FLOOD INSURANCE STUDY
FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 2 OF 4

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

COMMUNITY NAME	COMMUNITY NUMBER
CHARLESTOWN, TOWN OF	445395
EXETER, TOWN OF	440032
HOPKINTON, TOWN OF	440028
NARRAGANSETT INDIAN TRIBE	445414
NARRAGANSETT, TOWN OF	445402
NEW SHOREHAM, TOWN OF	440036
NORTH KINGSTOWN, TOWN OF	445404
RICHMOND, TOWN OF	440031
SOUTH KINGSTOWN, TOWN OF	445407
WESTERLY, TOWN OF	445410

FEMA

REVISED:

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TABLE OF CONTENTS

Volume 1

TABLE OF CONTENTS

Volume 1 (continued)

Figures

Tables

TABLE OF CONTENTS

Volume 2

Tables

TABLE OF CONTENTS

Volume 3

Exhibits

Volume 4

Exhibits

Published Separately

6.3 Floodplain and Floodway Delineation

The FIRM shows tints, screens, and symbols to indicate floodplains and floodways as well as the locations of selected cross sections used in the hydraulic analyses and floodway computations.

For riverine flooding sources, the mapped floodplain boundaries shown on the FIRM have been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated using the topographic elevation data described in Table 22. For each coastal flooding source studied as part of this FIS Report, the mapped floodplain boundaries on the FIRM have been delineated using the flood and wave elevations determined at each transect; between transects, boundaries were delineated using land use and land cover data, the topographic elevation data described in Table 22, and knowledge of coastal flood processes. In ponding areas, flood elevations were determined at each junction of the model; between junctions, boundaries were interpolated using the topographic elevation data described in Table 22.

In cases where the 1-percent and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

The floodway widths presented in this FIS Report and on the FIRM were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. Table 2 indicates the flooding sources for which floodways have been determined. The results of the floodway computations for those flooding sources have been tabulated for selected cross sections and are shown in Table 23, “Floodway Data.”

Certain flooding sources may have been studied that do not have published BFEs on the FIRMs, or for which there is a need to report the 1-percent-annual-chance flood elevations at selected cross sections because a published Flood Profile does not exist in this FIS Report. These streams may have also been studied using methods to determine non-encroachment zones rather than floodways. For these flooding sources, the 1-percent-annual-chance floodplain boundaries have been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated using the topographic elevation data described in Table 22. All topographic data used for modeling or mapping has been converted as necessary to NAVD88. The 1-percent-annual-chance elevations for selected cross sections along these flooding sources, along with their non-encroachment widths, if calculated, are shown in Table 24, “Flood Hazard and Non-Encroachment Data for Selected Streams.”

Table 22: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Vertical Accuracy	Horizontal Accuracy	Citation
Charlestown, Town of; Exeter, Town of; Hopkinton, Town of; Narragansett, Town of; Narragansett Indian Tribe; North Kingstown, Town of; Richmond, Town of; South Kingstown, Town of; Westerly, Town of	Ashaway River, Beaver River, Chipuxet River, Green Fall River, Pawcatuck River, Queen River, Usquepaug River, Wood River, other flooding sources in Pawcatuck-Wood Watershed	Northeast Light Detection and Ranging data (LiDAR) DEM 2011	10 cm RMSEz	2-foot contours	
Charlestown, Town of; North Kingstown, Town of; New Shoreham, Town of' and Westerly, Town of	Coastal Flooding	2006 LiDAR	+/- 0.33 ft at 95% confidence level	2-foot contours	Terrapoint USA 2006
Exeter, Town of	Zone A Flooding Sources within Quinebaug HUC-8 Watershed – Pachaug River	2011 LiDAR data for Northeast	<15cm RMSEz	1 meter	RGIS 2011
South Kingstown, Town of	Coastal Flooding	2-foot contours derived from DTM developed from April 2006 Aerial Imagery	N/A	1:100	EarthData International, Inc. 2006
Narragansett, Town of	Coastal Flooding	2-foot contours derived from planimetric data	N/A	2-foot contours	WSP Sells, Inc.2009
North Kingstown, Town of	Zone A Flooding Sources in Narragansett Watershed	Previously printed FIRMs	N/A	N/A	FEMA

BFEs shown at cross sections on the FIRM represent the 1-percent-annual-chance water surface elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations.

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	595	245	1,856	0.7	21.1	21.1	21.6	0.5
B	1,355	249	1,058	1.3	21.2	21.2	21.7	0.5
C	1,945	167	514	2.6	22.2	22.2	22.7	0.5
D	2,935	152	553	2.4	29.8	29.8	30.8	1.0
E	4,635	99	489	2.7	30.8	30.8	31.8	1.0
F	5,705	117	513	2.5	31.5	31.50	32.5	1.0
G	6,510	106	483	2.6	33.2	33.2	34.2	1.0
H	8,942	129	737	1.7	41.9	41.9	42.9	1.0
I	9,302	99	419	3.0	42.3	42.3	43.3	1.0
J	16,630	49	93	5.5	62.0	62.0	63.0	1.0
K	17,195	72	338	1.3	72.9	72.9	73.4	0.5
L	18,195	142	578	0.7	74.9	74.9	75.9	1.0
M	18,417	65	303	1.3	78.2	78.2	79.2	1.0

[1]Feet above Boston Neck Road

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	73	367 / 188[2]	1,253	1.7	29.7	24.5[3]	24.5	0.0
B	365	228 / 180[2]	959	2.2	29.7	25.0[3]	25.1	0.1
C	878	529	1,589	1.3	29.7	26.0[3]	26.1	0.1
D	1,379	389	1,197	1.8	29.7	26.8[3]	27.0	0.2
E	2,225	370	1,049	2.0	29.7	28.5[3]	28.8	0.3
F	3,021	325	1,152	1.8	29.8	29.8	30.3	0.5
G	3,554	269	740	2.9	30.4	30.4	31.2	0.8
H	4,035	132	583	3.7	31.8	31.8	32.4	0.6
I	4,356	100	772	2.8	32.2	32.2	33.0	0.8
J	4,474	75	674	3.2	32.3	32.3	33.0	0.7
K	4,525	119	904	2.4	34.8	34.8	34.8	0.0
L	4,650	71	492	4.3	35.4	35.4	35.4	0.0
M	4,800	73	542	3.9	35.7	35.7	35.7	0.0
N	4,982	69	514	4.1	36.0	36.0	36.0	0.0
O	5,095	68	499	4.3	36.2	36.2	36.2	0.0
P	5,386	119	620	3.4	36.9	36.9	37.0	0.1
Q	5,528	127	1,052	2.0	42.6	42.6	42.6	0.0
R	5,789	209	1,121	1.9	42.7	42.7	42.7	0.0
S	6,403	83	783	2.7	43.0	43.0	43.0	0.0
T	7,262	96	606	3.5	43.5	43.5	43.6	0.1
U	7,738	147	958	2.2	43.9	43.9	44.2	0.3
V	8,184	64	513	4.2	44.1	44.1	44.5	0.4
W	8,507	54	421	5.1	44.5	44.5	45.0	0.5
X	8,566	136	839	2.5	44.9	44.9	45.4	0.5

[1]Feet above confluence with Pawcatuck River

[2]Total floodway width / width within Washington County

[3]Elevation computed without consideration of backwater effects from Pawcatuck River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: ASHAWAY RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Y	8,631	136	831	2.6	44.9	44.9	45.4	0.5
Z	8,662	194	791	2.7	46.1	46.1	46.2	0.1
AA	8,874	234	1,284	1.7	46.3	46.3	46.4	0.1
AB	9,142	247	1,134	1.9	46.3	46.3	46.4	0.1
AC	9,482	192	1,075	2.0	46.6	46.6	46.7	0.1
AD	9,970	178	964	2.2	46.7	46.7	46.8	0.1
AE	10,262	327	1,588	1.3	46.9	46.9	47.0	0.1
AF	10,817	661	1,585	1.3	47.1	47.1	47.2	0.1
AG	11,662	609	2,348	0.9	48.2	48.2	48.2	0.0
AH	11,759	506	1,843	1.2	48.3	48.3	48.3	0.0
AI	11,910	210	1,135	1.9	49.5	49.5	49.5	0.0
AJ	12,445	201	1,288	1.7	49.6	49.6	49.7	0.1
AK	13,193	450	2,617	0.8	50.2	50.2	50.3	0.1
AL	13,922	671	3,012	0.7	50.5	50.5	50.6	0.1
AM	14,312	290 / 197[2]	1,439	1.5	50.8	50.8	50.9	0.1
AN	14,664	396 / 108[2]	1,536	1.4	51.2	51.2	51.3	0.1
AO	15,036	401 / 451[2]	1,374	2.2	51.7	51.7	51.9	0.2
AP	15,780	302	1,287	2.1	53.7	53.7	54.1	0.4
AQ	15,948	294	2,894	1.5	55.5	55.5	55.8	0.3
AR	16,185	87	731	2.9	56.4	56.4	56.7	0.3
AS	16,346	786 / 437[2]	5,452	0.4	56.9	56.9	57.0	0.1
AT	16,962	470 / 349[2]	2,642	0.7	56.9	56.9	57.0	0.1

[1]Feet above confluence with Pawcatuck River

[2]Total floodway width / width within Washington County

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: ASHAWAY RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	106	25	162	3.3	107.3	107.3	107.9	0.6
B	135	55	270	2.0	107.4	107.4	108.0	0.6
C	180	33	131	4.0	112.4	112.4	112.4	0.0
D	255	28	137	3.9	112.5	112.5	112.6	0.1
E	328	21	101	5.3	113.8	113.8	113.8	0.0

[1]Feet above confluence with Wood River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: BARBERVILLE CANAL

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	350	454	1,231	0.9	84.9	84.9	84.9	0.0
B	697	161	515	1.8	85.3	85.3	85.3	0.0
C	1,393	76	331	2.7	85.9	85.9	86.1	0.2
D	2,359	30	163	5.5	87.3	87.3	88.1	0.8
E	3,135	264	1,028	0.9	89.0	89.0	89.7	0.7
F	4,128	263	1,078	0.8	90.0	90.0	90.4	0.4
G	4,823	191	801	1.1	90.7	90.7	91.0	0.3
H	5,277	273	1,161	0.8	91.2	91.2	91.4	0.2
I	5,691	489	2,135	0.4	91.4	91.4	91.6	0.2
J	6,464	695	1,399	0.6	91.6	91.6	91.8	0.2
K	6,954	500	1,182	0.8	92.0	92.0	92.1	0.1
L	7,096	184	656	1.4	92.7	92.7	92.8	0.1
M	7,775	279	1,075	0.8	93.4	93.4	93.6	0.2
N	8,542	233	828	1.0	94.1	94.1	94.3	0.2
O	9,044	205	739	1.1	94.5	94.5	94.8	0.3
P	9,579	163	617	1.3	95.0	95.0	95.4	0.4
Q	10,239	193	793	1.0	95.7	95.7	96.2	0.5
R	11,042	528	1,794	0.5	96.2	96.2	96.6	0.4
S	11,619	245	912	0.9	96.4	96.4	96.8	0.4
T	12,247	308	1,121	0.7	96.9	96.9	97.2	0.3
U	12,639	369	1,352	0.6	97.2	97.2	97.4	0.2
V	13,160	416	1,515	0.5	97.5	97.5	97.7	0.2
W	13,330	250	854	1.0	97.6	97.6	97.8	0.2
X	13,423	227	808	1.0	97.6	97.6	97.8	0.2

[1]Feet above confluence with Pawcatuck River

[2]Elevation computed without consideration of backwater effects from Pawcatuck River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: BEAVER RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Y	14,168	175	469	1.7	98.3	98.3	98.6	0.3
Z	14,268	193	797	1.0	101.2	101.2	101.2	0.0
AA	14,417	145	564	1.5	101.3	101.3	101.3	0.0
AB	14,876	303	1,307	0.6	101.6	101.6	101.6	0.0
AC	15,550	242	991	0.8	101.9	101.9	101.9	0.0
AD	15,672	344	1,346	0.6	102.4	102.4	102.4	0.0
AE	16,167	613	2,608	0.3	102.5	102.5	102.6	0.1
AF	16,673	791	3,025	0.3	102.6	102.6	102.6	0.0
AG	17,251	1315	4,070	0.2	102.7	102.7	102.7	0.0
AH	17,880	642	2,136	0.4	102.8	102.8	102.8	0.0
AI	18,234	130	290	2.3	102.7	102.7	102.8	0.1
AJ	18,982	76	214	3.1	106.0	106.0	106.0	0.0
AK	19,588	94	175	3.8	108.8	108.8	108.9	0.1
AL	19,856	135	311	2.1	110.2	110.2	110.2	0.0
AM	20,248	52	382	3.8	111.4	111.4	111.4	0.0
AN	20,362	240	760	0.9	112.7	112.7	112.7	0.0

[1]Feet above confluence with Pawcatuck River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: BEAVER RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	300	20	131	3.4	60.2	60.0[2]	60.8	0.8
B	335	30	159	2.8	60.2	60.1[2]	60.9	0.8
C	800	50	327	1.4	60.5	60.5	61.2	0.7
D	835	50	349	1.3	60.5	60.5	61.3	0.8
E	2,400	60	146	3.0	61.8	61.8	62.6	0.8
F	3,100	60	252	1.8	63.4	63.4	64.3	0.9
G	4,100	60	247	1.8	64.3	64.3	65.2	0.9
H	5,400	40	122	3.6	66.4	66.4	67.0	0.6
I	5,800	40	153	2.9	67.3	67.3	68.1	0.8
J	6,800	40	265	1.5	67.8	67.8	68.7	0.9
K	6,840	50	244	1.6	70.3	70.3	70.3	0.0
L	8,300	50	86	4.5	70.7	70.7	70.8	0.1
M	8,330	70	67	5.8	74.6	74.6	75.6	1.0
N	9,700	70	314	1.2	75.0	75.0	76.0	1.0
O	11,400	70	172	2.3	76.4	76.4	77.3	0.9
P	11,600	30	111	3.5	78.9	78.9	78.9	0.0
Q	12,500	30	145	2.3	79.0	79.0	79.3	0.3
R	12,550	30	121	2.8	79.4	79.4	79.4	0.0

[1]Feet above confluence with Wood River

[2]Elevation computed without consideration of backwater effects from Wood River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: CANONCHET BROOK

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	1,450	30	70	3.6	81.4	81.4	81.7	0.3
B	1,490	20	57	4.4	83.2	83.2	83.2	0.0
C	2,830	15	65	3.8	85.3	85.3	86.2	0.9
D	2,870	15	71	3.5	86.3	86.3	87.0	0.7
E	2,970	15	74	3.4	86.9	86.9	87.5	0.6
F	3,100	15	73	3.4	87.0	87.0	87.7	0.7
G	3,130	15	68	3.7	87.2	87.2	87.8	0.6
H	3,250	30	153	1.6	93.8	93.8	93.8	0.0
I	3,850	15	39	6.4	93.8	93.8	94.7	0.9
J	3,950	15	36	7.0	95.7	95.7	96.5	0.8
K	3,970	15	73	3.4	102.5	102.5	103.0	0.5
L	4,050	40	184	1.4	107.1	107.1	107.4	0.3
M	4,550	15	53	1.1	107.1	107.1	107.6	0.5
N	4,800	15	13	4.6	107.9	107.9	108.0	0.1
O	4,850	15	40	1.5	109.8	109.8	110.4	0.6
P	4,890	15	46	1.3	110.3	110.3	110.8	0.5
Q	5,750	15	11	5.6	115.5	115.5	115.5	0.0

[1]Feet above confluence with Canonchet Brook

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: CANONCHET BROOK TRIBUTARY

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	159	5,959	8,816	0.1	92.3	91.8[2]	91.8	0.0
B	639	5,573	7,859	0.1	92.3	91.9[2]	91.9	0.0
C	1,192	5,495	6,388	0.1	92.3	91.9[2]	91.9	0.0
D	1,704	6,016	5,401	0.1	92.3	91.9[2]	91.9	0.0
E	2,358	6,047	4,966	0.2	92.3	92.1[2]	92.1	0.0
F	3,066	4,414	4,249	0.2	92.3	92.2[2]	92.2	0.0
G	3,552	6,450	4,488	0.2	92.4	92.4	92.4	0.0
H	4,220	6,499	4,773	0.2	92.6	92.6	92.6	0.0
I	4,888	6,449	5,070	0.2	92.8	92.8	92.8	0.0
J	5,516	3,682	3,752	0.3	93.0	93.0	93.0	0.0
K	6,148	3,050	3,435	0.2	93.2	93.2	93.2	0.0
L	6,808	1,772	2,403	0.4	93.5	93.5	93.5	0.0
M	7,530	739	1,795	0.7	94.1	94.1	94.1	0.0
N	8,379	465	998	0.6	94.7	94.7	94.8	0.1
O	9,209	549	1,319	0.5	94.9	94.9	95.1	0.2
P	10,090	510	1,346	0.5	95.2	95.2	95.4	0.2
Q	10,756	604	1,688	0.4	95.4	95.4	95.5	0.1
R	11,322	981	2,045	0.3	95.5	95.5	95.6	0.1
S	11,910	296	841	0.7	95.6	95.6	95.7	0.1
T	12,619	383	911	0.6	95.8	95.8	95.9	0.1
U	13,149	514	1,210	0.5	95.9	95.9	96.1	0.2
V	13,716	570	1,304	0.4	96.0	96.0	96.1	0.1
W	14,468	717	1,858	0.3	96.2	96.2	96.3	0.1
X	14,779	624	1,737	0.3	96.6	96.6	96.7	0.1

