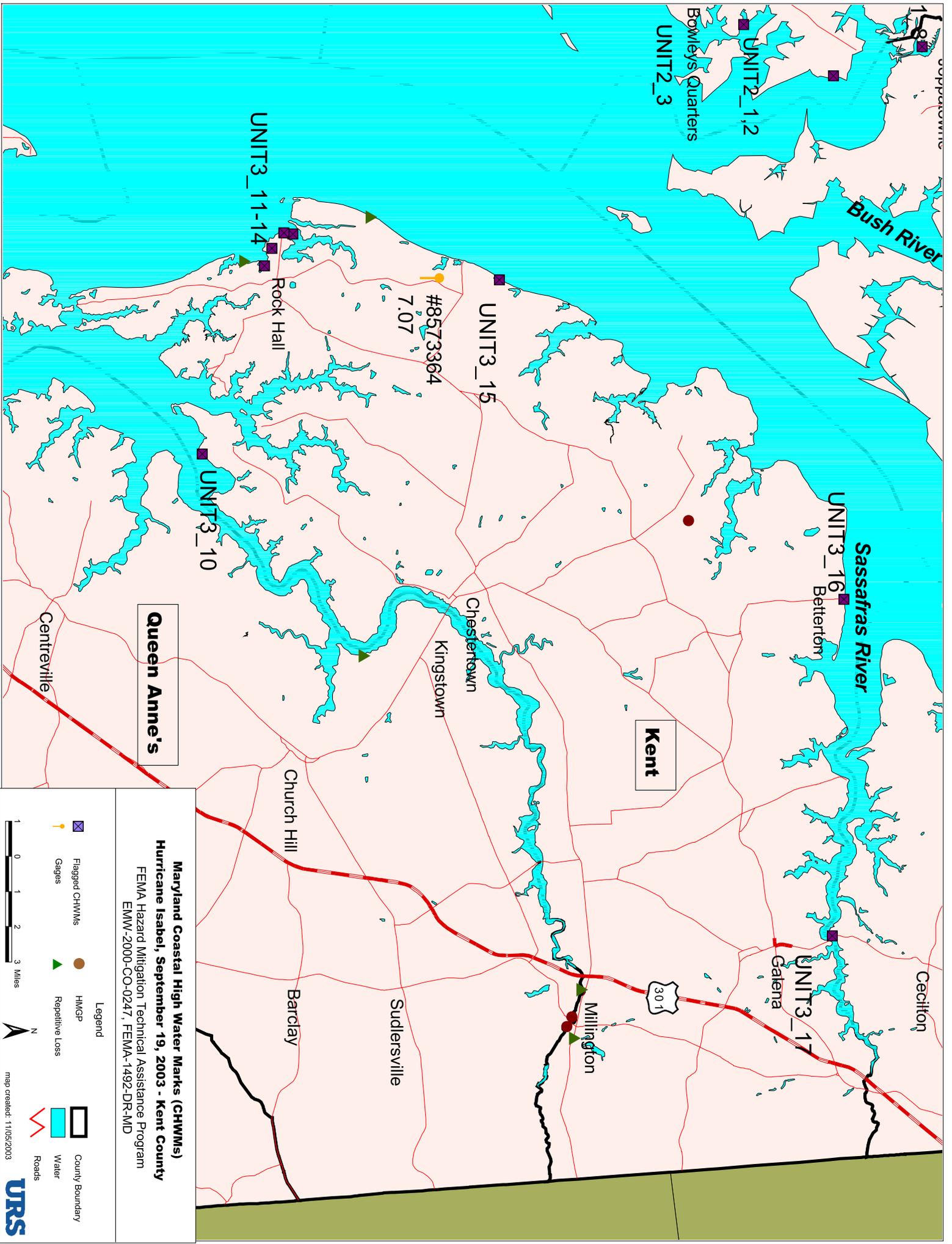


Appendices

Appendix H: Survey Sheets from Kent County



Queen Anne's

Kent

Maryland Coastal High Water Marks (CHWMs)
Hurricane Isabel, September 19, 2003 - Kent County
 FEMA Hazard Mitigation Technical Assistance Program
 EMW-2000-CO-0247, FEMA-1492-DR-MD

Legend

- County Boundary
- Water
- Roads
- Flagged CHWMs
- Gages
- HMGP
- Repetitive Loss

1 0 1 2 3 Miles

N

map created: 11/05/2003





PROJECT FEMA-1492-DR-MD High Water Mark Survey Project
COMM. NO. 240045
TYPE High Water Mark Survey **PREL.** 10/05/2003 **FINAL** 11/20/2003 **SHEET** H-1
CONTENTS Individual Historical High Water Mark Survey Report

Historical Mark: UNIT3_10 **Mark Type:** Coastal
Flood Event: Hurricane Isabel **Date of Flood:** 09/19/2003
Flooding Source: Chesapeake Bay **Quality of Mark:** Fair
Flood Elevation: **7.38 FT** **Location:** Debris line on signpost
Flooding Type: Surge
Mark Address: Southern limit of Cliff's City Road, near Cliff's City Wharf (dead end).
Description of Mark: 21 inches from base of 15 MPH sign

