Countywide Analysis

As part of this countywide update, revised coastal analyses were performed for the open water flooding sources in the communities of Hingham, Hull, Marion, Mattapoisett, and Wareham. Provided below is a summary of the analyses performed. All revised coastal analyses were performed in accordance with Appendix D "Guidance for Coastal Flooding Analyses and Mapping," (Reference 80) of the Guidelines and Specifications, as well as, the "Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update", (Reference 84).

For the revised communities, published values in the Tidal Flood Survey (Reference 73) were used to estimate the stillwater elevations for the 10-, 2-, and 1-percent-annual-chance floods for Hingham Bay, Hull Bay, Weir River, Straits Pond, Massachusetts Bay, and Buzzards Bay. The 0.02-percent-annual-chance stillwater elevations for the revised flooding sources were extrapolated based on the more the frequent stillwater elevations in the Tidal Flood Survey. Stillwater elevations for the revised flooding sources are presented in Table 14.

TABLE 14 – SUMMARY OF REVISED STILLWATER ELEVATIONS

FLOODING SOURCE AND LOCATION	ELEVATION (feet NAVD 88) 10-PERCENT	2-PERCENT	1-PERCENT	0.2-PERCENT*
BROAD COVE				
For entire shoreline within Town of Hingham	**	**	6.0	**
BUZZARDS BAY				
Antassawamock	7.1	10.7	12.5	16.2
Aucoot Cove	7.6	11.4	13.2	17.1
Butler's Point	7.6	11.5	13.3	17.3
Crescent Beach	7.4	11.1	12.9	16.7
Cromeset Neck	7.8	11.7	13.6	17.6
Holly Woods	7.5	11.3	13.2	17.1
Jacobs Neck	7.8	11.8	13.7	17.7
Mattapoisett Harbor	7.3	11.1	12.8	16.7
Weweantic River	7.8	11.8	13.7	17.7
Wings Cove	7.6	11.6	13.5	17.6

REVISED DATA

*extrapolated from USACE data

** Data Not Available

REVISED TO REFLECT LOMR EFFECTIVE AUGUST 14, 2015

TABLE 14 – SUMMARY OF REVISED STILLWATER ELEVATIONS – cont'd

FLOODING SOURCE AND LOCATION	ELEVATION (feet NAVD 88) 10-PERCENT	2-PERCENT	1-PERCENT	0.2-PERCENT*
HINGHAM BAY				
At Bumpkin Island	8.4	9.3	9.7	10.6
From Hewitts Cove to Crow Point	8.4	9.3	9.5	10.6
HINGHAM HARBOR				
At Bottom, Sailor, Ragged, and Langlee Islands	8.4	9.3	9.5	10.6
From Crow Point to Planters Hill	8.4	9.3	9.5	10.6
HULL BAY				
Windmill Point to Hog Island Causeway, and South Shore of Peddocks Island	8.4	9.3	9.7	10.6
Hog Island Causeway to Packard Avenue in Kenberma	8.4	9.3	9.7	10.6
Packard Avenue in Kenberma to opposite of World's End	8.4	9.3	9.7	10.6
MASSACHUSETTS BAY				
Outer Coast from Hingham border to Windmill Point	8.4	9.3	9.7	10.6
North Shore of Peddocks Island	8.4	9.3	9.7	10.6
STRAITS POND				
Along the entire shoreline in Hull	8.4	9.3	9.7	10.6
WEIR RIVER				
World's End to Washington Boulevard	8.4	9.3	9.7	10.6

REVISED DATA

*extrapolated from USACE data

was applied on 20 years (1980-1999) of wave characteristic data from WIS Station No. 53. Mean wave characteristics were determined as specified in the FEMA guidance for V Zone mapping.

Wave heights and wave runup in Hingham, Hull, Marion, Mattapoisett, and Wareham were computed along transects that were located perpendicular to the average shoreline. The transects were located with consideration given to the physical and cultural characteristics of the land so that they would closely represent conditions in their locality. Transects were spaced close together in areas of complex topography and dense development. In areas having more uniform characteristics, the transects were spaced at larger intervals. It was also necessary to locate transects in areas where unique flooding existed and in areas where computer wave heights varied significantly between adjacent transects.

Transect Descriptions for the restudied coastal analyses are shown in Table 15 below and have been re-numbered to conform to countywide standards.