[1]Feet above mouth at Worden Pond

[2]Elevation computed without consideration of backwater effects from Worden Pond

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: CHIPUXET RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Y	15,395	259	844	0.7	96.7	96.7	96.8	0.1
Z	16,210	259	886	0.6	96.9	96.9	97.0	0.1
AA	16,789	185	659	0.8	97.0	97.0	97.1	0.1
AB	17,369	231	757	0.7	97.2	97.2	97.3	0.1
AC	17,862	314	989	0.6	97.4	97.4	97.5	0.1
AD	18,107	245	1,166	0.5	99.1	99.1	99.1	0.0
AE	18,952	286	1,339	0.4	99.2	99.2	99.2	0.0
AF	19,488	237	1,102	0.5	99.2	99.2	99.2	0.0
AG	19,679	232	1,281	0.4	99.2	99.2	99.3	0.1
AH	20,261	815	2,682	0.2	99.3	99.3	99.3	0.0
AI	20,945	232	1,340	0.4	99.3	99.3	99.3	0.0
AJ	21,440	397	1,605	0.3	99.3	99.3	99.3	0.0
AK	21,642	451	2,861	0.2	99.3	99.3	99.3	0.0
AL	22,024	759	11,281	0.0	99.3	99.3	99.3	0.0
AM	22,418	749	14,817	0.0	99.3	99.3	99.3	0.0
AN	23,246	461	1,206	0.5	99.3	99.3	99.3	0.0
AO	23,406	177	554	1.0	99.9	99.9	99.9	0.0
AP	23,566	115	503	1.1	100.0	100.0	100.1	0.1
AQ	23,865	194	1,379	0.4	100.1	100.1	100.2	0.1
AR	24,502	193	1,539	0.3	100.1	100.1	100.2	0.1
AS	25,190	1,634	38,248	0.0	100.1	100.1	100.2	0.1
AT	25,734	1,474	38,997	0.0	100.1	100.1	100.2	0.1
AU	26,457	964	15,690	0.0	100.1	100.1	100.2	0.1
AV	27,241	920	3,652	0.1	100.1	100.1	100.2	0.1

[1]Feet above mouth at Worden Pond

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: CHIPUXET RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AW	27,582	926	3,576	0.1	100.1	100.1	100.2	0.1
AX	28,424	1,033	4,159	0.1	100.1	100.1	100.2	0.1
AY	28,971	1,003	3,636	0.1	100.1	100.1	100.2	0.1
AZ	29,844	213	874	0.5	100.1	100.1	100.2	0.1
BA	30,576	172	669	0.7	100.2	100.2	100.4	0.2
BB	30,707	238	1,233	0.4	100.7	100.7	101.6	0.9
BC	31,244	164	684	0.7	100.7	100.7	101.6	0.9
BD	32,069	95	372	1.2	101.1	101.1	102.0	0.9
BE	32,598	42	194	2.4	101.5	101.5	102.5	1.0
BF	33,156	36	143	3.2	102.2	102.2	103.1	0.9
BG	33,594	34	149	3.1	103.1	103.1	104.1	1.0
BH	34,266	168	440	1.0	104.4	104.4	105.0	0.6
BI	35,094	122	252	1.8	105.8	105.8	106.0	0.2
BJ	35,752	78	190	3.7	107.6	107.6	107.7	0.1
BK	36,160	39	111	4.2	109.5	109.5	109.9	0.4
BL	36,328	192	1,042	0.4	111.7	111.7	112.0	0.3
BM	36,470	355	1,565	0.3	111.7	111.7	112.0	0.3
BN	36,969	428	1,602	0.3	111.8	111.8	112.1	0.3
BO	37,121	239	980	0.5	111.8	111.8	112.1	0.3
BP	37,390	141	688	0.7	111.8	111.8	112.1	0.3
BQ	37,524	132	668	0.7	112.7	112.7	113.0	0.3
BR	37,793	111	257	1.8	112.7	112.7	113.0	0.3
BS	37,902	100	189	2.4	112.9	112.9	113.2	0.3
BT	37,928	76	84	5.5	114.6	114.6	114.6	0.0

[1]Feet above mouth at Worden Pond

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BU	38,162	389	3,822	0.1	122.1	122.1	122.1	0.0
BV	38,701	336	3,028	0.2	122.1	122.1	122.1	0.0
BW	39,274	113	656	0.7	122.1	122.1	122.1	0.0
BX	39,566	148	848	0.5	122.1	122.1	122.1	0.0
BY	40,001	317	1,595	0.3	122.1	122.1	122.1	0.0
BZ	40,438	228	857	0.5	122.1	122.1	122.1	0.0
CA	40,734	185	668	0.7	122.1	122.1	122.1	0.0
CB	41,130	167	338	1.4	122.1	122.1	122.1	0.0
CC	41,611	21	88	5.2	123.3	123.3	123.5	0.2
CD	41,743	151	776	0.5	125.6	125.6	125.9	0.3
CE	42,345	80	347	1.2	125.7	125.7	126.0	0.3
CF	43,180	83	322	1.3	126.0	126.0	126.4	0.4
CG	43,899	48	144	2.9	126.3	126.3	126.9	0.6
CH	44,756	143	388	1.1	127.8	127.8	128.5	0.7
CI	45,256	26	107	2.3	128.4	128.4	129.2	0.8
CJ	45,612	18	64	3.8	128.8	128.8	129.7	0.9
CK	46,010	39	75	3.2	130.6	130.6	131.3	0.7
CL	46,065	421	1,470	0.2	135.1	135.1	135.1	0.0

[1]Feet above mouth at Worden Pond

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: CHIPUXET RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	272	174	562	0.4	107.1	107.1	107.8	0.7
B	347	15	35	6.4	110.7	110.7	111.2	0.5
C	352	15	38	5.9	111.3	111.3	111.3	0.0
D	375	161	591	0.4	113.2	113.2	113.2	0.0

[1]Feet above confluence with Usquepaug River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: GLEN ROCK CANAL

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	386	309	1,744	1.0	57.0	57.0	57.1	0.1
B	578	372	1,712	1.0	57.0	57.0	57.1	0.1

[1]Feet above confluence with Parmenter Brook and Ashaway River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: GREEN FALL RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	150	53	44	5.2	9.9	5.2[2]	5.2	0.0
B	300	88	590	0.4	11.9	11.9	11.9	0.0
C	1,250	45	104	2.2	11.9	11.9	11.9	0.0
D	2,700	28	42	5.5	33.0	33.0	33.3	0.3
E	2,819	20	59	4.0	34.5	34.5	34.6	0.1
F	5,459	80	144	1.6	39.9	39.9	40.9	1.0

[1]Feet above confluence with Mastuxet Cove

[2]Elevation computed without consideration of backwater effects from Little Narragansett Bay

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: MASTUXET BROOK

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0	55	91	4.5	10.5	1.4[2]	1.4	0.0
B	1,230	21	89	4.6	10.5	3.9[2]	4.5	0.6
C	1,500	65	390	1.0	13.6	13.6	13.6	0.0
D	2,640	225	1,012	0.4	13.6	13.6	13.6	0.0
E	4,050	1,500	21,387	0.0	13.6	13.6	13.6	0.0
F	5,265	103	373	0.8	13.6	13.6	13.6	0.0
G	7,555	48	273	1.1	13.7	13.7	13.9	0.2
H	8,235	55	248	1.2	13.7	13.7	13.9	0.2
I	9,116	44	90	2.7	14.8	14.8	14.8	0.0
J	10,600	17	97	2.5	16.6	16.6	16.8	0.2
K	11,100	129	753	0.3	22.1	22.1	22.1	0.0
L	11,910	18	71	2.9	22.1	22.1	22.1	0.0
M	12,638	27	80	2.6	22.4	22.4	22.9	0.5

[1]Feet above confluence with Pettaquamscutt River

[2]Elevation computed without consideration of backwater effects from Narragansett Bay

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: MATTATUXET RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	40	15	19	6.5	29.8	23.1[2]	23.1	0.0
B	1,200	15	51	2.4	29.8	28.9[2]	29.8	0.9
C	1,550	15	31	3.9	30.2	30.2	30.7	0.5
D	1,650	20	38	3.2	32.2	32.2	32.3	0.1
E	3,000	20	50	2.4	36.0	36.0	37.0	1.0
F	3,250	20	26	4.6	38.1	38.1	38.1	0.0

[1]Feet above confluence with Pawcatuck River

[2]Elevation computed without consideration of backwater effects from Pawcatuck River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: MILE BROOK

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	134	939 / 474[2]	5,456	1.4	9.9	1.5[3]	1.5	0.0
B	5,221	359 / 153[2]	2,564	2.9	9.9	2.3[3]	2.3	0.0
C	6,585	161 / 91[2]	1,833	4.1	9.9	2.7[3]	2.7	0.0
D	8,211	118 / 62[2]	1,149	6.5	9.9	3.5[3]	3.5	0.0
E	8,952	133 / 94[2]	1,392	5.4	9.9	4.4[3]	4.4	0.0
F	9,370	103 / 46[2]	1,221	6.1	9.9	5.4[3]	5.4	0.0
G	9,872	109 / 48[2]	919	8.1	9.9	5.8[3]	5.8	0.0
H	10,322	214 / 47[2]	1,512	4.9	9.9	7.8[3]	7.8	0.0
I	10,682	347 / 64[2]	2,296	3.3	9.9	8.3[3]	8.3	0.0
J	11,437	212 / 165[2]	1,329	5.6	9.9	8.9[3]	8.9	0.0
K	12,191	149 / 49[2]	1,060	7.1	10.7	10.7	10.8	0.1
L	12,331	135 / 64[2]	1,282	5.8	12.4	12.4	12.4	0.0
M	12,911	223 / 66[2]	1,883	4.0	13.3	13.3	13.3	0.0
N	13,779	219 / 77[2]	2,046	3.7	14.0	14.0	14.0	0.0
O	14,390	281 / 195[2]	2,494	3.0	14.3	14.3	14.3	0.0
P	15,483	170 / 83[2]	1,603	4.7	14.8	14.8	14.8	0.0
Q	16,020	175 / 77[2]	1,619	4.6	15.0	15.0	15.2	0.2
R	16,241	175 / 71[2]	1,683	4.4	15.1	15.1	15.5	0.4
S	16,639	175 / 61[2]	1,758	4.3	16.8	16.8	16.9	0.1
T	17,045	230 / 171[2]	1,593	4.7	16.9	16.9	17.1	0.2
U	17,460	266 / 188[2]	2,558	2.9	17.2	17.2	17.9	0.7
V	18,148	240 / 142[2]	2,070	3.6	17.8	17.8	18.4	0.6
W	18,424	200 / 150[2]	1,747	4.3	18.0	18.0	18.6	0.6
X	19,183	200 / 87[2]	1,639	4.6	18.6	18.6	19.4	0.8

[1]Feet above Gayitt Point

[2]Total floodway width / width within Washington County

[3]Elevation computed without consideration of backwater effect from Little Narragansett Bay

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: PAWCATUCK RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Y	19,723	195 / 100[2]	1,838	4.1	19.3	19.3	20.0	0.7
Z	20,152	205 / 175[2]	2,012	2.9	19.8	19.8	20.5	0.7
AA	20,300	215 / 226[2]	1,806	3.2	19.8	19.8	20.5	0.7
AB	20,544	265 / 303[2]	2,130	2.7	20.0	20.0	20.7	0.7
AC	20,893	201 / 142[2]	1,466	3.9	20.1	20.1	20.8	0.7
AD	21,151	216 / 80[2]	1,591	3.6	20.5	20.5	21.1	0.6
AE	21,237	136 / 46[2]	1,273	4.5	20.5	20.5	21.1	0.6
AF	21,321	278 / 162[2]	1,803	4.1	20.7	20.7	21.3	0.6
AG	21,469	340 / 153[2]	1,965	3.8	20.9	20.9	21.4	0.5
AH	21,927	330 / 66[2]	1,613	4.6	21.2	21.2	21.7	0.5
AI	22,311	300 / 75[2]	1,921	3.9	22.2	22.2	22.5	0.3
AJ	22,452	330 / 81[2]	1,930	3.9	22.3	22.3	22.6	0.3
AK	22,858	250 / 167[2]	1,622	4.3	22.6	22.6	22.9	0.3
AL	24,702	199 / 131[2]	1,835	3.9	24.3	24.3	24.6	0.3
AM	25,690	131 / 59[2]	1,284	5.5	24.8	24.8	25.2	0.4
AN	27,365	133 / 66[2]	1,499	4.7	26.2	26.2	26.8	0.6
AO	29,414	149 / 78[2]	1,859	3.8	27.3	27.3	27.9	0.6
AP	29,627	143 / 81[2]	1,952	3.6	27.6	27.6	28.4	0.8
AQ	30,199	200 / 128[2]	2,438	2.9	27.8	27.8	28.6	0.8
AR	30,844	200 / 100[2]	2,188	3.2	27.9	27.9	28.7	0.8
AS	31,691	200 / 104[2]	2,129	3.3	28.1	28.1	28.9	0.8
AT	32,999	200 / 156[2]	2,081	3.4	28.5	28.5	29.4	0.9
AU	34,068	275 / 116[2]	2,888	2.5	28.9	28.9	29.8	0.9
AV	34,844	382 / 264[2]	3,785	1.9	29.1	29.1	30.0	0.9

[1]Feet above Gayitt Point

[2]Total floodway width / width within Washington County

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: PAWCATUCK RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AW	36,419	427 / 63[2]	4,114	1.7	29.4	29.4	30.3	0.9
AX	37,082	600 / 89[2]	5,443	1.3	29.5	29.5	30.4	0.9
AY	37,268	600 / 74[2]	4,565	1.6	29.6	29.6	30.5	0.9
AZ	37,659	650 / 295[2]	6,038	1.2	29.6	29.6	30.6	1.0
BA	37,959	450	3,769	1.7	29.7	29.7	30.6	0.9
BB	38,828	242	2,509	2.6	29.8	29.8	30.8	1.0
BC	38,908	242	2,259	2.9	29.8	29.8	30.8	1.0
BD	39,165	241	2,929	2.2	33.2	33.2	33.4	0.2
BE	39,432	309	3,256	2.0	33.3	33.3	33.4	0.1
BF	40,304	421	3,275	2.0	33.3	33.3	33.5	0.2
BG	41,208	385	3,595	1.8	33.5	33.5	33.6	0.1
BH	43,500	380	3,564	1.8	33.7	33.7	33.9	0.2
BI	44,565	1,193	8,256	0.8	33.8	33.8	34.0	0.2
BJ	46,044	633	4,982	1.3	33.9	33.9	34.1	0.2
BK	46,842	315	2,733	2.4	33.9	33.9	34.1	0.2
BL	47,108	200	2,753	2.3	34.8	34.8	35.0	0.2
BM	47,476	350	3,699	1.7	34.9	34.9	35.0	0.1
BN	48,671	610	4,696	1.4	35.0	35.0	35.2	0.2
BO	50,252	600	4,659	1.4	35.2	35.2	35.6	0.4
BP	52,075	442	4,208	1.5	35.4	35.4	36.0	0.6
BQ	55,630	855	7,361	0.9	35.7	35.7	36.5	0.8
BR	58,655	1,320	10,793	0.6	36.0	36.0	36.8	0.8
BS	62,184	400	3,642	1.8	36.4	36.4	37.3	0.9
BT	64,195	1,000	8,178	0.8	36.9	36.9	37.8	0.9

