1. The 1% Flood Elevation, or "Base Flood Elevation," represents the critical wave height on top of the SWEL.
- 2. SWEL is the Still Water Elevation, or "Storm Surge" water level without the consideration of waves.
- 3. 0.2% annual chance = "500-year storm," 1% annual chance = "100-year storm," 2% annual chance = "50-year storm," 10% annual chance = "10-year storm."
- 4. Present Day 1% Flood Elevation and SWELs (Still Water Elevations, or "Storm Surge") values are from FIS for Hancock County (FEMA, 2016).
- 5. Tidal elevations, including Mean Higher High Water (MHHW), Mean High Water (MHW), North American Vertical Datum of 1988 (NAVD88), Mean Sea Level (MSL), Mean Low Water (MLW), and Mean Lower Low Water) are from NOAA Buoy 8414249 (NOAA, 2010).
- 6. Highest Annual Tide (HAT) data is from the Maine DEP (2018).
- 7. 1% annual chance Flood Elevations for years 2030, 2050, and 2100 were determined from an STWAVE wave transformation model created for this project.

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, IL)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.8	13.1	13.5	13.2	13.9	14.5	14.0	16.3	18.5
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 13.1 f	t was us	ed to ia	entify fl	ood inu	ndation	condition	ons		

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	NA	12.7	13.0	13.3	13.0	13.7	14.4	13.9	16.2	18.3		
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2		
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	ition of 13.7 ft	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons	9 -1.0 0.0			

						SLR	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	NA	12.8	13.1	13.5	13.2	13.9	14.5	14.0	16.3	18.5		
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2		
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	ition of 11.3 f	t was us	ed to id	entify fl	ood inu	ndation	condition					

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.4	12.7	13.0	12.8	13.4	14.1	13.6	15.9	18.0
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 13.0 f	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons	•	

						SLF	R Projec	ction						
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High			
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2			
			ft	ft	ft	ft	ft	ft	ft	ft	ft			
1% Flood	Elevation	NA	12.4	12.7	13.0	12.8	13.4	14.1	13.6	15.9	18.0			
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1			
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5			
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2			
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6			
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8			
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2			
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8			
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2			
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9			
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9			
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6			
Note: Low	Point Eleva	tion of 14.7 ft	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons					

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.8	13.0	13.4	13.1	13.8	14.5	13.9	16.2	18.4
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 17.1 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

ID30

						SLR	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	NA	13.4	13.7	14.0	13.8	14.4	15.1	14.6	16.9	19.0		
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2		
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	ition of 15.0 f	t was us	ed to id	entify fl	ood inu	ndation	on conditions					

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.4	12.7	13.0	12.8	13.5	14.1	13.6	15.9	18.0
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SW/FI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 12.8 ft	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	NA	13.9	14.1	14.5	14.2	14.9	15.6	15.0	17.3	19.5		
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2		
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	ution of 17.3 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons				

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	10.0	10.3	10.6	10.3	11.0	11.7	11.2	13.5	15.6
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ution of 11.8 f	t was us	as used to identify flood inundation conditions							

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	NA	12.7	13.0	13.3	13.1	13.8	14.4	13.9	16.2	18.3		
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2		
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	ation of 12.6 ft	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons				

Elevation Reference (NAVD88, ft)						SLF	R Projec	ction			
		Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
		ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood Elevation		NA	13.8	14.1	14.4	14.1	14.8	15.5	15.0	17.3	19.4
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW -5.6		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low Point Elevation of 17.5 ft was used to identify flood inundation conditions											

ID44

Elevation Reference (NAVD88, ft)			SLR Projection									
		Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High	
		ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2	
			ft	ft	ft	ft	ft	ft	ft	ft	ft	
1% Flood Elevation		NA	11.1	11.4	11.7	11.4	12.1	12.8	12.3	14.6	16.7	
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1	
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5	
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2	
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6	
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8	
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2	
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8	
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2	
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9	
MLW -5.		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9	
MLLW -5.6		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6	
Note: Low Point Elevation of 14.6 ft was used to identify flood inundation conditions												

Elevation Reference (NAVD88, ft)						SLF	R Projec	ction			
		Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
		ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood Elevation		11.0	9.9	10.2	10.5	10.3	10.9	11.6	11.1	13.4	15.5
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW -5.6		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low Point Elevation of 12.1 ft was used to identify flood inundation conditions											