Type of Line: Debris line

Description of Physical Structure: metal post

Closest City: Cliffs City **County:** Kent **State:** Maryland

Flaggers: Usher **Company/Agency:** Dewberry

Flagging Date: 9/27/2003

Surveyors: Blackwell, Chrimer **Company/Agency:** URS

Survey Date: 10/6/2003 **Survey Type:** N/A

Projection: Maryland **Vertical Datum:** NAVD 88 **Horizontal Datum:** NAD 83

Latitude: 39.1068 **Easting:** 1,556,393

Longitude: -76.1436 **Northing:** 523,154

Approx. First Floor Elevation (Based on Measurement from Mark): 5.63 FT

Approx. Distance to Shoreline: 320 FT

Comments:



DSCN0020.jpg

Survey Certification: Coastal High Water Mark location survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level.



PROJECT FEMA-1492-DR-MD High Water Mark Survey Project
COMM. NO. 240045
TYPE High Water Mark Survey **PREL.** 10/05/2003 **FINAL** 11/20/2003 **SHEET** H-2
CONTENTS Individual Historical High Water Mark Survey Report

Historical Mark: UNIT3_11 **Mark Type:** Coastal
Flood Event: Hurricane Isabel **Date of Flood:** 09/19/2003
Flooding Source: Chesapeake Bay **Quality of Mark:** Good
Flood Elevation: **6.89 FT** **Location:** Outside building wall
Flooding Type: Surge
Mark Address: 6043 Lawton Avenue (east side of Lawton Avenue, northernmost structure)
Description of Mark: 7.75 inches above ground grade

Type of Line: Mud line

Description of Physical Structure: wood building

Closest City: Rock Hall **County:** Kent **State:** Maryland

Flaggers: Usher **Company/Agency:** Dewberry

Flagging Date: 9/27/2003

Surveyors: Blackwell, Chrimer **Company/Agency:** URS

Survey Date: 10/6/2003 **Survey Type:** N/A

Projection: Maryland **Vertical Datum:** NAVD 88 **Horizontal Datum:** NAD 83

Latitude: 39.1451 **Easting:** 1,525,057

Longitude: -76.2593 **Northing:** 537,447

Approx. First Floor Elevation (Based on Measurement from Mark): 6.24 FT

Approx. Distance to Shoreline: 10 FT

Comments:



DSCN0021.jpg

Survey Certification: Coastal High Water Mark location survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level.



PROJECT FEMA-1492-DR-MD High Water Mark Survey Project
COMM. NO. 240045
TYPE High Water Mark Survey **PREL.** 10/05/2003 **FINAL** 11/20/2003 **SHEET** H-3
CONTENTS Individual Historical High Water Mark Survey Report

Historical Mark: UNIT3_12 **Mark Type:** Coastal
Flood Event: Hurricane Isabel **Date of Flood:** 09/19/2003
Flooding Source: Chesapeake Bay **Quality of Mark:** Good
Flood Elevation: **6.93 FT** **Location:** Inside wall transferred to exterior
Flooding Type: Surge
Mark Address: Gratitude Marina, 5924 Lawton Avenue, Rock Hall, Maryland, 21661
Description of Mark: 38.5 inches above floor

Type of Line: Mud line

Description of Physical Structure: wood building

Closest City: Rock Hall **County:** Kent **State:** Maryland

Flaggers: Usher **Company/Agency:** Dewberry

Flagging Date: 9/27/2003

Surveyors: Blackwell, Chrimer **Company/Agency:** URS

Survey Date: 10/6/2003 **Survey Type:** N/A

Projection: Maryland **Vertical Datum:** NAVD 88 **Horizontal Datum:** NAD 83

Latitude: 39.1413 **Easting:** 1,522,221

Longitude: -76.2602 **Northing:** 537,424

Approx. First Floor Elevation (Based on Measurement from Mark): 3.72 FT

Approx. Distance to Shoreline: 220 FT

Comments:



Survey Certification: Coastal High Water Mark location survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level.

DSCN0023.jpg



PROJECT FEMA-1492-DR-MD High Water Mark Survey Project
COMM. NO. 240045
TYPE High Water Mark Survey **PREL.** 10/05/2003 **FINAL** 11/20/2003 **SHEET** H-4
CONTENTS Individual Historical High Water Mark Survey Report

Historical Mark: UNIT3_13 **Mark Type:** Coastal
Flood Event: Hurricane Isabel **Date of Flood:** 09/19/2003
Flooding Source: Chesapeake Bay **Quality of Mark:** Fair
Flood Elevation: **6.74 FT** **Location:** Outside building wall
Flooding Type: Surge
Mark Address: 27083 Bayside Avenue, Rock Hall, Maryland
Description of Mark: 25.5 inches above crushed stone on ground