[1]Feet above Gayitt Point

[2]Total floodway width / width within Washington County

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: PAWCATUCK RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BU	67,204	1,345	10,042	0.6	37.3	37.3	38.1	0.8
BV	67,323	1,722	11,750	0.5	37.3	37.3	38.2	0.9
BW	67,609	2,080	15,207	0.4	37.4	37.4	38.2	0.8
BX	70,377	1,200	8,228	0.7	37.5	37.5	38.4	0.9
BY	71,769	300	2,540	2.3	37.5	37.5	38.5	1.0
BZ	73,660	655	5,517	1.1	38.3	38.3	39.1	0.8
CA	75,329	200	2,220	2.7	38.6	38.6	39.4	0.8
CB	76,082	235	2,572	2.3	38.8	38.8	39.6	0.8
CC	76,478	167	2,146	2.8	38.9	38.9	39.7	0.8
CD	76,578	175	2,241	2.7	38.9	38.9	39.7	0.8
CE	76,729	200	1,797	3.3	39.0	39.0	39.8	0.8
CF	77,049	250	2,305	2.6	39.6	39.6	40.5	0.9
CG	77,460	320	2,400	2.5	39.7	39.7	40.6	0.9
CH	77,991	473	3,582	1.7	40.0	40.0	40.9	0.9
CI	78,682	450	3,514	1.7	40.2	40.2	41.0	0.8
CJ	79,114	400	3,117	1.9	40.4	40.4	41.1	0.7
CK	79,378	300	2,727	2.2	41.3	41.3	41.4	0.1
CL	79,992	300	2,727	2.2	41.5	41.5	41.6	0.1
CM	80,707	300	2,582	2.3	41.7	41.7	41.8	0.1
CN	82,393	887	6,878	0.9	42.0	42.0	42.2	0.2
CO	86,057	733	5,903	1.0	42.3	42.3	42.7	0.4
CP	87,351	1,450	11,753	0.5	42.3	42.3	42.8	0.5
CQ	88,516	562	4,663	1.2	42.4	42.4	42.8	0.4
CR	89,744	400	3,390	1.7	42.4	42.4	43.1	0.7

[1]Feet above Gayitt Point

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: PAWCATUCK RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
CS	90,614	475	3,902	1.5	42.6	42.6	43.4	0.8
CT	92,253	353	3,189	1.8	43.0	43.0	43.8	0.8
CU	93,385	165	1,766	3.2	43.3	43.3	44.2	0.9
CV	93,739	194	2,228	2.5	43.6	43.6	44.4	0.8
CW	94,021	330	3,223	1.8	43.7	43.7	44.6	0.9
CX	94,511	300	2,857	2.0	43.8	43.8	44.7	0.9
CY	95,352	200	2,485	2.3	44.1	44.1	45.0	0.9
CZ	95,944	201	2,304	2.5	44.2	44.2	45.1	0.9
DA	96,255	200	2,197	2.6	45.3	45.3	46.1	0.8
DB	96,772	200	2,230	2.5	45.5	45.5	46.3	0.8
DC	98,432	165	2,053	2.8	46.0	46.0	46.9	0.9
DD	99,567	198	2,301	2.5	46.3	46.3	47.2	0.9
DE	100,977	200	2,260	2.5	46.7	46.7	47.7	1.0
DF	102,228	256	2,171	2.6	47.3	47.3	48.3	1.0
DG	102,702	400	3,865	0.7	47.7	47.7	48.6	0.9
DH	103,616	400	4,084	0.6	47.7	47.7	48.7	1.0
DI	104,685	645	6,410	0.4	47.8	47.8	48.7	0.9
DJ	105,603	651	5,777	0.4	47.8	47.8	48.8	1.0
DK	106,546	620	5,664	0.5	47.9	47.9	48.8	0.9
DL	107,347	612	4,896	0.5	47.9	47.9	48.9	1.0
DM	108,605	600	5,158	0.5	48.0	48.0	48.9	0.9
DN	109,057	600	4,908	0.5	48.0	48.0	49.0	1.0
DO	109,460	270	2,306	1.1	48.2	48.2	49.1	0.9
DP	110,215	435	3,597	0.7	48.3	48.3	49.2	0.9

[1]Feet above Gayitt Point

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
DQ	111,235	400	3,079	0.8	48.4	48.4	49.3	0.9
DR	111,889	460	3,688	0.7	48.5	48.5	49.4	0.9
DS	113,174	415	3,424	0.7	48.7	48.7	49.6	0.9
DT	113,842	250	2,131	1.1	48.7	48.7	49.6	0.9
DU	114,239	255	2,089	1.2	49.2	49.2	50.1	0.9
DV	114,824	349	2,883	0.8	49.4	49.4	50.2	0.8
DW	115,625	350	2,741	0.8	49.5	49.5	50.4	0.9
DX	116,523	350	2,681	0.9	49.7	49.7	50.5	0.8
DY	117,316	350	2,696	0.9	49.8	49.8	50.6	0.8
DZ	118,173	400	2,851	0.8	49.9	49.9	50.8	0.9
EA	118,530	300	2,049	1.1	50.0	50.0	50.9	0.9
EB	118,952	150	998	2.3	50.3	50.3	51.1	0.8
EC	119,219	246	1,766	1.3	50.4	50.4	51.3	0.9
ED	119,998	200	1,578	1.5	50.7	50.7	51.6	0.9
EE	120,945	210	1,507	1.5	51.0	51.0	51.9	0.9
EF	121,488	265	1,761	1.3	51.2	51.2	52.0	0.8
EG	121,667	225	1,394	1.7	51.2	51.2	52.1	0.9
EH	121,894	100	942	2.5	52.5	52.5	53.4	0.9
EI	122,461	175	1,492	1.6	52.8	52.8	53.7	0.9
EJ	123,583	100	899	2.6	53.2	53.2	54.1	0.9
EK	124,154	235	1,802	1.3	53.4	53.4	54.4	1.0
EL	124,599	180	1,271	1.8	53.5	53.5	54.4	0.9
EM	124,895	199	1,454	1.6	53.6	53.6	54.6	1.0
EN	125,547	200	1,518	1.5	53.9	53.9	54.8	0.9

[1]Feet above Gayitt Point

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
EO	126,384	150	1,289	1.8	54.1	54.1	55.1	1.0
EP	127,189	180	1,413	1.6	54.5	54.5	55.4	0.9
EQ	127,995	800	5,353	0.4	54.8	54.8	55.6	0.8
ER	128,277	753	4,875	0.5	54.8	54.8	55.6	0.8
ES	128,799	672	4,524	0.5	54.9	54.9	55.7	0.8
ET	129,153	429	2,328	1.0	54.9	54.9	55.7	0.8
EU	129,770	293	1,929	1.2	55.1	55.1	55.8	0.7
EV	130,577	285	1,496	1.5	55.3	55.3	56.0	0.7
EW	131,235	230	1,155	1.9	59.1	59.1	59.1	0.0
EX	131,608	258	1,160	1.9	59.3	59.3	59.4	0.0
EY	132,042	340	1,550	1.5	59.7	59.7	59.7	0.0
EZ	132,666	105	863	2.6	60.0	60.0	60.1	0.1
FA	133,780	105	793	2.8	60.7	60.7	60.8	0.1
FB	134,431	197	1,275	1.8	61.1	61.1	61.2	0.1
FC	135,560	305	1,549	1.4	61.6	61.6	61.8	0.2
FD	136,321	290	1,557	1.4	61.9	61.9	62.1	0.2
FE	137,091	95	708	3.1	62.3	62.3	62.5	0.2
FF	137,590	90	741	3.0	62.7	62.7	62.8	0.1
FG	137,961	195	1,096	2.0	62.9	62.9	63.2	0.3
FH	138,401	90	729	3.0	63.1	63.1	63.4	0.3
FI	139,092	80	734	3.0	63.5	63.5	63.9	0.4
FJ	139,500	80	692	3.2	63.8	63.8	64.2	0.4
FK	139,746	112	900	2.4	64.7	64.7	65.3	0.6
FL	139,802	179	2,600	0.8	64.8	64.8	65.4	0.6

[1]Feet above Gayitt Point

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: PAWCATUCK RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
FM	140,029	67	336	6.5	64.6	64.6	65.3	0.7
FN	140,209	60	291	7.5	67.3	67.3	67.3	0.0
FO	140,356	85	386	5.7	69.1	69.1	69.1	0.0
FP	140,739	187	924	2.4	69.9	69.9	70.0	0.1
FQ	140,948	63	346	6.3	69.8	69.8	69.8	0.0
FR	141,465	75	498	4.4	71.4	71.4	71.4	0.0
FS	141,760	124	1,028	2.1	71.7	71.7	71.8	0.1
FT	141,998	67	282	7.8	71.9	71.9	72.0	0.1
FU	142,138	95	455	4.8	73.1	73.1	73.1	0.0
FV	142,328	120	648	3.4	73.6	73.6	73.6	0.0
FW	142,432	59	231	9.5	73.4	73.4	73.4	0.0
FX	142,642	89	580	3.8	84.4	84.4	84.4	0.0
FY	142,938	139	745	2.9	84.6	84.6	84.6	0.0
FZ	143,659	365	912	2.4	84.8	84.8	84.8	0.0
GA	144,543	316	1,094	1.8	85.1	85.1	85.1	0.0
GB	145,054	247	890	2.2	85.3	85.3	85.3	0.0
GC	145,458	374	1,180	1.6	85.5	85.5	85.5	0.0
GD	145,945	101	641	3.0	85.7	85.7	85.8	0.1
GE	146,123	70	497	3.9	86.0	86.0	86.1	0.1
GF	146,656	78	367	5.3	86.8	86.8	86.8	0.0
GG	146,841	275	1,546	1.2	87.7	87.7	87.9	0.2
GH	147,002	210	998	1.9	87.8	87.8	87.9	0.1
GI	147,096	135	377	5.1	87.8	87.8	87.8	0.0
GJ	147,250	130	620	3.1	87.9	87.9	88.8	0.9

[1]Feet above Gayitt Point

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
GK	147,368	129	580	3.3	88.0	88.0	88.9	0.9
GL	147,439	75	398	4.8	88.0	88.0	88.9	0.9
GM	147,493	41	231	8.3	87.8	87.8	88.7	0.9
GN	147,596	55	420	4.6	89.7	89.7	89.9	0.2
GO	147,913	80	444	4.3	90.1	90.1	90.3	0.2
GP	148,277	195	1,024	1.9	90.5	90.5	90.9	0.4
GQ	148,450	235	1,521	1.3	90.7	90.7	91.0	0.3
GR	148,712	100	795	2.4	91.1	91.1	91.4	0.3
GS	149,129	260	1,547	1.2	91.2	91.2	91.5	0.3
GT	149,748	595	3,056	0.6	91.4	91.4	91.7	0.3
GU	150,430	550	2,983	0.6	91.4	91.4	91.8	0.4
GV	150,797	270	1,799	1.1	91.5	91.5	91.8	0.3
GW	150,989	110	814	2.4	92.1	92.1	92.3	0.2
GX	151,090	220	1,485	1.3	92.1	92.1	92.4	0.3
GY	151,433	701	3,767	0.5	92.1	92.1	92.5	0.4
GZ	152,219	814	4,291	0.4	92.2	92.2	92.6	0.4
HA	152,738	704	3,922	0.5	92.2	92.2	92.6	0.4
HB	153,358	886	4,555	0.4	92.2	92.2	92.6	0.4
HC	154,209	1,062	5,293	0.4	92.3	92.3	92.6	0.3
HD	154,633	1,129	5,754	0.3	92.3	92.3	92.7	0.4

[1]Feet above Gayitt Point

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	46	332	2,492	0.8	113.2	113.2	113.2	0.0
B	500	374	2,611	0.7	113.2	113.2	113.2	0.0
C	902	224	1,648	1.1	113.2	113.2	113.2	0.0
D	1,253	335	2,282	0.8	113.2	113.2	113.2	0.0
E	1,727	225	1,509	1.2	113.2	113.2	113.2	0.0
F	2,417	210	1,305	1.4	113.3	113.3	113.3	0.0
G	2,713	390	2,336	0.8	113.3	113.3	113.3	0.0
H	3,411	369	1,389	1.3	113.3	113.3	113.4	0.1
I	4,519	345	1,040	1.8	113.7	113.7	113.7	0.0
J	5,005	376	1,182	1.6	113.9	113.9	113.9	0.0
K	5,753	220	837	2.2	114.3	114.3	114.3	0.0
L	6,182	74	495	3.7	114.5	114.5	114.6	0.1
M	6,283	81	616	3.0	115.3	115.3	115.7	0.4
N	6,789	234	1,166	1.6	115.5	115.5	116.0	0.5
O	7,233	141	873	2.1	115.9	115.9	116.4	0.5
P	8,263	363	1,960	0.9	116.6	116.6	117.1	0.5
Q	9,289	411	2,215	0.8	117.0	117.0	117.6	0.6
R	10,051	715	4,070	0.4	117.1	117.1	117.8	0.7
S	12,175	378	2,041	0.9	117.6	117.6	118.4	0.8
T	13,889	510	2,855	0.6	118.4	118.4	119.2	0.8
U	15,983	210	1,156	1.5	119.5	119.5	120.3	0.8
V	17,039	183	1,050	1.7	120.6	120.6	121.4	0.8
W	18,279	134	909	1.9	121.7	121.7	122.6	0.9
X	19,201	310	1,953	0.9	122.3	122.3	123.3	1.0

[1]Feet above Glen Rock Dam

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: QUEEN RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Y	20,564	518	2,941	0.6	122.8	122.8	123.8	1.0
Z	21,255	269	1,490	1.2	123.1	123.1	124.0	0.9
AA	21,762	270	1,365	1.3	123.5	123.5	124.4	0.9
AB	22,562	115	726	2.4	124.2	124.2	125.2	1.0
AC	22,952	92	611	2.8	124.7	124.7	125.5	0.8
AD	23,374	465	2,748	0.6	125.2	125.2	126.1	0.9
AE	23,509	570	3,158	0.6	125.4	125.4	126.3	0.9
AF	23,760	531	2,850	0.6	125.5	125.5	126.4	0.9
AG	24,226	328	1,513	1.1	125.6	125.6	126.5	0.9
AH	25,048	69	416	4.1	126.2	126.2	127.2	1.0
AI	25,641	154	776	2.2	128.1	128.1	128.8	0.7
AJ	26,462	147	834	2.0	129.4	129.4	130.4	1.0
AK	26,909	56	380	4.5	130.1	130.1	131.1	1.0
AL	27,176	71	451	3.7	130.6	130.6	131.5	0.9
AM	27,621	43	294	5.7	131.4	131.4	132.3	0.9
AN	28,235	40	293	5.8	133.0	133.0	133.8	0.8
AO	28,757	70	574	2.9	133.9	133.9	134.9	1.0
AP	28,887	80	641	2.6	134.5	134.5	135.3	0.8
AQ	29,402	146	1,235	1.4	134.8	134.8	135.7	0.9
AR	29,632	186	1,503	1.1	134.9	134.9	135.8	0.9
AS	30,161	496	3,860	0.4	135.1	135.1	136.0	0.9
AT	31,135	512	3,483	0.4	135.1	135.1	136.1	1.0
AU	32,173	860	5,770	0.2	135.2	135.2	136.2	1.0
AV	32,712	966	6,224	0.2	135.2	135.2	136.2	1.0

[1]Feet above Glen Rock Dam

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: QUEEN RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AW	32,874	1,031	6,466	0.2	135.2	135.2	136.2	1.0
AX	33,288	817	4,746	0.2	135.2	135.2	136.2	1.0
AY	34,390	824	3,983	0.2	135.3	135.3	136.3	1.0
AZ	34,834	631	2,165	0.4	135.3	135.3	136.3	1.0
BA	35,242	300	784	1.1	135.6	135.6	136.5	0.9
BB	35,476	170	486	1.8	136.3	136.3	136.8	0.5
BC	35,769	160	437	2.0	137.7	137.7	137.8	0.1
BD	37,125	89	403	2.1	142.2	142.2	143.1	0.9
BE	38,239	112	445	1.9	145.2	145.2	146.2	1.0
BF	38,510	110	322	2.7	146.2	146.2	147.0	0.8
BG	38,599	96	513	1.7	148.9	148.9	149.2	0.3
BH	39,356	44	165	5.2	150.1	150.1	151.0	0.9
BI	39,520	71	229	3.8	151.1	151.1	151.8	0.7
BJ	40,732	69	210	4.1	158.6	158.6	158.6	0.0
BK	41,349	79	319	2.7	162.1	162.1	162.9	0.8
BL	42,122	41	163	5.3	166.3	166.3	166.7	0.4
BM	42,671	25	133	6.4	169.4	169.4	170.4	1.0
BN	43,059	50	192	4.5	171.6	171.6	172.3	0.7
BO	43,133	44	213	4.0	173.0	173.0	174.0	1.0
BP	43,354	69	286	3.0	173.8	173.8	174.5	0.7
BQ	43,743	38	178	4.8	174.0	174.0	175.0	1.0
BR	43,766	28	157	5.5	174.1	174.1	175.0	0.9
BS	43,809	149	632	1.4	177.9	177.9	178.9	1.0
BT	44,243	253	1,177	0.7	178.0	178.0	178.9	0.9