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	15.0	9.9	10.2	10.5	10.3	10.9	11.6	11.1	13.4	15.5
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ition of 10.2 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	14.0	9.9	10.2	10.5	10.3	10.9	11.6	11.1	13.4	15.5
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	v Point Elevation of 12.7 ft was used to identify flood inundation conditions										

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	14.0	9.9	10.2	10.5	10.3	10.9	11.6	11.1	13.4	15.5
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CW/FI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 9.4 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns	_	

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	988, IL)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	13.0	14.3	14.6	14.9	14.6	15.3	16.0	15.4	17.7	19.9
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 11.9 ft	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	11.0	12.9	13.2	13.5	13.3	13.9	14.6	14.1	16.4	18.5
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	SWEL 1% 2%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW	<u> </u>	-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ition of 9.8 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns		

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	11.0	12.9	13.2	13.5	13.3	13.9	14.6	14.1	16.4	18.5		
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1		
CW/FI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW	<u> </u>	-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	tion of 8.8 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns	8 9.1 11 4 8.7 10 7 4.0 6 4 3.7 5 .5 -1.2 0			

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	100, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	13.0	15.3	15.6	15.9	15.7	16.4	17.0	16.5	18.8	20.9
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	SWEL 1%		9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ation of 5.6 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns	•	

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	13.0	14.3	14.6	14.9	14.6	15.3	16.0	15.5	17.8	19.9
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CW/FI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7 -4.4		-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 2.6 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns		

						SLF	R Projec	ction			
Eleva Refer	rence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	100, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	13.0	14.9	15.2	15.5	15.3	15.9	16.6	16.1	18.4	20.5
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	SWEL 1%		9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ation of 2.5 ft	was use	d to ide	ntify flo	od inun	dation c	condition	ns		

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, IL)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.5	12.8	13.1	12.9	13.6	14.2	13.7	16.0	18.1
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SW/FI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0 -4.7		-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low Point Elevation of 7.7 ft was used to identify flood inundation conditions											

						SLF	R Projec	ction				
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High	
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2	
			ft	ft	ft	ft	ft	ft	ft	ft	ft	
1% Flood	Elevation	NA	12.1	12.4	12.7	12.4	13.1	13.8	13.2	15.5	17.7	
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2	
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5	
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2	
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6	
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8	
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2	
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8	
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2	
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9	
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9	
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6	
Note: Low	Point Eleva	ation of 10.1 fi	t was us	ed to id	entify fl	ood inu	ndation	conditi				

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	11.8	12.0	12.4	12.1	12.8	13.5	12.9	15.2	17.4
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Note: Low Point Elevation of 12.3 ft was used to identify flood inundation conditions							-			

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	12.0	13.3	13.6	13.9	13.6	14.3	15.0	14.5	16.8	18.9
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW	<u> </u>	-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 2.0 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns		

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	11.0	10.9	11.2	11.5	11.3	12.0	12.6	12.1	14.4	16.5
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 8.6 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	11.0	10.6	10.9	11.2	11.0	11.7	12.3	11.8	14.1	16.2
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW	<u> </u>	-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 8.3 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	11.0	10.6	10.9	11.2	11.0	11.7	12.3	11.8	14.1	16.2
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 8.3 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns		

						SLF	R Projec	ction						
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High			
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2			
			ft	ft	ft	ft	ft	ft	ft	ft	ft			
1% Flood	Elevation	11.0	10.6	10.9	11.2	11.0	11.7	12.3	11.8	14.1	16.2			
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2			
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5			
SWEL	SWEL 1% 2% 10%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2			
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6			
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8			
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2			
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8			
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2			
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9			
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9			
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6			
Note: Low	Point Eleva	tion of 8.3 ft	was use	d to ide	ntify flo	od inun	dation o	conditio						

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	10.0	10.3	10.7	10.4	11.1	11.7	11.2	13.5	15.7
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 14.2 ft	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	11.0	10.3	10.6	10.9	10.6	11.3	12.0	11.5	13.8	15.9
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW	<u> </u>	-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ition of 7.4 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns		

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	11.0	10.2	10.5	10.9	10.6	11.3	11.9	11.4	13.7	15.9
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 6.5 ft	was use	d to ide	ntify flo	od inun	dation c	condition	ns		

Appendix F

Flood Exposure Vulnerability Tables – Manholes

General Notes for All Tables:

- 1. The 1% Flood Elevation, or "Base Flood Elevation," represents the critical wave height on top of the SWEL.
- 2. SWEL is the Still Water Elevation, or "Storm Surge" water level without the consideration of waves.
- 3. 0.2% annual chance = "500-year storm," 1% annual chance = "100-year storm," 2% annual chance = "50-year storm," 10% annual chance = "10-year storm."
- 4. Present Day 1% Flood Elevation and SWELs (Still Water Elevations, or "Storm Surge") values are from FIS for Hancock County (FEMA, 2016).
- 5. Tidal elevations, including Mean Higher High Water (MHHW), Mean High Water (MHW), North American Vertical Datum of 1988 (NAVD88), Mean Sea Level (MSL), Mean Low Water (MLW), and Mean Lower Low Water) are from NOAA Buoy 8414249 (NOAA, 2010).
- 6. Highest Annual Tide (HAT) data is from the Maine DEP (2018).
- 7. 1% annual chance Flood Elevations for years 2030, 2050, and 2100 were determined from an STWAVE wave transformation model created for this project.

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	988, IU)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	13.0	14.8	15.1	15.4	15.2	15.9	16.5	16.0	18.3	20.4
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	WEL 1%		9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 10.5 ft	ft was used to identify flood inundation conditions								

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	11.0	14.0	14.3	14.7	14.4	15.1	15.7	15.2	17.5	19.6
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 8.2 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, IL)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	11.0	14.4	14.7	15.0	14.7	15.4	16.1	15.5	17.8	20.0
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 10.1 f	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons	•	

						SLF	R Projec	ction						
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High			
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2			
			ft	ft	ft	ft	ft	ft	ft	ft	ft			
1% Flood	Elevation	NA	12.9	13.2	13.5	13.3	13.9	14.6	14.1	16.4	18.5			
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2			
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5			
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2			
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6			
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8			
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2			
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8			
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2			
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9			
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9			
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6			
Note: Low	Point Eleva	ation of 14.7 ft	t was us	ed to id	entify fl	ood inu	ndation	conditi						

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.6	12.8	13.2	12.9	13.6	14.3	13.7	16.0	18.2
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 15.1 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	11.0	13.7	14.0	14.3	14.1	14.7	15.4	14.9	17.2	19.3
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 8.2 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	11.0	12.9	13.2	13.5	13.3	13.9	14.6	14.1	16.4	18.5
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ition of 9.8 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.8	13.0	13.4	13.1	13.8	14.5	13.9	16.2	18.4
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ation of 12.9 ft	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons	_	

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.5	12.8	13.1	12.8	13.5	14.2	13.7	16.0	18.1
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ation of 16.1 fi	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	15.1	15.3	15.7	15.4	16.1	16.8	16.2	18.5	20.7
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 15.2 f	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	15.1	15.4	15.7	15.5	16.1	16.8	16.3	18.6	20.7
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL	·	-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 13.9 ft	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	988, II)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	13.0	15.2	15.5	15.9	15.6	16.3	16.9	16.4	18.7	20.9
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWFI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ation of 15.2 ft	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		-

SMH 022A

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	988, II)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	13.0	14.3	14.6	14.9	14.7	15.4	16.0	15.5	17.8	19.9
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW	<u> </u>	-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ution of 14.4 f	t was us	ed to id	entify fl	lood inundation conditions					

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	000, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	13.0	13.9	14.2	14.6	14.3	15.0	15.6	15.1	17.4	19.5
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SW/FI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 13.0 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

SMH 024

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	14.4	14.7	15.0	14.8	15.4	16.1	15.6	17.9	20.0
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ation of 17.4 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

						SLF	R Projec	ction						
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High			
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2			
			ft	ft	ft	ft	ft	ft	ft	ft	ft			
1% Flood	Elevation	NA	15.0	15.3	15.6	15.3	16.0	16.7	16.2	18.5	20.6			
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2			
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5			
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2			
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6			
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8			
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2			
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8			
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2			
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9			
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9			
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6			
Note: Low	Point Eleva	ation of 17.6 ft	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons					

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	15.0	15.3	15.7	15.4	16.1	16.7	16.2	18.5	20.6
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
CWEI	SWEL 1% 9.3 2% 9.0		9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL			9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 16.6 f	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons		

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	15.2	15.5	15.8	15.5	16.2	16.9	16.3	18.6	20.8
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ition of 12.7 ft	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	NA	12.8	13.1	13.4	13.1	13.8	14.5	13.9	16.2	18.4		
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1		
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	tion of 12.2 ft	t was us	ed to id	entify fl	ood inu	ndation	dation conditions					