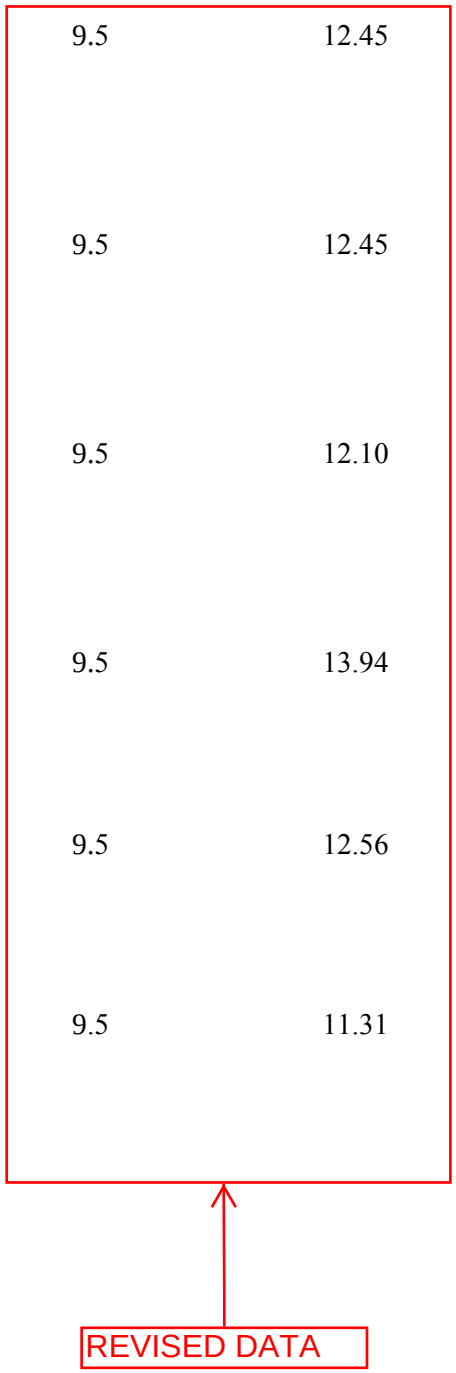
TABLE 15 – REVISED TRANSECT DESCRIPTIONS

		ELEVATION (feet NAVD 88)	
TRANSECT	LOCATION	1-PERCENT-ANNUAL-CHANCE STILLWATER	MAXIMUM 1-PERCENT ANNUAL CHANCE WAVE CREST[1]
1	The transect is located at along the east side of Stoddards Neck at a point approximately 1,400 feet north of U.S. Route 3A, extending west towards Davids Island.	9.5	11.79
2	The transect is located along the Back River shoreline at a point approximately 1,200 feet northwest of the west end of Shipyard Drive, extending south towards U.S. Route 3A.	9.5	13.05
3	The transect is located along the Hingham Bay shoreline at the north end of Wompatuck Road, extending southeast towards Foley Beach Road.	9.5	13.12
4	The transect is located along the Hingham Bay shoreline at a point approximately 150 feet in the vicinity of Howard Road, extending southwest towards Shute Avenue.	9.5	13.69
5	The transect is located along the Hingham Bay shoreline, extending southeast along Cushing Avenue towards Downer Avenue.	9.5	14.32

REVISED DATA

TABLE 15 – REVISED TRANSECT DESCRIPTIONS – cont'd

TRANSECT	LOCATION	ELEVATION (feet NAVD 88) 1-PERCENT-ANNUAL-CHANCE STILLWATER	ELEVATION (feet NAVD 88) MAXIMUM 1-PERCENT ANNUAL CHANCE WAVE CREST[1]
6	The transect is located along the Hingham Harbor shoreline at a point approximately 50 feet northeast of the intersection of Cushing Avenue and Downer Avenue, extending northwest towards Mann Street.	9.5	12.45
7	The transect is located along the Hingham Harbor shoreline at a point approximately 350 feet north of the intersection of Governor Long Road and Otis Street, extending southwest towards Broad Cove Road.	9.5	12.45
8	The transect is located along the Hingham Harbor shoreline at a point approximately 1000 feet southeast of the vicinity of Cole Road and Otis Street, extending southwest towards Lincoln Street.	9.5	12.10
9	The transect is located along the northern shoreline of Langlee Island, extending south towards the intersection of Otis Street and Summer Street on the mainland of Hingham.	9.5	13.94
10	The transect is located along the Hingham Harbor shoreline at a point approximately 300 feet northeast of the Summer Street Rotary, extending south towards Home Meadows.	9.5	12.56
11	The transect is located along the Hingham Harbor shoreline at a point approximately 1,300 feet northwest of the intersection of Seal Cove Road and Martins Lane, extending east towards Martins Lane.	9.5	11.31



[1] Because of map scale limitations, the maximum wave elevation may not be shown on the FIRM.