[1]Feet above Glen Rock Dam

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BU	44,305	142	848	1.0	178.1	178.1	179.1	1.0
BV	44,921	118	522	1.6	178.2	178.2	179.1	0.9
BW	45,023	49	117	7.4	179.0	179.0	179.0	0.0
BX	45,115	75	342	2.5	180.8	180.8	181.8	1.0
BY	45,378	31	155	5.6	181.0	181.0	181.8	0.8
BZ	45,664	76	382	2.3	181.5	181.5	182.5	1.0
CA	45,814	21	80	10.7	185.2	185.2	186.0	0.8
CB	46,195	63	189	4.6	189.4	189.4	190.3	0.9
CC	46,318	57	350	2.5	193.7	193.7	194.7	1.0
CD	46,616	32	90	9.5	193.9	193.9	194.6	0.7
CE	46,951	70	152	5.6	201.7	201.7	201.9	0.2
CF	47,009	53	127	6.8	204.4	204.4	204.5	0.1
CG	47,283	75	150	5.7	212.3	212.3	212.3	0.0
CH	47,343	103	303	2.8	215.6	215.6	215.6	0.0
CI	47,488	76	155	5.6	216.6	216.6	216.6	0.0
CJ	47,510	57	117	7.4	217.2	217.2	217.2	0.0
CK	47,561	390	1,408	0.6	224.3	224.3	224.3	0.0

[1]Feet above Glen Rock Dam

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	125	451 / 132[2]	374	1.4	135.1	128.7[3]	129.3	0.6
B	1,950	36	113	4.6	135.1	131.7[3]	132.2	0.5
C	3,180	33	122	4.3	137.2	137.2	137.9	0.7
D	4,200	30	128	4.1	141.1	141.1	141.8	0.7
E	5,190	74	213	2.4	143.5	143.5	143.9	0.4
F	5,295	79	503	1.0	146.8	146.8	146.8	0.0
G	6,040	28	116	4.5	147.0	147.0	147.0	0.0
H	6,170	34	218	2.4	149.4	149.4	149.4	0.0
I	6,450	100	803	0.6	151.6	151.6	151.6	0.0
J	7,420	154	1,166	0.3	151.6	151.6	151.7	0.1
K	8,300	144	315	1.1	151.6	151.6	151.7	0.1
L	8,400	165	556	0.6	152.6	152.6	152.6	0.0
M	8,925	106	1,349	0.3	152.6	152.6	152.6	0.0
N	9,270	142	777	0.5	152.6	152.6	152.6	0.0
O	9,500	157	570	0.6	152.6	152.6	152.7	0.1
P	9,625	245	856	0.4	156.9	156.9	157.0	0.1
Q	10,175	13	37	9.7	158.1	158.1	158.3	0.2

[1]Feet above confluence with Queen River

[2]Total floodway width including floodway of Queen River / width considering Queens Fort Brook only

[3]Elevation computed without consideration of backwater effects from Queen River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: QUEENS FORT BROOK

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	50	32	28	3.6	11.9	1.4[2]	1.4	0.0
B	785	139	114	0.9	11.9	3.3[2]	3.3	0.0
C	1,770	119	74	1.3	11.9	4.5[2]	4.5	0.0
D	2,775	84	52	1.9	11.9	8.0[2]	8.0	0.0
E	3,200	12	26	3.9	11.9	9.9[2]	10.1	0.2
F	3,740	11	24	4.2	13.0	13.0	13.3	0.3
G	4,000	110	573	0.2	18.6	18.6	18.6	0.0
H	4,840	24	61	1.6	18.6	18.6	18.6	0.0

[1]Feet above bike path at Allens Harbor

[2]Elevation computed without consideration of backwater effects from Narragansett Bay

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: QUIDNESSET BROOK

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	650	109	726	1.3	15.2	15.2	16.2	1.0
B	1,709	41	297	2.8	23.5	23.5	24.0	0.5
C	2,382	82	626	1.7	23.6	23.6	24.6	1.0
D	2,569	74	553	1.4	23.7	23.7	24.7	1.0
E	3,350	200	1,613	0.5	23.7	23.7	24.7	1.0
F	3,635	199	1,452	0.3	23.7	23.7	24.7	1.0
G	5,370	56	270	1.0	24.3	24.3	25.3	1.0
H	6,895	24	73	2.8	25.9	25.9	26.4	0.5
I	7,394	259	1,728	0.4	32.4	32.4	33.3	0.9
J	7,618	278	2,123	0.3	35.7	35.7	35.7	0.0
K	9,915	65	426	0.5	35.7	35.7	36.7	1.0
L	10,995	208	960	0.2	35.7	35.7	36.2	0.5
M	11,181	166	1,146	0.1	37.8	37.8	38.3	0.5
N	11,940	29	174	0.8	39.7	39.7	40.2	0.5
O	13,390	17	48	1.6	39.8	39.8	40.7	0.9

[1]Feet above confluence with Hunt River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: SAND HILL BROOK / SAW MILL BROOK

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	65	94	279	4.7	10.4	2.0[2]	2.0	0.0
B	1,365	43	220	5.9	10.4	5.4[2]	5.4	0.0
C	1,652	97	750	1.7	14.3	14.3	14.3	0.0
D	2,452	128	990	1.3	14.4	14.4	14.4	0.0
E	2,764	73	483	2.7	14.4	14.4	14.4	0.0
F	4,364	70	418	3.1	15.0	15.0	15.1	0.1
G	5,829	43	306	4.2	15.9	15.9	16.2	0.3
H	6,409	36	240	5.4	16.4	16.4	16.7	0.3
I	7,024	26	182	7.1	17.1	17.1	17.7	0.6
J	7,249	30	241	3.8	18.8	18.8	19.1	0.3
K	7,607	35	331	2.7	21.6	21.6	21.9	0.3
L	7,869	33	309	2.9	22.1	22.1	22.3	0.2
M	8,449	236	2,513	0.4	30.6	30.6	30.6	0.0
N	13,314	50	319	2.9	34.4	34.4	34.4	0.0

[1]Feet above Silver Lake Avenue

[2]Elevation computed without consideration of backwater effects from Atlantic Ocean

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: SAUGATUCKET RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	100	60	142	3.4	37.5	27.4[2]	28.4	1.0
B	1,400	65	236	2.0	37.5	31.5[2]	30.6	0.9
C	2,300	65	212	2.3	37.5	32.6[2]	33.4	0.8
D	3,400	120	216	1.8	37.5	35.3[2]	35.7	0.4
E	4,300	80	248	1.6	37.5	36.9[2]	37.3	0.4
F	4,340	80	214	1.9	37.7	37.7	38.2	0.5
G	4,520	80	341	1.2	38.0	38.0	38.4	0.4
H	5,800	130	339	1.2	38.6	38.6	39.1	0.5
I	7,000	150	300	1.3	39.7	39.7	40.1	0.4
J	7,900	80	139	2.6	41.3	41.3	41.7	0.4
K	7,950	40	147	2.4	41.9	41.9	42.2	0.3

[1]Feet above confluence with Pawcatuck River

[2]Elevation computed without consideration of backwater effects from Pawcatuck River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: TOMAQUOG BROOK

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	408	1,440	7,683	0.2	92.3	92.0[2]	93.0	1.0
B	1,026	1,480	7,484	0.3	92.3	92.0[2]	93.1	1.0
C	1,659	1,005	5,088	0.4	92.3	92.1[2]	93.1	1.0
D	2,304	813	3,715	0.5	92.3	92.3	93.3	1.0
E	2,879	691	2,817	0.7	92.6	92.6	93.5	0.9
F	3,450	801	3,421	0.6	92.9	92.9	93.7	0.8
G	3,939	832	3,524	0.5	93.1	93.1	93.9	0.8
H	4,649	869	4,080	0.5	93.5	93.5	94.2	0.7
I	5,023	972	4,538	0.4	93.6	93.6	94.3	0.7
J	5,180	945	4,429	0.4	93.6	93.6	94.3	0.7
K	5,570	891	4,053	0.5	93.8	93.8	94.4	0.6
L	6,002	878	3,954	0.5	94.0	94.0	94.6	0.6
M	6,288	1,470	7,363	0.3	95.1	95.1	95.7	0.6
N	7,320	1,770	8,293	0.2	95.2	95.2	95.8	0.6
O	7,931	2,046	9,260	0.2	95.2	95.2	95.8	0.6
P	8,845	1,742	7,329	0.3	95.3	95.3	95.9	0.6
Q	9,565	1,415	5,149	0.4	95.4	95.4	96.0	0.6
R	10,373	675	2,454	0.8	95.6	95.6	96.2	0.6
S	10,891	430	1,627	1.2	96.1	96.1	96.6	0.5
T	11,307	590	2,211	0.9	96.4	96.4	97.0	0.6
U	12,261	262	1,094	1.7	97.2	97.2	97.9	0.7
V	13,146	147	789	2.4	98.2	98.2	99.0	0.8
W	13,610	80	365	5.2	98.7	98.7	99.6	0.9
X	13,712	46	358	5.3	99.2	99.2	100.0	0.8

[1]Feet above confluence with Pawcatuck River

[2]Elevation computed without consideration of backwater effects from Pawcatuck River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: USQUEPAUG RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Y	14,283	230	1,472	1.3	100.6	100.6	101.1	0.5
Z	15,155	240	1,610	1.2	100.8	100.8	101.5	0.7
AA	15,731	335	2,206	0.9	100.9	100.9	101.8	0.9
AB	16,035	480	3,100	0.6	101.0	101.0	101.9	0.9
AC	16,435	640	4,109	0.5	101.0	101.0	102.0	1.0
AD	17,164	736	4,307	0.4	101.1	101.1	102.1	1.0
AE	17,927	445	2,371	0.8	101.3	101.3	102.2	0.9
AF	18,415	418	2,410	0.8	101.4	101.4	102.4	1.0
AG	18,991	497	2,550	0.7	101.6	101.6	102.5	0.9
AH	19,426	240	1,439	1.3	101.8	101.8	102.7	0.9
AI	19,967	370	2,013	0.9	102.1	102.1	103.0	0.9
AJ	20,546	259	1,605	1.2	102.4	102.4	103.3	0.9
AK	21,113	144	890	2.1	102.6	102.6	103.4	0.8
AL	21,667	240	1,514	1.3	103.1	103.1	103.9	0.8
AM	22,810	330	2,036	0.9	103.6	103.6	104.5	0.9
AN	23,398	280	1,731	1.1	103.8	103.8	104.8	1.0
AO	24,054	125	909	2.1	104.2	104.2	105.0	0.8
AP	24,511	253	1,682	1.1	104.5	104.5	105.4	0.9
AQ	25,917	525	3,050	0.6	104.9	104.9	105.8	0.9
AR	26,608	474	2,793	0.7	105.1	105.1	105.9	0.8
AS	27,390	520	2,632	0.7	105.3	105.3	106.2	0.9
AT	28,189	445	2,395	0.8	105.6	105.6	106.5	0.9
AU	29,060	480	2,505	0.7	106.0	106.0	106.8	0.8
AV	29,740	533	2,645	0.7	106.3	106.3	107.0	0.7

[1]Feet above confluence with Pawcatuck River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: USQUEPAUG RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AW	30,182	201	1,104	1.7	106.4	106.4	107.1	0.7
AX	30,353	513	2,334	0.8	107.0	107.0	107.7	0.7
AY	30,746	72	278	5.9	106.4	106.4	107.4	1.0
AZ	30,826	54	358	4.6	108.9	108.9	109.4	0.5
BA	30,922	101	597	2.8	109.4	109.4	109.8	0.4
BB	30,932	121	685	2.4	109.4	109.4	109.8	0.4
BC	30,979	280	1,233	1.3	113.2	113.2	113.2	0.0

[1]Feet above confluence with Pawcatuck River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: USQUEPAUG RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	121	118	1,468	1.5	19.5	19.5	20.3	0.8
B	409	71	597	2.9	19.5	19.5	20.3	0.8
C	663	79	617	2.8	19.6	19.6	20.4	0.8
D	789	57	449	3.8	19.6	19.6	20.3	0.7
E	936	62	364	4.7	19.6	19.6	20.3	0.7
F	1,198	64	262	6.6	19.9	19.9	20.5	0.6

[1]Feet above confluence with Pawcatuck River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: WHITE ROCK CANAL

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	30	1150	8,214	0.5	47.5	47.5	48.5	1.0
B	418	869	6,438	0.6	47.5	47.5	48.5	1.0
C	934	535	4,063	0.9	47.6	47.6	48.6	1.0
D	1,878	290	2,280	1.6	47.9	47.9	48.9	1.0
E	2,323	246	2,135	1.8	48.2	48.2	49.0	0.8
F	2,884	245	2,052	1.8	48.4	48.4	49.3	0.9
G	3,424	347	2,774	1.4	48.7	48.7	49.5	0.8
H	3,831	185	3,837	1.5	48.8	48.8	49.6	0.8
I	4,105	509	4,496	0.8	50.6	50.6	51.2	0.6
J	5,080	477	3,525	1.0	50.6	50.6	51.2	0.6
K	7,377	527	2,165	1.6	50.8	50.8	51.3	0.5
L	8,261	272	1,388	2.6	51.1	51.1	51.5	0.4
M	8,993	220	1,121	3.2	51.7	51.7	52.0	0.3
N	9,669	176	1,357	2.6	52.3	52.3	52.6	0.3
O	10,793	443	2,568	1.4	52.8	52.8	53.1	0.3
P	12,370	747	3,644	1.0	53.2	53.2	53.4	0.2
Q	13,977	759	3,879	0.9	53.7	53.7	53.9	0.2
R	15,682	609	3,331	1.1	54.2	54.2	54.5	0.3
S	16,400	576	2,948	1.2	54.5	54.5	54.9	0.4
T	17,184	121	1,066	3.3	54.8	54.8	55.2	0.4
U	17,589	152	1,528	2.3	59.9	59.9	60.7	0.8
V	18,063	137	1,722	2.1	60.0	60.0	60.8	0.8
W	18,659	222	2,429	1.5	60.1	60.1	60.9	0.8
X	18,834	100	1,186	3.0	60.0	60.0	60.8	0.8

[1]Feet above confluence with Pawcatuck River

[2]Elevation computed without consideration of backwater effects from Pawcatuck River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: WOOD RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Y	18,881	194	3,047	1.3	60.2	60.2	61.0	0.8
Z	19,680	765	4,058	0.8	60.2	60.2	61.0	0.8
AA	21,926	649	3,308	1.0	60.5	60.5	61.2	0.7
AB	23,305	509	2,746	1.2	61.0	61.0	61.6	0.6
AC	24,712	386	2,213	1.5	61.8	61.8	62.4	0.6
AD	26,239	481	2,857	1.1	62.4	62.4	63.2	0.8
AE	27,179	494	3,191	1.0	62.8	62.8	63.6	0.8
AF	29,271	882	4,116	0.8	63.6	63.6	64.2	0.6
AG	30,562	608	3,368	0.9	64.5	64.5	64.8	0.3
AH	31,572	642	3,187	1.0	65.1	65.1	65.3	0.2
AI	33,195	199	1,098	2.9	66.1	66.1	66.3	0.2
AJ	34,015	185	1,150	2.8	66.7	66.7	67.2	0.5
AK	34,483	181	1,110	2.9	67.0	67.0	67.7	0.7
AL	35,175	178	1,228	2.5	67.6	67.6	68.3	0.7
AM	35,494	121	911	3.4	68.0	68.0	68.6	0.6
AN	36,123	116	1,036	3.0	68.4	68.4	69.2	0.8
AO	36,529	115	947	3.3	68.7	68.7	69.5	0.8
AP	36,978	107	814	3.8	69.6	69.6	70.1	0.5
AQ	37,775	169	1,224	2.5	70.2	70.2	70.8	0.6
AR	37,889	178	1,311	2.4	70.3	70.3	70.9	0.6
AS	37,932	178	1,323	2.4	70.3	70.3	71.0	0.7
AT	38,126	301	2,224	1.4	70.5	70.5	71.2	0.7
AU	38,471	483	3,190	1.0	70.7	70.7	71.4	0.7
AV	39,383	200	1,233	2.5	71.0	71.0	71.6	0.6