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	13.3	13.5	13.9	13.6	14.3	15.0	14.4	16.7	18.9
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ition of 11.4 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

SMH 042

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.5	12.8	13.1	12.9	13.5	14.2	13.7	16.0	18.1
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 12.7 ft	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, IL)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.5	12.7	13.1	12.8	13.5	14.2	13.6	15.9	18.1
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 16.6 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	10.4	10.6	11.0	10.7	11.4	12.1	11.5	13.8	16.0
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	SWEL 1%		9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 15.0 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	12.0	14.2	14.5	14.9	14.6	15.3	15.9	15.4	17.7	19.9
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ition of 9.4 ft	was use	d to ide	ntify flo	od inun	dation c	condition	ns		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	12.0	14.4	14.7	15.0	14.7	15.4	16.1	15.6	17.9	20.0
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%			10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 9.3 ft	was use	d to ide	ntify flo	od inun	dation c	conditio	ns		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	11.3	11.5	11.9	11.6	12.3	13.0	12.4	14.7	16.9
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ition of 12.8 ft	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons	_	_

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	11.3	11.6	11.9	11.7	12.4	13.0	12.5	14.8	16.9
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 13.1 f	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons		

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	11.3	11.6	12.0	11.7	12.4	13.0	12.5	14.8	17.0
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ation of 14.7 f	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons		_

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	10.6	10.9	11.2	11.0	11.7	12.3	11.8	14.1	16.2
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW	<u> </u>	-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 14.8 ft	t was us	ed to id	entify fl	ood inu	ndation	condition	ons	•	

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	NA	12.1	12.3	12.7	12.4	13.1	13.8	13.2	15.5	17.7		
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2		
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	ation of 12.9 ft	t was us	ed to id	entify fl	ood inu	ndation	conditi					

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	00, IL)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	NA	13.1	13.4	13.7	13.5	14.1	14.8	14.3	16.6	18.7		
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2		
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW	<u> </u>	-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	tion of 13.7 ft	t was us	ed to id	entify fl	ood inu	ndation	condition	<u> </u>				

						SLF	R Projec	ction				
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High	
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2	
			ft	ft	ft	ft	ft	ft	ft	ft	ft	
1% Flood	Elevation	NA	13.9	14.2	14.6	14.3	15.0	15.6	15.1	17.4	19.6	
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1	
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5	
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2	
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6	
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8	
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2	
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8	
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2	
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9	
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9	
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6	
Note: Low	Point Eleva	tion of 16.7 ft	t was us	ed to id	entify fl	ood inu	ndation conditions					

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	11.1	11.4	11.7	11.5	12.2	12.8	12.3	14.6	16.7
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 13.7 ft	t was us	ed to id	entify fl	ood inu	ndation	condition	ons	•	

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	12.0	14.2	14.5	14.8	14.5	15.2	15.9	15.4	17.7	19.8		
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1		
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	tion of 9.1 ft	was use	d to ide	ntify flo	od inun	dation c	condition	L L				

SMH 104

						SLF	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	12.0	15.1	15.4	15.7	15.4	16.1	16.8	16.3	18.6	20.7
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 9.4 ft	was use	d to ide	ntify flo	od inun	dation c	condition	ns		

						SLR	R Projec	ction			
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	13.6	13.8	14.2	13.9	14.6	15.3	14.7	17.0	19.2
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL	<u> </u>	-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW	<u> </u>	-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ition of 12.2 f	t was us	ed to ia	entify fl	ood inu	ndation	condition	ons		

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	NA	11.4	11.7	12.0	11.8	12.5	13.1	12.6	14.9	17.0		
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2		
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL 2%		9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6					-3.9	-1.6	0.6				
Note: Low	Point Eleva	tion of 13.3 f	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons	9 -1.6 0.6			

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	NA	10.1	10.4	10.7	10.5	11.2	11.8	11.3	13.6	15.7		
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2		
CWEI	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	SWEL 2%		9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	tion of 10.4 f	t was us	ed to id	entify fl	ood inu	ndation	conditi	<u> </u>				

SMH 125

						SLR	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	11.0	10.1	10.4	10.7	10.4	11.1	11.8	11.3	13.6	15.7		
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1		
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL	·	-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	tion of 10.1 f	t was us	ed to id	entify fl	ood inu	ndation	ation conditions					

SMH 126

						SLF	R Projec	ction					
Eleva Refer	ence	Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High		
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2		
			ft	ft	ft	ft	ft	ft	ft	ft	ft		
1% Flood	Elevation	NA	10.0	10.3	10.7	10.4	11.1	11.7	11.2	13.5	15.7		
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1		
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5		
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2		
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6		
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8		
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2		
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8		
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2		
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9		
MLW	·	-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9		
MLLW		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6		
Note: Low	Point Eleva	ition of 11.2 f	t was us	ed to ia	entify fl	ood inu	ndation	conditi	ļ.				