TABLE 15 – REVISED TRANSECT DESCRIPTIONS – cont'd

TRANSECT	LOCATION	ELEVATION (feet NAVD 88) 1-PERCENT-ANNUAL-CHANCE STILLWATER	ELEVATION (feet NAVD 88) MAXIMUM 1-PERCENT ANNUAL CHANCE WAVE CREST[1]
12	The transect is located along the west side of Planters Hill at a point approximately 3,200 feet northwest of Martins Lane, extending southeast towards the Weir River.	9.5	15.00
13	The transect is located along the Hull Bay shoreline extending south along Beech Avenue towards World's End.	9.7	15.49/15.01*
14	The transect is located on southwest side of Spinnaker Island at a point approximately 400 feet south of the intersection of Spinnaker Island Causeway and Marina Drive, extending to the northeast.	9.7	15.55
15	The transect is located along the Hull Bay shoreline extending northeast along Western Avenue towards Main Street.	9.7	16.39
16	The transect is located at the north end of Peddocks Island, extending southwest towards island's center.	9.7	16.22
17	The transect is located along the Massachusetts Bay shoreline, extending south along Town Street.	9.7	16.95/15.97*
18	The transect is located along the Massachusetts Bay shoreline at a point approximately 900 feet northwest of the intersection of Christine Road and Harbor View Road, extending south towards Spring Street.	9.7	16.39
19	The transect is located along the Massachusetts Bay shoreline at a point approximately 150 feet west of the intersection of Nantasket Avenue and Fitzpatrick Way, extending southeast toward Allerton Harbor.	9.7	16.87/14.67*

REVISED DATA

*Wave propagation from Hingham Bay

[1] Because of map scale limitations, the maximum wave elevation may not be shown on the FIRM.

TABLE 16 – REVISED TRANSECT DATA – cont'd

FLOODING SOURCE	STILLWATER ELEVATIONS (feet NAVD 88[1]) 10-PERCENT-ANNUAL CHANCE	2-PERCENT-ANNUAL-CHANCE	1-PERCENT-ANNUAL-CHANCE	0.2-PERCENT-ANNUAL-CHANCE	ZONE	BASE FLOOD ELEVATION (feet NAVD 88)[1]
BUZZARDS BAY – continued						
Transect 199	7.1	10.7	12.5	16.2	VE	17 to 20
Transect 200	7.1	10.7	12.5	16.2	VE	19
					AE	14
HINGHAM BAY						
Transect 3	8.4	9.3	9.5	10.6	VE	13
					AE	11
Transect 4	8.4	9.3	9.5	10.6	VE	22
Transect 5	8.4	9.3	9.5	10.6	VE	14
HINGHAM HARBOR						
Transect 6	8.4	9.3	9.5	10.6	VE	13
Transect 7	8.4	9.3	9.5	10.6	VE	16
					AE	6
Transect 8	8.4	9.3	9.5	10.6	VE	12
					AE	10
Transect 9	8.4	9.3	9.5	10.6	VE	19
Transect 10	8.4	9.3	9.5	10.6	VE	14
					AE	11
Transect 11	8.4	9.3	9.5	10.6	VE	11

[1]North American Vertical Datum of 1988

REVISED DATA

TABLE 16 – REVISED TRANSECT DATA – cont'd

FLOODING SOURCE	STILLWATER ELEVATIONS (feet NAVD 88[1]) 10-PERCENT-ANNUAL CHANCE	2-PERCENT-ANNUAL-CHANCE	1-PERCENT-ANNUAL-CHANCE	0.2-PERCENT-ANNUAL-CHANCE	ZONE	BASE FLOOD ELEVATION (feet NAVD 88)[1]
MASSACHUSETTS BAY – continued						
Transect 24	8.4	9.3	9.7	10.6	VE AO	20-22
Transect 25	8.4	9.3	9.7	10.6	VE	36
Transect 26	8.4	9.3	9.7	10.6	VE AE	20-22 10-17
Transect 27	8.4	9.3	9.7	10.6	VE AE	21-26 10-15
Transect 28	8.4	9.3	9.7	10.6	VE	25
WEIR RIVER						
Transect 12	8.4	9.3	9.5	10.6	VE AE	17 10
WEYMOUTH BACK RIVER						
Transect 1	8.4	9.3	9.5	10.6	VE AE	14 10
Transect 2	8.4	9.3	9.5	10.6	VE	13

[1]North American Vertical Datum of 1988