[1]Feet above confluence with Pawcatuck River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: WOOD RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AW	40,053	86	525	5.9	71.9	71.9	72.5	0.6
AX	40,173	100	699	4.5	73.5	73.5	73.8	0.3
AY	40,308	143	1,459	2.1	79.8	79.8	79.8	0.0
AZ	40,638	192	1,154	2.7	79.8	79.8	79.8	0.0
BA	41,376	459	2,955	0.9	80.1	80.1	80.1	0.0
BB	42,197	416	1,598	1.7	80.1	80.1	80.2	0.1
BC	43,252	741	3,172	0.9	80.9	80.9	80.9	0.0
BD	43,896	385	1,878	1.5	81.1	81.1	81.2	0.1
BE	44,783	242	1,140	2.4	81.5	81.5	81.6	0.1
BF	45,594	158	940	2.9	82.1	82.1	82.4	0.3
BG	46,084	161	769	3.5	82.5	82.5	82.8	0.3
BH	46,817	197	1,025	2.7	83.0	83.0	83.5	0.5
BI	47,017	178	982	2.8	84.0	84.0	84.4	0.4
BJ	47,429	424	2,592	0.9	84.3	84.3	84.7	0.4
BK	47,813	170	688	3.6	84.6	84.6	85.0	0.4
BL	47,957	157	606	4.0	87.0	87.0	87.0	0.0
BM	48,133	186	1,904	1.3	99.2	99.2	99.2	0.0
BN	48,983	354	3,048	0.8	99.2	99.2	99.2	0.0
BO	50,268	713	3,504	0.7	99.3	99.3	99.3	0.0
BP	51,467	295	1,551	1.6	99.3	99.3	99.3	0.0
BQ	51,897	584	1,944	1.3	99.4	99.4	99.4	0.0
BR	52,143	227	1,122	2.2	99.6	99.6	99.6	0.0
BS	52,609	209	858	2.9	99.8	99.8	99.8	0.0
BT	53,856	108	757	3.2	101.0	101.0	101.0	0.0

[1]Feet above confluence with Pawcatuck River

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BU	54,429	104	722	3.4	101.5	101.5	101.6	0.1
BV	55,510	59	570	4.3	102.4	102.4	102.7	0.3
BW	56,035	58	514	4.8	102.8	102.8	103.4	0.6
BX	57,166	186	1,383	1.8	103.4	103.4	104.4	1.0
BY	58,148	188	1,431	1.7	103.9	103.9	104.8	0.9
BZ	58,705	370	2,461	1.0	104.2	104.2	105.1	0.9
CA	59,016	488	3,076	0.8	104.3	104.3	105.2	0.9
CB	59,624	514	2,844	0.9	104.4	104.4	105.4	1.0
CC	60,423	76	631	3.9	104.6	104.6	105.6	1.0
CD	61,580	80	782	3.1	105.5	105.5	106.5	1.0
CE	62,004	68	437	5.6	105.7	105.7	106.7	1.0
CF	62,497	72	202	9.5	107.7	107.7	107.7	0.0
CG	62,569	80	466	4.1	110.0	110.0	110.0	0.0
CH	62,706	100	790	3.1	114.1	114.1	114.2	0.1
CI	62,804	85	745	3.3	114.1	114.1	114.3	0.2
CJ	63,112	85	705	3.5	114.2	114.2	114.4	0.2

[1]Feet above confluence with Pawcatuck River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: WOOD RIVER

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	707	245	579	0.0	54.6	54.6	55.0	0.4
B	1,147	15	88	0.0	54.8	54.8	55.0	0.2
C	1,319	15	88	0.0	55.0	55.0	55.0	0.0
D	1,332	10	14	0.0	59.9	59.9	59.9	0.0

[1]Feet above confluence with Wood River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

WASHINGTON COUNTY, RHODE ISLAND

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: WOODVILLE CANAL

Table 24: Flood Hazard and Non-Encroachment Data for Selected Streams

[Not applicable to this Flood Risk Project]

6.4 Coastal Flood Hazard Mapping

Flood insurance zones and BFEs including the wave effects were identified on each transect based on the results from the onshore wave hazard analyses. Between transects, elevations were interpolated using topographic maps, land-use and land-cover data, and knowledge of coastal flood processes to determine the aerial extent of flooding. Sources for topographic data are shown in Table 22.

Zone VE is subdivided into elevation zones and BFEs are provided on the FIRM.

The limit of Zone VE shown on the FIRM is defined as the farthest inland extent of any of these criteria (determined for the 1-percent-annual-chance flood condition):

- The *primary frontal dune zone* is defined in 44 CFR Section 59.1 of the NFIP regulations. The primary frontal dune represents a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes that occur immediately landward and adjacent to the beach. The primary frontal dune zone is subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune zone occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.

- The *wave runup zone* occurs where the (eroded) ground profile is 3.0 feet or more below the 2-percent wave runup elevation.

- The *wave overtopping splash zone* is the area landward of the crest of an overtopped barrier, in cases where the potential 2-percent wave runup exceeds the barrier crest elevation by 3.0 feet or more.

- The *breaking wave height zone* occurs where 3-foot or greater wave heights could occur (this is the area where the wave crest profile is 2.1 feet or more above the total stillwater elevation).

- The *high-velocity flow zone* is landward of the overtopping splash zone (or area on a sloping beach or other shore type), where the product of depth of flow times the flow velocity squared (hv^2) is greater than or equal to 200 ft^3/sec^2. This zone may only be used on the Pacific Coast.

The SFHA boundary indicates the limit of SFHAs shown on the FIRM as either “V” zones or “A” zones.

Table 25 indicates the coastal analyses used for floodplain mapping and the criteria used to determine the inland limit of the open-coast Zone VE and the SFHA boundary at each transect.

Table 25: Summary of Coastal Transect Mapping Considerations

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
1		11.0	VE 13 AE 12	Wave Height	SWEL
2		11.8	VE 14 AE 12	Wave Height	SWEL
3		13.3	VE 16 AE 14	Wave Height	SWEL
4	✓	12.0	VE 14 AE 12	PFD	SWEL
5	✓	11.9	VE 14 AE 12	PFD	SWEL
6	✓	12.0	VE 14 AE 12	PFD	Runup
7	✓	12.1	VE 14 AE 12	PFD	SWEL
8		11.4	VE 14 AE 12	Wave Height	SWEL
9		12.0	VE 15 AE 12	Wave Height	SWEL
10		12.1	VE 15 AE 12	Wave Height	SWEL
11		12.7	VE 15 AE 13	Wave Height	SWEL
12	✓	12.2	VE 15 AE 13	PFD	SWEL
13		12.9	VE 15 AE 13	Wave Height	SWEL
14		12.0	VE 15 AE 12	Wave Height	SWEL
15		13.4	VE 16 AE 14	Wave Height	SWEL
16	✓	12.1	VE 15 AE 13	PFD	SWEL
17		12.1	VE 15 AE 12	Wave Height	SWEL
18		12.7	VE 15 AE 13	Wave Height	SWEL
19	✓	12.3	VE 16 AE 12	PFD	SWEL

Table 25: Summary of Coastal Transect Mapping Considerations (continued)

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
20	✓	12.5	VE 16 AE 12	PFD	SWEL
21		12.4	VE 15 AE 12	Wave Height	SWEL
22		12.7	VE 16 AE 14	Wave Height	SWEL
23		12.6	VE 16 AE 13	Wave Height	SWEL
24		12.6	VE 15 AE 13	Wave Height	SWEL
25		12.6	VE 16	Wave Height	Runup
26		13.5	VE 17	Wave Height	Runup
27		12.3	VE 14 AE 12	Wave Height	SWEL
28		14.0	VE 22 AE 14	Wave Height	Runup
29		12.7	VE 17 AE 13	Wave Height	SWEL
30		12.8	VE 15 AE 13	Wave Height	SWEL
31		12.0	VE 14 AE 12	Wave Height	SWEL
32		13.9	VE 24	Wave Height	Runup
33		13.3	VE 17	Wave Height	Runup
34		13.3	VE 15 AE 14	Wave Height	Runup
35		13.7	VE 17 AE 14	Wave Height	SWEL
36		13.5	VE 17 AE 13	Wave Height	SWEL
37		12.8	VE 16 AE 14	Wave Height	Runup
38		13.0	VE 15 AE 14	Wave Height	SWEL
39		13.5	VE 16	Wave Height	Runup
40		13.9	VE 16	Wave Height	Runup
41		14.1	VE 19 AE 14	Wave Height	SWEL

Table 25: Summary of Coastal Transect Mapping Considerations (continued)

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
42		13.3	VE 16 AE 13	Wave Height	SWEL
43		12.7	VE 15 AE 14	Wave Height	SWEL
44		14.1	VE 16 AE 14	Wave Height	SWEL
45		12.2	VE 14	Wave Height	Runup
46		12.4	VE 15 AE 13	Wave Height	SWEL
47		12.2	VE 16 AE 12	Wave Height	Runup
48		14.1	VE 20	Wave Height	Runup
49		11.9	VE 16 AE 12	Wave Height	SWEL
50		12.8	VE 16	Wave Height	Runup
51		11.8	VE 16	Wave Height	Runup
52		12.6	VE 16	Wave Height	Runup
53		13.3	VE 22	Wave Height	Runup
54		12.5	VE 17	Wave Height	Runup
55		12.1	VE 15 AE 13	Wave Height	SWEL
56	✓	12.7	VE 16 AE 13	PFD	SWEL
57		12.3	VE 19 AE 13	Wave Height	Runup
58		12.4	VE 22 AE 12	Wave Height	SWEL
59		13.7	VE 19 AE 14	Wave Height	Runup
60		13.3	VE 17 AE 13	Wave Height	SWEL
61		12.9	VE 21 AE 14	Wave Height	Runup
62		12.3	VE 14 AE 12	Wave Height	SWEL
63		12.2	VE 15 AE 12	Wave Height	SWEL
64		12.3	VE 15 AE 13	Wave Height	SWEL

Table 25: Summary of Coastal Transect Mapping Considerations (continued)

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
65		13.8	VE 19 AE 14	Wave Height	Runup
66		13.3	VE 17 AE 14	Wave Height	SWEL
67		9.7	VE 12	Wave Height	SWEL
68		9.9	VE 12 AE 12	Wave Height	Runup
69	✓	9.9	VE 12 AE 11	PFD	SWEL
70		9.8	VE 12 AE 10	Wave Height	SWEL
71		9.9	VE 12 AE 12	Wave Height	SWEL
72		10.8	VE 13	Wave Height	Runup
73		10.8	VE 28	Wave Height	Runup
74		10.1	VE 12 AE 12	Wave Height	Runup
75		10.2	VE 12	Wave Height	Runup
76	✓	9.8	VE 13 AE 10	PFD	Runup

A LiMWA boundary has also been added in coastal areas subject to wave action for use by local communities in safe rebuilding practices. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave.

6.5 FIRM Revisions

This FIS Report and the FIRM are based on the most up-to-date information available to FEMA at the time of its publication; however, flood hazard conditions change over time. Communities or private parties may request flood map revisions at any time. Certain types of requests require submission of supporting data. FEMA may also initiate a revision. Revisions may take several forms, including Letters of Map Amendment (LOMAs), Letters of Map Revision Based on Fill (LOMR-Fs), Letters of Map Revision (LOMRs) (referred to collectively as Letters of Map Change (LOMCs)), Physical Map Revisions (PMRs), and FEMA-contracted restudies. These types of revisions are further described below. Some of these types of revisions do not result in the republishing of the FIS Report. To assure that any user is aware of all revisions, it is advisable to contact the community repository of flood-hazard data (shown in Table 30, “Map Repositories”).

6.5.1 Letters of Map Amendment

A LOMA is an official revision by letter to an effective NFIP map. A LOMA results from an administrative process that involves the review of scientific or technical data submitted by the owner or lessee of property who believes the property has incorrectly been included in a designated SFHA. A LOMA amends the currently effective FEMA map and establishes that a specific property is not located in a SFHA.

To obtain an application for a LOMA, visit www.fema.gov/flood-maps/change-your-flood-zone and download the form "MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill". Visit the "Flood Map-Related Fees" section to determine the cost, if any, of applying for a LOMA.

FEMA offers a tutorial on how to apply for a LOMA. The LOMA Tutorial Series can be accessed at www.fema.gov/flood-maps/tutorials.

For more information about how to apply for a LOMA, call the FEMA Mapping and Insurance eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627).

6.5.2 Letters of Map Revision Based on Fill

A LOMR-F is an official revision by letter to an effective NFIP map. A LOMR-F states FEMA's determination concerning whether a structure or parcel has been elevated on fill above the base flood elevation and is, therefore, excluded from the SFHA.

Information about obtaining an application for a LOMR-F can be obtained in the same manner as that for a LOMA, by visiting www.fema.gov/flood-maps/change-your-flood-zone for the "MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill" or by calling the FEMA Mapping and Insurance eXchange, toll free, at 1-877-FEMA MAP (1-877-336-2627). Fees for applying for a LOMR-F, if any, are listed in the "Flood Map-Related Fees" section.

A tutorial for LOMR-F is available at www.fema.gov/flood-maps/tutorials.

6.5.3 Letters of Map Revision

A LOMR is an official revision to the currently effective FEMA map. It is used to change flood zones, floodplain and floodway delineations, flood elevations and planimetric features. All requests for LOMRs should be made to FEMA through the chief executive officer of the community, since it is the community that must adopt any changes and revisions to the map. If the request for a LOMR is not submitted through the chief executive officer of the community, evidence must be submitted that the community has been notified of the request.

To obtain an application for a LOMR, visit www.fema.gov/flood-maps/change-your-flood-zone and download the form "MT-2 Application Forms and Instructions for Conditional Letters of Map Revision and Letters of Map Revision". Visit the "Flood Map-Related Fees" section to determine the cost of applying for a LOMR. For more information about how to apply for a LOMR, call the FEMA Mapping and Insurance eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627) to speak to a Map Specialist.

Previously issued mappable LOMCs (including LOMRs) that have been incorporated into the Washington County FIRM are listed in Table 26. Please note that this table only includes LOMCs that have been issued on the FIRM panels updated by this map revision. For all other areas within this county, users should be aware that revisions to the FIS Report made by prior LOMRs may not be reflected herein and users will need to continue to use the previously issued LOMRs to obtain the most current data.

Table 26: Incorporated Letters of Map Change

[Not Applicable to this Flood Risk Project]

6.5.4 Physical Map Revisions

A Physical Map Revisions (PMR) is an official republication of a community's NFIP map to effect changes to base flood elevations, floodplain boundary delineations, regulatory floodways and planimetric features. These changes typically occur as a result of structural works or improvements, annexations resulting in additional flood hazard areas or correction to base flood elevations or SFHAs.

The community's chief executive officer must submit scientific and technical data to FEMA to support the request for a PMR. The data will be analyzed and the map will be revised if warranted. The community is provided with copies of the revised information and is afforded a review period. When the base flood elevations are changed, a 90-day appeal period is provided. A 6-month adoption period for formal approval of the revised map(s) is also provided.

For more information about the PMR process, please visit www.fema.gov and visit the Floods & Maps "Change Your Flood Zone Designation" section.

6.5.5 Contracted Restudies

The NFIP provides for a periodic review and restudy of flood hazards within a given community. FEMA accomplishes this through a national watershed-based mapping needs assessment strategy, known as the Coordinated Needs Management Strategy (CNMS). The CNMS is used by FEMA to assign priorities and allocate funding for new flood hazard analyses used to update the FIS Report and FIRM. The goal of CNMS is to define the validity of the engineering study data within a mapped inventory. The CNMS is used to track the assessment process, document engineering gaps and their resolution, and aid in prioritization for using flood risk as a key factor for areas identified for flood map updates. Visit www.fema.gov to learn more about the CNMS or contact the FEMA Regional Office listed in Section 8 of this FIS Report.

6.5.6 Community Map History

The current FIRM presents flooding information for the entire geographic area of Washington County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBMs) and/or Flood Boundary and Floodway Maps (FBFMs) may have been prepared for the incorporated communities and the unincorporated areas in the county that had identified SFHAs. Current and historical data relating to the maps prepared for the project area are presented in Table 27, "Community Map History." A description of each of the column headings and the source of the date is also listed below.

- *Community Name* includes communities falling within the geographic area shown on the FIRM, including those that fall on the boundary line, nonparticipating communities, and communities with maps that have been rescinded. Communities with No Special Flood Hazards are indicated by a footnote. If all maps (FHBM, FBFM, and FIRM) were rescinded for a community, it is not listed in this table unless SFHAs have been identified in this community.

- *Initial Identification Date (First NFIP Map Published)* is the date of the first NFIP map that identified flood hazards in the community. If the FHBM has been converted to a FIRM, the initial FHBM date is shown. If the community has never been mapped, the upcoming effective date or "pending" (for Preliminary FIS Reports) is shown. If the community is listed in Table 27 but not identified on the map, the community is treated as if it were unmapped.

- *Initial FHBM Effective Date* is the effective date of the first FHBM. This date may be the same date as the Initial NFIP Map Date.

- *FHBM Revision Date(s)* is the date(s) that the FHBM was revised, if applicable.

- *Initial FIRM Effective Date* is the date of the first effective FIRM for the community.