SMH A

Elevation Reference (NAVD88, ft)				SLR Projection								
		Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High	
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2	
			ft	ft	ft	ft	ft	ft	ft	ft	ft	
1% Flood	Elevation	NA	12.8	13.1	13.4	13.1	13.8	14.5	14.0	16.3	18.4	
	0.20%	9.9	10.5	10.8	11.1	10.8	11.5	12.2	11.6	13.9	16.1	
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5	
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2	
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6	
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8	
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2	
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8	
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2	
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9	
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9	
MLLW -5.6		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6	
Note: Low	Point Eleva	tion of 12.1 f	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons			

SMH B

Reference Fig.						SLF	R Projec	ction			
		Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	13.3	13.6	13.9	13.7	14.4	15.0	14.5	16.8	18.9
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL	MSL		0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW -5.6		-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6	
Note: Low	Point Eleva	ition of 11.4 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

SMH C

Elevation Reference (NAVD88, ft)						SLF	R Projec	ction			
		Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.5	12.8	13.2	12.9	13.6	14.2	13.7	16.0	18.2
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW -5.6		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	ation of 12.8 ft	t was us	ed to id	entify fl	ood inu	ndation	conditi	ons		

SMH D

					SLR	R Projec	ction				
Elevation Reference (NAVD88, ft)		Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.4	12.7	13.0	12.8	13.4	14.1	13.6	15.9	18.0
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW -5		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 13.0 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons		

SMH E

Elevation Reference (NAVD88, ft)						SLF	R Projec	ction			
		Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	00, 11)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.4	12.7	13.0	12.8	13.4	14.1	13.6	15.9	18.0
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL		-0.3	0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW -5.6		-5.6	-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6
Note: Low	Point Eleva	tion of 13.9 f	t was us	ed to id	entify fl	ood inu	ndation	condition	ons	•	

SMH F

Reference Water						SLF	R Projec	ction			
		Existing Water Elevation,	2030 Int- Low	2030 Int	2030 Int- High	2050 Int- Low	2050 Int	2050 Int- High	2100 Int- Low	2100 Int	2100 Int- High
(NAVD	88, It)	ft	0.58	0.83	1.2	0.92	1.6	2.3	1.8	4.0	6.2
			ft	ft	ft	ft	ft	ft	ft	ft	ft
1% Flood	Elevation	NA	12.6	12.8	13.2	12.9	13.6	14.3	13.7	16.0	18.2
	0.20%	10.0	10.6	10.9	11.2	10.9	11.6	12.3	11.7	14.0	16.2
SWEL	1%	9.3	9.9	10.2	10.5	10.2	10.9	11.6	11.0	13.3	15.5
SWEL	2%	9.0	9.6	9.9	10.2	9.9	10.6	11.3	10.7	13.0	15.2
	10%	8.4	9.0	9.3	9.6	9.3	10.0	10.7	10.1	12.4	14.6
HAT		6.6	7.2	7.5	7.8	7.5	8.2	8.9	8.3	10.6	12.8
MHHW		5.0	5.6	5.9	6.2	6.0	6.7	7.3	6.8	9.1	11.2
MHW		4.6	5.2	5.5	5.8	5.5	6.2	6.9	6.4	8.7	10.8
NAVD88		0.0	0.6	0.9	1.2	0.9	1.6	2.3	1.7	4.0	6.2
MSL	MSL		0.3	0.6	0.9	0.6	1.3	2.0	1.4	3.7	5.9
MLW		-5.2	-4.7	-4.4	-4.1	-4.3	-3.6	-3.0	-3.5	-1.2	0.9
MLLW -5.6		-5.0	-4.7	-4.4	-4.7	-4.0	-3.3	-3.9	-1.6	0.6	
Note: Low	Note: Low Point Elevation of 14.9 ft was used to identify flood inundation conditions										

Appendix G

Ocean Outfall