- *FIRM Revision Date(s)* is the date(s) the FIRM was revised, if applicable. This is the revised date that is shown on the FIRM panel, if applicable. As countywide studies are completed or revised, each community listed should have its FIRM dates updated accordingly to reflect the date of the countywide study. Once the FIRMs exist in countywide format, as PMRs of FIRM panels within the county are completed, the FIRM Revision Dates in the table for each community affected by the PMR are updated with the date of the PMR, even if the PMR did not revise all the panels within that community.

The initial effective date for the Washington County FIRMs in countywide format was 10/19/2010.

Table 27: Community Map History

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Charlestown, Town of	07/13/1972	N/A	N/A	07/13/1972	04/03/2020 10/16/2013 10/19/2010 09/30/1995 06/16/1992 06/17/1986 10/01/1983 08/20/1976 07/01/1974
Exeter, Town of	03/14/1975	03/14/1975	N/A	03/01/1982	07/19/2023 04/03/2020 10/19/2010
Hopkinton, Town of	05/31/1974	05/31/1974	04/08/1977	03/16/1981	04/03/2020 10/19/2010
Narragansett Indian Tribe[1]	07/13/1972	N/A	N/A	07/13/1972	04/03/2020 10/16/2013 10/19/2010 09/30/1995 06/16/1992 06/17/1986 10/01/1983 08/20/1976 07/01/1974
Narragansett, Town of	12/07/1971	N/A	N/A	12/07/1971	04/03/2020 10/16/2013 10/19/2010 09/30/1995 06/16/1992 11/01/1984 12/03/1976 07/01/1974
New Shoreham, Town of	01/03/1975	01/03/1975	10/01/1983	04/03/1985	10/16/2013 10/19/2010 09/30/1995 06/16/1992
North Kingstown, Town of	07/18/1972	N/A	N/A	07/18/1972	04/03/2020 10/16/2013 10/19/2010 06/16/1992 12/05/1989 10/01/1983 02/16/1983 01/09/1976 07/01/1974
Richmond, Town of	05/31/1974	05/31/1974	12/10/1976	11/05/1980	04/03/2020 10/19/2010

Table 27: Community Map History

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
South Kingstown, Town of	07/13/1972	N/A	N/A	07/13/1972	04/03/2020 10/16/2013 10/19/2010 09/30/1995 06/16/1992 01/03/1986 02/04/1977 11/12/1976 07/01/1974
Westerly, Town of	07/28/1972	N/A	N/A	07/28/1972	04/03/2020 10/16/2013 10/19/2010 05/17/1993 08/03/1992 02/05/1986 12/26/1975 07/01/1974

[1] Dates for this community were taken from Town of Charlestown

SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION

7.1 Contracted Studies

Table 28 provides a summary of the contracted studies, by flooding source, that are included in this FIS Report.

Table 28: Summary of Contracted Studies Included in this FIS Report

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Aguntaug Brook	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Aguntaug Brook	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of
Aguntaug Brook	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Alewife Brook	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Alewife Brook	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Allen Cove	6/17/1986	Stone & Webster Engineering Corporation	EMW-C-0405	June 1986	Charlestown, Town of
Allen Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Allen Cove	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Allen Cove	6/18/1986	U.S. Army Corps of Engineers	unknown	1972	Charlestown, Town of
Allens Harbor	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Alton Pond	5/1/1980	USGS	IAA-H-9-77	June 1979	Richmond, Town of
Alton Pond	9/16/1980	U.S. Geological Survey	IAA-H-9-77	June 1979	Hopkinton, Town of
Annaquatucket River	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Ashaway River	4/3/2020	U.S. Geological Survey	HSFE01-14-X-0075	February 2016	Hopkinton, Town of
Ashaway River	9/16/1980	U.S. Geological Survey	IAA-H-9-77	June 1979	Hopkinton, Town of
Atlantic Ocean	unknown	Dewberry & Davis	EMW-C-0543	July 1981	Westerly, Town of
Atlantic Ocean	10/3/1984	PRC Harris, Inc.	H-4776	July 1981	New Shoreham, Town of
Atlantic Ocean	unknown	PRC Harris, Inc.	H-4776	April 1983	Westerly, Town of
Atlantic Ocean	unknown	PRC Harris, Inc.	unknown	March 1983	Narragansett, Town of
Babcock Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Babcock Cove	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Babcock Cove	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Barberville Canal	4/3/2020	U.S. Geological Survey	HSFE01-14-X-0075	February 2016	Hopkinton, Town of
Beaver River	4/3/2020	U.S. Geological Survey	HSFE01-14-X-0075	February 2016	Richmond, Town of
Beaver River	5/1/1980	USGS	IAA-H-9-77	June 1979	Richmond, Town of
Bissell Cove	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Block Island Sound	6/17/1986	Stone & Webster Engineering Corporation	EMW-C-0405	June 1986	Charlestown, Town of
Block Island Sound	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Block Island Sound	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Block Island Sound	5/1/1984	PRC Harris, Inc.	H-4776	July 1981	Narragansett, Town of
Block Island Sound	10/3/1984	PRC Harris, Inc.	H-4776	July 1981	New Shoreham, Town of,
Block Island Sound	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of
Block Island Sound	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Block Island Sound	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Block Island Sound	6/18/1986	U.S. Army Corps of Engineers	unknown	1972	Charlestown, Town of
Breakheart Brook	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Brushy Brook	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Brushy Brook	9/16/1980	U.S. Geological Survey	IAA-H-9-77	June 1979	Hopkinton, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Canonchet Brook	5/1/1980	USGS	IAA-H-9-77	June 1979	Richmond, Town of
Canonchet Brook	9/16/1980	U.S. Geological Survey	IAA-H-9-77	June 1979	Hopkinton, Town of
Canonchet Brook Tributary	9/16/1980	U.S. Geological Survey	IAA-H-9-77	June 1979	Hopkinton, Town of
Cedar Swamp Brook	6/17/1986	Stone & Webster Engineering Corporation	EMW-C-0405	June 1986	Charlestown, Town of
Cedar Swamp Brook	6/18/1986	U.S. Army Corps of Engineers	unknown	1972	Charlestown, Town of
Cedar Swamp Pond	6/17/1986	Stone & Webster Engineering Corporation	EMW-C-0405	June 1986	Charlestown, Town of
Cedar Swamp Pond	6/18/1986	U.S. Army Corps of Engineers	unknown	1972	Charlestown, Town of
Chickasheen Brook	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Chickasheen Brook	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Chickasheen Brook	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Chipuxet River	4/3/2020	U.S. Geological Survey	HSFE01-14-X-0075	February 2016	Exeter, Town of; North Kingstown, Town of; South Kingstown, Town of
Chipuxet River	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Chipuxet River	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Chipuxet River	1/3/1986	USACE	unknown	1971	South Kingstown, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Coastal Flooding including; Atlantic Ocean, Block Island Sound, Little Narragansett Bay, Narragansett Bay, Rhode Island Sound	10/16/2013	STARR	HSFEHQ-09-D-0370	July 2011	Charlestown, Town of; Narragansett, Town of; North Kingstown, Town of; South Kingstown, Town of; Westerly, Town of
Cocumussoc Brook	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Colonel Willie Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Colonel Willie Cove	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of
Colonel Willie Cove	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Congdon Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Congdon Cove	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Cormorant Cove	10/3/1984	PRC Harris, Inc.	H-4776	July 1981	New Shoreham, Town of
Crooked Brook	5/1/1984	PRC Harris, Inc.	H-4776	July 1981	Narragansett, Town of
Diamond Brook	5/1/1980	USGS	IAAH-9-77	June 1979	Richmond, Town of
Fisherville Brook	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Fishing Cove	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Flat Meadow Pond	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Flat Meadow Pond	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Flat River	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Foster Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Foster Cove	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of
Foster Cove	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Fresh Meadow Brook	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Fresh Meadow Brook	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Genesee Brook	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Genesee Brook	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Glen Rock Canal	4/3/2020	U.S. Geological Survey	HSFE01-14-X-0075	February 2016	South Kingstown, Town of
Glen Rock Reservoir	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Glen Rock Reservoir	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Great Salt Pond	10/3/1984	PRC Harris, Inc.	H-4776	July 1981	New Shoreham, Town of
Green Fall River	4/3/2020	U.S. Geological Survey	HSFE01-14-X-0075	February 2016	Hopkinton, Town of
Green Hill Pond	6/17/1986	Stone & Webster Engineering Corporation	EMW-C-0405	June 1986	Charlestown, Town of
Green Hill Pond	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Green Hill Pond	1/3/1986	USACE	unknown	1971	South Kingstown, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Green Hill Pond	6/18/1986	U.S. Army Corps of Engineers	unknown	1972	Charlestown, Town of
Harbor Pond	10/3/1984	PRC Harris, Inc.	H-4776	July 1981	New Shoreham, Town of
Hunts River	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Indian Cedar Brook	6/17/1986	Stone & Webster Engineering Corporation	EMW-C-0405	June 1986	Charlestown, Town of
Indian Cedar Brook	6/18/1986	U.S. Army Corps of Engineers	unknown	1972	Charlestown, Town of
Indian Run	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Indian Run	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Little Narragansett Bay	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Little Narragansett Bay	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of
Little Narragansett Bay	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Locke Brook	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Mastuxet Brook	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Mastuxet Brook	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of
Mastuxet Brook	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Mastuxet Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Mastuxet Cove	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Mastuxet Cove	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Mattatuxet River	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Mattatuxet River	5/1/1984	PRC Harris, Inc.	H-4776	July 1981	Narragansett, Town of
Mattatuxet River	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Mattatuxet River	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
McGowan Brook	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
McGowan Brook	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of
McGowan Brook	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Meadow Brook	6/17/1986	Stone & Webster Engineering Corporation	EMW-C-0405	June 1986	Charlestown, Town of
Meadow Brook	5/1/1980	USGS	IAA-H-9-77	June 1979	Richmond, Town of
Meadow Brook	6/18/1986	U.S. Army Corps of Engineers	unknown	1972	Charlestown, Town of
Mile Brook	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Mile Brook	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of
Mile Brook	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Mile Brook	9/16/1980	U.S. Geological Survey	IAA-H-9-77	June 1979	Hopkinton, Town of
Mill Cove	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Mill Creek	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Mink Brook	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Mink Brook	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Moscow Brook	9/16/1980	U.S. Geological Survey	IAA-H-9-77	June 1979	Hopkinton, Town of
Mud Brook	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Mud Brook	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Narragansett Bay	5/1/1984	PRC Harris, Inc.	H-4776	July 1981	Narragansett, Town of
Narragansett Bay	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Ninigret Pond	6/17/1986	Stone & Webster Engineering Corporation	EMW-C-0405	June 1986	Charlestown, Town of
Ninigret Pond	6/18/1986	U.S. Army Corps of Engineers	unknown	1972	Charlestown, Town of
Old Harbor	10/3/1984	PRC Harris, Inc.	H-4776	July 1981	New Shoreham, Town of
Parmenter Brook	9/16/1980	U.S. Geological Survey	IAA-H-9-77	June 1979	Hopkinton, Town of
Parris Brook	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Pasquiset Brook	6/17/1986	Stone & Webster Engineering Corporation	EMW-C-0405	June 1986	Charlestown, Town of
Pasquiset Brook	6/18/1986	U.S. Army Corps of Engineers	unknown	1972	Charlestown, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Pawcatuck River	4/3/2020	U.S. Geological Survey	HSFE01-14-X-0075	February 2016	Charlestown, Town of; Hopkinton, Town of; Richmond, Town of; Westerly, Town of
Pawcatuck River	6/17/1986	Stone & Webster Engineering Corporation	EMW-C-0405	June 1986	Charlestown, Town of
Pawcatuck River	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Pawcatuck River	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Pawcatuck River	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of
Pawcatuck River	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Pawcatuck River	5/1/1980	USGS	IAA-H-9-77	June 1979	Richmond, Town of
Pawcatuck River	9/16/1980	U.S. Geological Survey	IAA-H-9-77	June 1979	Hopkinton, Town of
Pawcatuck River	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Pawcatuck River	6/18/1986	U.S. Army Corps of Engineers	unknown	1972	Charlestown, Town of
Pendock Brook	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Perch Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Perch Cove	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Perry Healy Brook	6/17/1986	Stone & Webster Engineering Corporation	EMW-C-0405	June 1986	Charlestown, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Perry Healy Brook	6/18/1986	U.S. Army Corps of Engineers	unknown	1972	Charlestown, Town of
Pettaquamscutt Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Pettaquamscutt Cove	5/1/1984	PRC Harris, Inc.	H-4776	July 1981	Narragansett, Town of
Pettaquamscutt Cove	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Pettaquamscutt River	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Pettaquamscutt River	5/1/1984	PRC Harris, Inc.	H-4776	July 1981	Narragansett, Town of
Pettaquamscutt River	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Pettaquamscutt River	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Pine River	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Point Judith Harbor of Refuge	5/1/1984	PRC Harris, Inc.	H-4776	July 1981	Narragansett, Town of
Point Judith Pond	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Point Judith Pond	5/1/1984	PRC Harris, Inc.	H-4776	July 1981	Narragansett, Town of
Point Judith Pond	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Poquiant Brook	6/17/1986	Stone & Webster Engineering Corporation	EMW-C-0405	June 1986	Charlestown, Town of
Poquiant Brook	6/18/1986	U.S. Army Corps of Engineers	unknown	1972	Charlestown, Town of
Potowomut River	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Potter Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Potter Cove	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of
Potter Cove	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Potter Pond	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Potter Pond	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Queen River	4/3/2020	U.S. Geological Survey	HSFE01-14-X-0075	February 2016	Exeter, Town of; South Kingstown, Town of
Queen River	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Queen River	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Queen River	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Queens Fort Brook	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Quidnessett Brook	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Quinochontaug Pond	6/17/1986	Stone & Webster Engineering Corporation	EMW-C-0405	June 1986	Charlestown, Town of
Quinochontaug Pond	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Quinochontaug Pond	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of
Quinochontaug Pond	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Quinochontaug Pond	6/18/1986	U.S. Army Corps of Engineers	unknown	1972	Charlestown, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Quonochontaug Pond	6/17/1986	Stone & Webster Engineering Corporation	EMW-C-0405	June 1986	Charlestown, Town of
Quonochontaug Pond	6/18/1986	U.S. Army Corps of Engineers	unknown	1972	Charlestown, Town of
Rake Factory Brook	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Rake Factory Brook	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Reuben Brown Brook	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Rhode Island Sound	5/1/1984	PRC Harris, Inc.	H-4776	July 1981	Narragansett, Town of
Rhode Island Sound	10/3/1984	PRC Harris, Inc.	H-4776	July 1981	New Shoreham, Town of
Roaring Brook	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Rocky Brook	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Rocky Brook	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Sagatuckett River	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Sagatuckett River	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Sand Hill Brook/ Saw Mill Brook	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Saugatucket River	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Saugatucket River	1/3/1986	USACE	unknown	1971	South Kingstown, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Seaweed Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Seaweed Cove	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Segar Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Segar Cove	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Silver Spring Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Silver Spring Cove	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Silver Spring Pond	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Smelt Brook	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Smelt Brook	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Smelt Brook Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Smelt Brook Cove	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Sodom Brook	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Spring Pond	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Spring Pond	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of
Spring Pond	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Sycamore Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Sycamore Cove	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Taney Brook	5/1/1980	USGS	IAA-H-9-77	June 1979	Richmond, Town of
The Narrows Cove	5/1/1984	PRC Harris, Inc.	H-4776	July 1981	Narragansett, Town of
Thompson Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Thompson Cove	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of
Thompson Cove	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Tibbets Creek	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Tomaquag Brook	9/16/1980	U.S. Geological Survey	IAA-H-9-77	June 1979	Hopkinton, Town of
Tributary to Chipuxet River	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Trims Pond	10/3/1984	PRC Harris, Inc.	H-4776	July 1981	New Shoreham, Town of
Trustom Pond	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Trustom Pond	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Turner Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Turner Cove	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Upper Point Judith Pond	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Upper Point Judith Pond	5/1/1984	PRC Harris, Inc.	H-4776	July 1981	Narragansett, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Upper Point Judith Pond	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Usquepaug River	4/3/2020	U.S. Geological Survey	HSFE01-14-X-0075	February 2016	Richmond, Town of; South Kingstown, Town of
Usquepaug River	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
Usquepaug River	5/1/1980	USGS	IAA-H-9-77	June 1979	Richmond, Town of
Usquepaug River	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
Watch Hill Cove	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Watch Hill Cove	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of
Watch Hill Cove	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
White Brook	5/1/1980	USGS	IAA-H-9-77	June 1979	Richmond, Town of
White Horn Brook	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	December 1983	South Kingstown, Town of
White Horn Brook	1/3/1986	USACE	unknown	1971	South Kingstown, Town of
White Rock Canal	4/3/2020	U.S. Geological Survey	HSFE01-14-X-0075	February 2016	Westerly, Town of
Wickford Cove	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Wickford Harbor	12/5/1989	USACE	IAA-H-8-71	unknown	North Kingstown, Town of
Wine Brook	9/16/1980	U.S. Geological Survey	IAA-H-9-77	June 1979	Hopkinton, Town of
Winnapaug Pond	unknown	Stone & Webster Engineering Corporation	EMW-C-0405	October 1981	Westerly, Town of
Winnapaug Pond	2/5/1986	USACE	IAA-H-8-71	unknown	Westerly, Town of

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Winnapaug Pond	unknown	Harris-Toups Associates	IAA-H-8-72	May 1980	Westerly, Town of
Wood River	4/3/2020	U.S. Geological Survey	HSFE01-14-X-0075	February 2016	Hopkinton, Town of; Richmond, Town of
Wood River	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Wood River	5/1/1980	USGS	IAA-H-9-77	June 1979	Richmond, Town of
Wood River	9/16/1980	U.S. Geological Survey	IAA-H-9-77	June 1979	Hopkinton, Town of
Woodville Canal	4/3/2020	U.S. Geological Survey	HSFE01-14-X-0075	February 2016	Hopkinton, Town of
Woody Hill Brook	9/1/1981	Harris-Toups Associates	H-4776	June 1980	Exeter, Town of
Wyoming Pond	5/1/1980	USGS	IAA-H-9-77	June 1979	Richmond, Town of
Wyoming Pond	9/16/1980	U.S. Geological Survey	IAA-H-9-77	June 1979	Hopkinton, Town of
Zone A Flooding Sources within Narragansett HUC-8 Watershed	12/5/1989	USACE	IAA-H-8-71 P05	July 1981	North Kingstown, Town of
Zone A Flooding Sources within Pawcatuck-Wood HUC-8 Watershed - Pawcatuck River and Tributaries	4/3/2020	U.S. Geological Survey	HSFE01-14-X-0075	February 2016	Charlestown, Town of; Exeter, Town of; Hopkinton, Town of; Narragansett Indian Tribe; North Kingstown, Town of; Richmond, Town of; South Kingstown, Town of; Westerly, Town of
Zone A Flooding Sources within Quinebaug HUC-8 Watershed – Pachaug River	7/19/2023	COMPASS	HSFE60-15-D-0003	July 2019	Exeter, Town of

7.2 Community Meetings

The dates of the community meetings held for this Flood Risk Project and previous Flood Risk Projects are shown in Table 29. These meetings may have previously been referred to by a variety of names (Community Coordination Officer (CCO), Scoping, Discovery, etc.), but all meetings represent opportunities for FEMA, community officials, study contractors, and other invited guests to discuss the planning for and results of the project.

Table 29: Community Meetings

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Charlestown, Town of	04/03/2020	09/12/2017	Final CCO	FEMA, RI EMA, this community, and study contractor
		06/15/2016	Workmap	FEMA, RI EMA, this community, and study contractor
		03/07/2012	Discovery	FEMA, RI EMA, this community, and study contractor
Exeter, Town of	7/19/2023	9/28/2020 9/29/2020 9/30/2020	Final CCO Meeting	FEMA, COMPASS, the state, and the community
		9/26/2019	Flood Risk Review	FEMA, RI EMA, this community, and study contractor
		12/01/2015	Discovery	FEMA, RI EMA, this community, and study contractor
Hopkinton, Town of	04/03/2020	09/12/2017	Final CCO	FEMA, RI EMA, this community, and study contractor
		06/15/2016	Workmap	FEMA, RI EMA, this community, and study contractor
		03/07/2012	Discovery	FEMA, RI EMA, this community, and study contractor
Narragansett Indian Tribe	04/03/2020	09/12/2017	Final CCO	FEMA, RI EMA, this community, and study contractor
		06/15/2016	Workmap	FEMA, RI EMA, this community, and study contractor
		03/07/2012	Discovery	FEMA, RI EMA, this community, and study contractor
Narragansett, Town of	04/03/2020	09/12/2017	Final CCO	FEMA, RI EMA, this community, and study contractor
		06/15/2016	Workmap	FEMA, RI EMA, this community, and study contractor
		03/07/2012	Discovery	FEMA, RI EMA, this community, and study contractor
New Shoreham, Town of	10/16/2013	05/02/2012	Final CCO	FEMA, RI EMA, study contractor, and communities
North Kingstown, Town of	04/03/2020	09/12/2017	Final CCO	FEMA, RI EMA, this community, and study contractor
		06/15/2016	Workmap	FEMA, RI EMA, this community, and study contractor
		03/07/2012	Discovery	FEMA, RI EMA, this community, and study contractor

Table 29: Community Meetings (continued)

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Richmond, Town of	04/03/2020	09/12/2017	Final CCO	FEMA, RI EMA, this community, and study contractor
		06/15/2016	Workmap	FEMA, RI EMA, this community, and study contractor
		03/07/2012	Discovery	FEMA, RI EMA, this community, and study contractor
South Kingstown, Town of	04/03/2020	09/12/2017	Final CCO	FEMA, RI EMA, this community, and study contractor
		06/15/2016	Workmap	FEMA, RI EMA, this community, and study contractor
		03/07/2012	Discovery	FEMA, RI EMA, this community, and study contractor
Westerly, Town of	04/03/2020	09/12/2017	Final CCO	FEMA, RI EMA, this community, and study contractor
		06/15/2016	Workmap	FEMA, RI EMA, this community, and study contractor
		03/07/2012	Discovery	FEMA, RI EMA, this community, and study contractor

SECTION 8.0 – ADDITIONAL INFORMATION

Information concerning the pertinent data used in the preparation of this FIS Report can be obtained by submitting an order with any required payment to the FEMA Engineering Library. For more information on this process, see www.fema.gov.

The additional data that was used for this project includes the FIS Report and FIRM that were previously prepared for Washington County (FEMA 2013 and 2020).

Table 30 is a list of the locations where FIRMs for Washington County can be viewed. Please note that the maps at these locations are for reference only and are not for distribution. Also, please note that only the maps for the community listed in the table are available at that particular repository. A user may need to visit another repository to view maps from an adjacent community.

Table 30: Map Repositories

Community	Address	City	State	Zip Code
Charlestown, Town of	Town Hall, Building Department 4540 South County Trail	Charlestown	RI	02813
Exeter, Town of	Town Hall, Town Clerk's Office 675 Ten Rod Road	Exeter	RI	02822
Hopkinton, Town of	Town Hall 1 Town House Road	Hopkinton	RI	02833
Narragansett Indian Tribe	Administration Building 4533 South County Trail	Charlestown	RI	02813
Narragansett, Town of	Town Hall, Engineering Department 25 Fifth Avenue	Narragansett	RI	02822
New Shoreham, Town of	Town Hall 16 Old Town Road	Block Island	RI	02807
North Kingstown, Town of	Department of Public Works Engineering Department 2050 Davisville Road	North Kingstown	RI	02852
Richmond, Town of	Richmond Town Hall 5 Richmond Townhouse Road	Wyoming	RI	02898
South Kingstown, Town of	South KingstownTown Hall 180 High Street	Wakefield	RI	02879
Westerly, Town of	Town Hall 45 Broad Street	Westerly	RI	02891

The National Flood Hazard Layer (NFHL) dataset is a compilation of effective FIRM Databases and LOMCs. Together they create a GIS data layer for a State or Territory. The NFHL is updated as studies become effective and extracts are made available to the public monthly. NFHL data can be viewed or ordered from the website shown in Table 31.

Table 31 contains useful contact information regarding the FIS Report, the FIRM, and other relevant flood hazard and GIS data. In addition, information about the State NFIP Coordinator and GIS Coordinator is shown in this table. At the request of FEMA, each Governor has designated an agency of State or territorial government to coordinate that State's or territory's NFIP activities. These agencies often assist communities in developing and adopting necessary floodplain management measures. State GIS Coordinators are knowledgeable about the availability and location of State and local GIS data in their state.

Table 31: Additional Information

FEMA and the NFIP	
FEMA and FEMA Engineering Library website	www.fema.gov/flood-maps/products-tools/know-your-risk/engineers-surveyors-architects
NFIP website	www.fema.gov/flood-insurance
NFHL Dataset	msc.fema.gov
FEMA Region I	99 High Street, Sixth Floor Boston, MA 02110 (877) 336-2734
Other Federal Agencies	
USGS website	www.usgs.gov
Hydraulic Engineering Center website	www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	Michelle Burnett Emergency Management Agency 645 New London Avenue Cranston, Rhode Island 02920 (401) 462-7048 michelle.burnett@ema.ri.gov
State GIS Coordinator	Vincent Flood GIS Supervising Planner One Capitol Hill, 3rd Floor Providence, Rhode Island 02908 (401) 222-1243 vincent.flood@doa.ri.gov

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

Table 32 includes sources used in the preparation of and cited in this FIS Report as well as additional studies that have been conducted in the study area.

Table 32: Bibliography and References

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
ADR Associates, Inc. 1978	ADR Associates, Inc	*Topographic Maps compiled from aerial photographs, Scale 1:1,200, Contour Interval 2 feet, Town of Narragansett, Rhode Island*	N/A	N/A	1978	
COMPASS 2019b	Federal Emergency Management Agency	DFIRM Data Capture Submission for REG-FY18-01100001-Quinebaug Watershed	COMPASS	Washington D.C.	11/30/2019	https://hazards.fema.gov
COMPASS 2019c	Federal Emergency Management Agency	Base Level Engineering Hydraulics Data Capture Submission for REG-FY16-0110001-Quinebaug Watershed	COMPASS	Washington D.C.	11/30/2019	https://hazards.fema.gov
COMPASS 2019d	Federal Emergency Management Agency	Base Level Engineering Hydrologic Data Capture Submission for REG-FY16-0110001-Quinebaug Watershed	COMPASS	Washington D.C.	11/30/2019	https://hazards.fema.gov
Critsz	South Kingston Patch	*Update: SK Schools Cancelled As Snow Intensifies*	Carl Critz	N/A	unknown	http://southkingstown.patch.com/articles/overnight-snowstorm-will-make-morningcommute-difficult
DEP, 2007	State of Connecticut Department of Environmental Protection	*Natural Hazards Mitigation Plan For 2007-2010.*	N/A	N/A	12/1/2007	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Dewberry and Davis LLC, 2006	Terrapoint Point USA for Dewberry & Davis LLC	*based on North American Vertical Datum of 1988, accurate to 2-ft contours, date of LIDAR data acquisition*	N/A	N/A	12/1/2006	
Donoghue	Providence Business News	*Hurricane Earl threatens Mass. and RI; businesses should prepare*	Kimberley Donoghue	N/A	unknown	http://www.pbn.com/Hurricane-Earl-threatens-Mass-and-RI-businesses-should-prepare,52108
EarthData Inter. Inc. 2006A	EarthData International, Inc.,	*based on North American Vertical Datum of 1988, Digital Terrain Model (DTM), including masspoints and breaklines meeting ASPRS accuracy standards for Class 1 mapping and 2-foot contour generation at a scale of 1:100*	N/A	N/A	4/1/2006	
EarthData Inter. Inc. 2006B	Town of South Kingstown from masspoints and breaklines from EarthData International, Inc.,	*2-foot contours Digital Terrain Model (DTM)*	N/A	N/A	April 2006	
FEMA, 1980	Federal Emergency Management Agency, Federal Insurance Administration	*Flood Insurance Study, Town of Stonington, New London County, Connecticut*	N/A	Washington, D.C.	3/30/1980	
FEMA, 1981	Federal Emergency Management Agency	*Users Manual for Wave Height Analysis*	N/A	Washington, D.C.	2/1/1981	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
FEMA, 1982A	Federal Emergency Management Agency	*Flood Insurance Study, Town of Portsmouth, Newport County, Rhode Island*	N/A	Washington, D.C	9/2/1982	FEMA Flood Map Service Center http://msc.fema.gov
FEMA, 1982B	Federal Emergency Management Agency	*Flood Insurance Study, Town of East Greenwich, Kent County, Rhode Island.*	N/A	Washington, D.C	8/1/1982	FEMA Flood Map Service Center http://msc.fema.gov
FEMA, 1983	Federal Emergency Management Agency	*Flood Insurance Study, Town of Stonington, New London County, Connecticut.*	N/A	N/A	7/1/1983	FEMA Flood Map Service Center http://msc.fema.gov
FEMA, 1984A	Federal Emergency Management Agency	*Flood Insurance Study, Town of North Stonington, New London County, Connecticut.*	N/A	N/A	10/1/1984	FEMA Flood Map Service Center http://msc.fema.gov
FEMA, 1984B	Federal Emergency Management Agency	*Flood Insurance Study, Town of Narragansett, Washington County, Rhode Island*	N/A	N/A	5/1/1984	FEMA Flood Map Service Center http://msc.fema.gov
FEMA, 1986A	Federal Emergency Management Agency	*Flood Insurance Study, Town of Charlestown, Washington County, Rhode Island.*	N/A	N/A	6/17/1986	FEMA Flood Map Service Center http://msc.fema.gov
FEMA, 1986B	Federal Emergency Management Agency	*Flood Insurance Study, Town of Westerly, Washington County, Rhode Island*	N/A	N/A	2/5/1986	FEMA Flood Map Service Center http://msc.fema.gov

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
FEMA, 1986C	Federal Emergency Management Agency	*Flood Insurance Study, Town of Jamestown, Newport County, Rhode Island*	N/A	Washington, D.C	2/19/1986	FEMA Flood Map Service Center http://msc.fema.gov
FEMA, 1986D	Federal Emergency Management Agency	*Flood Insurance Rate Map, Town of West Greenwich, Kent County, Rhode Island*	N/A	Washington, D.C	1/1/1986	FEMA Flood Map Service Center http://msc.fema.gov
FEMA, 1988	Federal Emergency Management Agency	*Flood Insurance Study, Town of Voluntown, New London County, Connecticut.*	N/A	N/A	6/1/1988	FEMA Flood Map Service Center http://msc.fema.gov
FEMA, 2003A	Federal Emergency Management Agency	*Guidelines and Specifications for Flood Hazard Mapping Partners. Appendix D, Guidance for Coastal Flooding Analyses and Mapping*	N/A	N/A	4/1/2003	
FEMA, 2003B	Federal Emergency Management Agency	*Guidelines and Specifications for Flood Hazard Mapping Partners. Appendix D: Guidance for Coastal Flooding Analyses and Mapping*	N/A	Washington, D.C.	4/1/2003	
FEMA, 2007A	Federal Emergency Management Agency	*Coastal Hazard Analysis Modeling Program (CHAMP) Version 2.0*	N/A	Washington, D.C.	8/1/2007	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
FEMA, 2007B	Federal Emergency Management Agency	*Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update (FEMA, 2007) to Appendix D, Guidance for Coastal Flooding Analyses and Mapping (FEMA, 2003)*	N/A	N/A	2007	
FEMA, 2008	Federal Emergency Management Agency	*Procedure Memorandum No. 50 – Policy and Procedure for Identifying and Mapping Areas Subject to Wave Heights Greater than 1.5 feet as an Information Layer on Flood Insurance Rate Maps (FIRMs),*	N/A	Washington, D.C.	12/3/2008	
FEMA, 2010A	Federal Emergency Management Agency	*Flood Insurance Study, Washington County (All Jurisdictions), Rhode Island.*	N/A	N/A	10/19/2010	FEMA Flood Map Service Center http://msc.fema.gov
FEMA, 2010B	STARR, prepared for the Federal Emergency Management Agency	*Regional Frequency Analyses using L Moments*	N/A	N/A	11/3/2010	
FEMA, 2010C	Federal Emergency Management Agency	*Flood Insurance Study, Kent County (All Jurisdictions), Rhode Island*	N/A	N/A	12/1/2010	FEMA Flood Map Service Center http://msc.fema.gov
FEMA, 2010D	Federal Emergency Management Agency	*Flood Insurance Study, Newport County, Rhode Island (All Jurisdictions).*	N/A	N/A	4/1/2010	FEMA Flood Map Service Center http://msc.fema.gov

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
FEMA, 2015	Federal Emergency Management Agency	National Flood Hazard Layer	Federal Emergency Management Agency	Washington, D.C.	9/30/2015	FEMA Flood Map Service Center http://msc.fema.gov
FEMA, 2016	Federal Emergency Management Agency	Pawcatuck-Wood Watershed Flood Risk Project	Federal Emergency Management Agency	Washington, D.C.	9/30/2016	https://hazards.fema.gov
FEMA 2020	Federal Emergency Management Agency	Flood Insurance Study, Washington County, Rhode Island (All Jurisdictions)	FEMA	Washington D.C.	4/3/2020	FEMA Flood Map Service Center http://msc.fema.gov
FIS, 1971	U.S. Department of Housing and Urban Development, Federal Insurance Administration	*Flood Insurance Study, Town of South Kingstown, Washington County, Rhode Island*	N/A	Washington, D.C.	9/1/1971	FEMA Flood Map Service Center http://msc.fema.gov
FIS, 1980	Federal Emergency Management Agency, Federal Insurance Administration	*Flood Insurance Study, Town of Hopkinton, Washington County, Rhode Island*	N/A	Washington, D.C.	9/16/1980	FEMA Flood Map Service Center http://msc.fema.gov
Geod Aerial Mapping Inc. 1979A	Geod Aerial Mapping, Inc., of Oak Ridge, New Jersey	*Topographic Mapping and Aerial Photography, Scale 1:4,800, Contour Interval 5 feet, Town of Exeter, Rhode Island*	N/A	N/A	1979	
Geod Aerial Mapping Inc. 1979B	Geod Aerial Mapping, Inc., of Oak Ridge, New Jersey	*Topographic Mapping and Aerial Photography, Scale 1:4,800, Contour Interval 5 feet, Town of East Greenwich, Rhode Island*	N/A	N/A	1979	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Geod Surveying and Aerial Mapping Co.	Geod Surveying and Aerial Mapping Corporation	*Aerial Photographs, Scale 1"=1,600', Town of Narragansett, Rhode Island, 1982*	N/A	Geod Surveying and Aerial Mapping Corporation	unknown	
Grammatico, 2002	OoCities website	*Major Hurricane Landfalls, Virginia-Massachusetts, (1900-2007)*	Michael A. Grammatico	N/A	May, 2002	http://www.oocities.com/hurricanene/hurricaneglo ria.htm.
Green, 1964	U.S. Department of the Interior, Geological Survey	*Water-Supply Paper 1671, Magnitude and Frequency of Floods in the United States, Part 1A. North Atlantic Slope Basins, Maine to Connecticut*	A. R. Green	Washington, D.C	1964	
Harris-Toups Associates, 1977	Harris-Toups Associates	*Computer Program RIVSRG*	N/A	Lake Success, New York	1977	
Impact Committee, 1980	Town of Charlestown, Impact Committee	*Charlestown in the 80's*	N/A	Charlestown, Rhode Island.	10/1/1980	
James W. Sewall Co. 1980A	James W. Sewall, Co., of Old Town, Maine	*Topographic Maps compiled from aerial photographs, Scale 1:4,800, Contour Interval 5 feet, Charlestown, Rhode Island*	N/A	N/A	1980	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
James W. Sewall Co. 1980B	James W. Sewall, Co., of Old Town, Maine	*Topographic Maps compiled from aerial photographs, Scale 1:4,800, Contour Interval 5 feet, South Kingstown, Rhode Island*	N/A	N/A	1980	
James W. Sewall Co. 1980C	James W. Sewall, Co., of Old Town, Maine	*Topographic Maps compiled from aerial photographs, Scale 1:4,800, Contour Interval 5 feet, Town of Westerly, Rhode Island*	N/A	N/A	1980	
LOMR 18-01-0820P	FEMA	LOMR 18-01-0820P		Washington, D.C.	7/6/2018	FEMA Flood Map Service Center http://msc.fema.gov
LOMR 20-01-0268P	FEMA	LOMR 20-01-0268P		Washington, D.C.	2/13/2020	FEMA Flood Map Service Center http://msc.fema.gov
LOMR 20-01-1104P	FEMA	LOMR 20-01-1104P		Washington, D.C.	10/30/2020	FEMA Flood Map Service Center http://msc.fema.gov
LOMR 21-01-0755P	FEMA	LOMR 21-01-0755P		Washington, D.C.	6/15/2021	FEMA Flood Map Service Center http://msc.fema.gov
MA Public Safety	Massachusetts Executive Office of Public Safety and Security, Public Safety	*New England Hurricanes of Note*	N/A	N/A	unknown	http://www.mass.gov/eopss/home-sec-emergresp/plan-prep/natural-hazards/hurricanes/new-england-hurricanes-of-note.html

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Natinol Academy of Sci. 1977	National Academy of Sciences.	*Methodology for Calculating Wave Action Effects Associated with Storm Surges*	N/A	Washington, D.C.	1977	
NOAA, A	U.S. Department of the Interior, Geological Survey	*Annual Peak Flow Frequency Analyses of the Pawcatuck River Gage at Charlestown, Rhode Island, and the Pawcatuck River Gage at Wood River Junction, Rhode Island*	N/A	Boston, Massachusetts	12/1/1980	
NOAA, B	NOAA Satellite and Information Service	*National Climatic Data Center, US Department of Commerce*	N/A	N/A	unknown	http://www4.ncdc.noaa.gov/cgiwin/wwcgi.dll?wwevent~ShowEvent~829320
NOAA, 2010	National Oceanographic and Atmospheric Administration (NOAA) National Ocean Service (NOS) Hydrographic Data Base (NOSHDB) and Hydrographic Survey Meta Data Base (HSMDB) (NOAA)	*Bathymetry*	N/A	N/A	5/27/2010	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
O'Brien and Harris, 1980	Personal Communication to Mr. David Knowles of Stone & Webster Engineering Corporation	*Description of the preliminary analysis done for the Narragansett Rhode Island, Flood Insurance Study*	Ms. Ellen O'Brien, PRC Harris	N/A	12/10/1980	
O'Coin and Santo, 2010	WPRI	*Remembering Gloria 25 years later*	Tim O'Coin & T.J. Del Santo	N/A	9/1/2010	http://www.wpri.com/dpp/weather/providence-areamarks-25th-anniversary-of-hurricane-gloria.
Olsen and Grant, 1972	University of Rhode Island, Coastal Resources Center	*Marine Technical Report No. 4, Rhode Island's Barrier Beaches, Volume II*	Stephen B. Olsen and Malcolm J. Grant	Kingston, Rhode Island	1972, estimated	
PBN Staff	Providence Business News	*Storm blankets Rhode Island, 2nd day of travel disruption*	PBN Staff	N/A	unknown	http://www.pbn.com/Storm-blankets-Rhode-Island-2nd-day-oftravel-disruption,54586
Providence Journal 1938	The Providence Journal	*The Great Hurricane and Tidal Wave, Rhode Island, September 21, 1938.*	N/A	Providence, Rhode Island	1938	
Providence Journal 1954	The Providence Journal	*Hurricane Carol Lashes Rhode Island, August 31, 1954*	N/A	Providence, Rhode Island	1954	
Providence Journal, A	Providence Journal	*no title*	N/A	N/A	unknown	http://newsblog.projo.com/2011/01/power-outagesreduced-to-about.html

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Providence Journal, B	Providence Journal	*no title*	N/A	N/A	unknown	http://newsblog.projo.com/2011/01/charlestownweathered-the-wet.html
Providence Journal, C	Providence Journal	*no title*	N/A	N/A	unknown	http://newsblog.projo.com/2010/03/live-nowcontinuous-updates-on.html
Providence Journal, D	Providence Journal	*no title*	N/A	N/A	unknown	http://newsblog.projo.com/2011/01/providendce-ri----snow-is.html
Providence Journal, E	Providence Journal	*no title*	N/A	N/A	unknown	http://newsblog.projo.com/2011/01/state-policegoslow-on-the-roa.html
Providence Journal, F	Providence Journal	*no title*	N/A	N/A	unknown	http://www.projo.com/education/content/URI_WINTER_STORM_02-13-11_FSMF2Q4_v22.14f4380.html
RI Dept. Econ. Development, 1976	State of Rhode Island, Department of Economic Development	*Town of Charlestown, Rhode Island, Monograph.*	N/A	Rhode Island	10/1/1976	
RI GIS, 2004	Rhode Island Geographic Information Systems	*(2003-2004) digital orthophotos, 1:5,000, 2-foot Ground Sample Distance (GSD)*	N/A	N/A	unknown	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
RI GIS, 2011	Rhode Island Geographic Information System (RIGIS)	*Northeast LiDAR DEM 2011*	RIGIS	Providence, RI	2012	http://www.rigis.org/pages/2011-statewide-lidar
RI GIS 2016	Rhode Island Geographic Information System	*Political boundaries for Rhode Island Townships 2016*		University of Rhode Island	6/1/2016	http://www.rigis.org/data/
Soens	WPRI.com Eyewitness News	*Storm leaves ice, flood, roof concerns*	Darren Soens	N/A	unknown	http://www.wpri.com/dpp/news/local_news/providence/providence-ice-roof-floodconcerns
U.S. Army Corps, 1975	U.S. Army Corps of Engineers, Galveston District	*Guidelines for Identifying Coastal High Hazard Zones*	N/A	Galveston, Texas	6/1/1975	
U.S. Army Corps, 1977	U.S. Army Corps of Engineers, Hydrologic Engineering Center	*Computer Program 723-X6-L202A, HEC-2 Water-Surface Profiles*	N/A	Davis, California	11/1/1976	
U.S. Army Corps 1979A	U.S. Army Corps of Engineers, New England Division	*Water Resources by the U.S. Army Corps of Engineers in Rhode Island*	N/A	Waltham, Massachusetts	1/1/1979	
U.S. Army Corps, 1979B	U.S. Army Corps of Engineers, New England Division	*Frequency of Tidal Flooding from Hurricanes and Storms at Providence, Rhode Island*	N/A	Waltham, Massachusetts	6/1/1979	
U.S. Army Corps, 1979C	U.S. Army Corps of Engineers, New England Division	*Frequency of Tidal Flooding from Hurricanes and Storms at Newport, Rhode Island*	N/A	Waltham, Massachusetts	6/1/1979	
U.S. Army Corps, 1979D	U.S. Army Corps of Engineers, New England Division	*Frequency of Tidal Flooding from Hurricanes and Storms at Fall River-Somerset, Massachusetts*	N/A	Waltham, Massachusetts	6/1/1979	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
U.S. Army Corps, 1979E	U.S. Army Corps of Engineers, New England Division	*Narragansett Bay, Rhode Island, Hurricane Flood Levels, East Shore of Narragansett Bay*	N/A	Waltham, Massachusetts	6/1/1979	
U.S. Army Corps, 1979F	U.S. Army Corps of Engineers, New England Division	*Hurricane Flood Levels, Narragansett Bay, Rhode Island, Sakonnet River, Mount Hope Bay, and Taunton River from Sakonnet Point, Rhode Island to Dighton, Massachusetts.*	N/A	Waltham, Massachusetts	6/1/1979	
U.S. Army Corps, 1979G	U.S. Army Corps of Engineers, Hydrologic Engineering Center	*HEC-2 Water-Surface Profiles, Generalized Computer Program*	N/A	Davis, California	8/1/1979	
U.S. Army Corps, 1979H	U.S. Army Corps of Engineers, Hydrologic Engineering Center	*HEC-2 Water-Surface Profiles, Users Manual*	N/A	Davis, California	8/1/1979	
U.S. Army Corps, 1984	U.S. Army Corps of Engineers	*Shore Protection Manual*	N/A	N/A	1984	
U.S. Census, 2010	U.S. Census Bureau	*no title*	N/A	N/A	2010	http://quickfacts.census.gov/qfd/states/09/09007.html
USCB, 2012	U.S. Census Bureau	*TIGER/Line Files*		Washington, D.C.	2012	
U.S. Census Bureau, 2016	US Census Bureau	*US Census Tiger Lines - Transportation*	US Census Bureau		1/1/2016	https://www.census.gov/cgi-bin/geo/shapefiles/index.php

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
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U.S. Dept. Ag. 1972	U.S. Department of Agriculture, Soil Conservation Service	*National Engineering Handbook, Section 4, Hydrology*	N/A	Washington, D.C.	8/1/1972	
U.S. Dept. Ag. 1975A	U.S. Department of Agriculture, Soil Conservation Service	*Flood Hazard Analyses, Annaquatucket River*	N/A	North Kingstown, Rhode Island	11/1/1975	
U.S. Dept. Ag. 1975B	U.S. Department of Agriculture, Soil Conservation Service	*Flood Hazard Analyses, Sand Hill Brook and Mill Brook*	N/A	North Kingstown, Rhode Island	12/1/1975	
U.S. Dept. Ag. 1976A	U.S. Department of Agriculture, Soil Conservation Service	*Flood Hazard Analysis, Saugatucket River, South Kingstown, Rhode Island*	N/A	West Warwick, Rhode Island	2/1/1976	
U.S. Dept. Ag. 1976B	U.S. Department of Agriculture, Soil Conservation Service	*Technical Release No. 61, WSP-2 Computer Program*	N/A	Washington, D.C.	5/1/1976	
U.S. Dept. Commerce	U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Survey	*Point Judith Harbor, Newport Harbor Charts, Soundings in feet, Scale 1:15,000*	N/A	N/A	unknown	
U.S. Water Res. Council, 1976	U.S. Water Resources Council	*Guidelines for Determining Flood Flow Frequency, Bulletin 17*	N/A	Washington, D.C.	3/1/1976	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
U.S. Weather Bureau, 1964	U.S. Department of Commerce, Weather Bureau	*Technical Paper No. 49, 2-10-Day Precipitation Periods of 2- to 100-Years in the Contiguous United States*	N/A	Washington, D.C	1964	
USA Today	USA Today	*no title*	N/A	N/A	unknown	http://www.usatoday.com/weather/wbertha3.htm
USGS, 1970A	U.S. Department of the Interior, Geological Survey	*7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 10 feet, Carolina, Rhode Island*	N/A	N/A	1970	
USGS, 1970B	U.S. Department of the Interior, Geological Survey	*7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 10 feet, Quonochontaug, Rhode Island*	N/A	N/A	1970	
USGS, 1970C	U.S. Department of the Interior, Geological Survey	*7.5-Minute Series Topographic Maps, Kingston, Rhode Island*	N/A	N/A	1970	
USGS, 1970D	U.S. Department of the Interior, Geological Survey	*7.5-Minute Series Topographic Maps, Hope Valley, Rhode Island*	N/A	N/A	1970	
USGS, 1970E	U.S. Department of the Interior, Geological Survey	*7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 10 feet, Voluntown, Connecticut-Rhode Island*	N/A	N/A	1970	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS, 1970F	U.S. Department of the Interior, Geological Survey	*7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 10 feet, Wickford, Rhode Island*	N/A	N/A	unknown	
USGS, 1973	U.S. Department of the Interior, Geological Survey	*7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 10 feet, Ashaway, Connecticut-Rhode Island*	N/A	N/A	1973	
USGS, 1975	U.S. Department of the Interior, Geological Survey	*Wickford, Rhode Island, 1975; Kingston, Rhode Island, 1975; Narragansett, Rhode Island, 1975*	N/A	N/A	unknown	
USGS, 1976A	U.S. Department of the Interior, Geological Survey	*Flood Magnitude and Frequency of Small Rhode Island Streams*	N/A	Boston, Massachusetts	1976	
USGS, 1976B	U.S. Department of the Interior	*Open-File Report, Computer Program E431, User's Manual, Computer Applications for Step-Backwater and Floodway Analyses*	James O. Shearman	Washington, D.C.	1976	
USGS, 2010	U.S. Geological Survey	National Water Information System	U.S. Geological Survey	Reston, VA	9/30/2010	http://waterdata.usgs.gov/nwis/inventory

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USGS, 2016	U.S. Geological Survey	*Watershed Boundary Dataset*	U.S. Geological Survey	Reston, VA	6/30/2016	http://nhd.usgs.gov/wbd.html
USGS, 2018	U.S. Geological Survey	*NAIP 2018 RI*	U.S. Department of Agriculture	Sioux Falls, South Dakota	11/7/2018	https://nrcs.app.box.com/v/naip/
Vallee and Dion	NOAA, National Weather Service Forecast Office, Boston, MA	*Southern New England Tropical Storms and Hurricanes, A Ninety-eight Year Summary 1909-1997*	David R. Vallee and Michael R. Dion	Taunton, MA	unknown	http://www.erh.noaa.gov/box/hurricane/NewEnglandClimatology.shtml.
Walton, et al, 1989	USACE, Coastal Engineering Research Center report	*Criteria for Evaluating Coastal Flood Protection Structures*	Walton, T. L., Jr., Ahrens, J. P., Truit, C. L., & Dean, R. G.	Vicksburg, Mississippi	1989	
Wiitala, et al, 1980	U.S. Department of the Interior, Geological Survey	*Water-Supply Paper 1526, Hydraulic and Hydrologic Aspects of Flood Plain Planning*	Sulo W. Wiitala, et al	Washington, D.C	12/1/1980	
WSP Sells, Inc, 2009	WSP Sells, Inc	*2-foot contours derived from planimetric data*	N/A	Narragansett, RI.,	2009	