Type of Line: Mud line
Description of Physical Structure: concrete building
Closest City: Rock Hall **County:** Kent **State:** Maryland

Flaggers: Usher **Company/Agency:** Dewberry
Flagging Date: 9/28/2003

Surveyors: Blackwell, Chrimer **Company/Agency:** URS
Survey Date: 10/6/2003 **Survey Type:** N/A
Projection: Maryland **Vertical Datum:** NAVD 88 **Horizontal Datum:** NAD 83
Latitude: 39.1363 **Easting:** 1,525,087
Longitude: -76.2519 **Northing:** 533,805

Approx. First Floor Elevation (Based on Measurement from Mark): 4.62 FT

Approx. Distance to Shoreline: 1030 FT

Comments:



DSCN0024.jpg

Survey Certification: Coastal High Water Mark location survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level.



PROJECT FEMA-1492-DR-MD High Water Mark Survey Project
COMM. NO. 240045
TYPE High Water Mark Survey **PREL.** 10/05/2003 **FINAL** 11/20/2003 **SHEET** H-5
CONTENTS Individual Historical High Water Mark Survey Report

Historical Mark: UNIT3_14 **Mark Type:** Coastal
Flood Event: Hurricane Isabel **Date of Flood:** 09/19/2003
Flooding Source: Chesapeake Bay **Quality of Mark:** Good
Flood Elevation: **7.06 FT** **Location:** Outside building wall
Flooding Type: Surge
Mark Address: Waterman's Crab House, 21053 Sharp Street, Rock Hall, Maryland
Description of Mark: 40.25 inches above blacktop grade

Type of Line: Mud line

Description of Physical Structure: metal building

Closest City: Rock Hall **County:** Kent **State:** Maryland

Flaggers: Usher **Company/Agency:** Dewberry

Flagging Date: 9/28/2003

Surveyors: Blackwell, Chrismar **Company/Agency:** URS

Survey Date: 10/6/2003 **Survey Type:** N/A

Projection: Maryland **Vertical Datum:** NAVD 88 **Horizontal Datum:** NAD 83

Latitude: 39.1332 **Easting:** 1,527,923

Longitude: -76.2427 **Northing:** 533,829

Approx. First Floor Elevation (Based on Measurement from Mark): 3.71 FT

Approx. Distance to Shoreline: 10 FT

Comments:



DSCN0025.jpg

Survey Certification: Coastal High Water Mark location survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level.



PROJECT FEMA-1492-DR-MD High Water Mark Survey Project
COMM. NO. 240045
TYPE High Water Mark Survey **PREL.** 10/05/2003 **FINAL** 11/20/2003 **SHEET** H-6
CONTENTS Individual Historical High Water Mark Survey Report

Historical Mark: UNIT3_15 **Mark Type:** Coastal
Flood Event: Hurricane Isabel **Date of Flood:** 09/19/2003
Flooding Source: Chesapeake Bay **Quality of Mark:** Fair
Flood Elevation: **6.41 FT** **Location:** Debris line on ground
Flooding Type: Surge
Mark Address: Due south of 9152 North Bayview Avenue, Tolchester Beach, Maryland
Description of Mark: N/A

Type of Line: Debris line

Description of Physical Structure: N/A

Closest City: Tolchester Beach **County:** Kent **State:** Maryland

Flaggers: Usher **Company/Agency:** Dewberry

Flagging Date: 9/28/2003

Surveyors: Blackwell, Chrimer **Company/Agency:** URS

Survey Date: 10/5/2003 **Survey Type:** N/A

Projection: Maryland **Vertical Datum:** NAVD 88 **Horizontal Datum:** NAD 83

Latitude: 39.2298 **Easting:** 1,530,484

Longitude: -76.2342 **Northing:** 566,631

Approx. First Floor Elevation (Based on Measurement from Mark): N/A

Approx. Distance to Shoreline: 220 FT

Comments:



DSCN0027.jpg

Survey Certification: Coastal High Water Mark location survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level.



PROJECT FEMA-1492-DR-MD High Water Mark Survey Project
COMM. NO. 240045
TYPE High Water Mark Survey **PREL.** 10/05/2003 **FINAL** 11/20/2003 **SHEET** H-7
CONTENTS Individual Historical High Water Mark Survey Report

Historical Mark: UNIT3_16 **Mark Type:** Coastal
Flood Event: Hurricane Isabel **Date of Flood:** 09/19/2003
Flooding Source: Chesapeake Bay **Quality of Mark:** Fair
Flood Elevation: **6.44 FT** **Location:** Debris line on ground
Flooding Type: Surge
Mark Address: Betterton Beach Waterfront Park, northwest of the intersection of Ericsson Avenue and Main Street
Description of Mark: N/A

Type of Line: Debris line

Description of Physical Structure: N/A

Closest City: Betterton **County:** Kent **State:** Maryland

Flaggers: Usher **Company/Agency:** Dewberry

Flagging Date: 9/28/2003

Surveyors: Blackwell, Chrismer **Company/Agency:** URS

Survey Date: 10/5/2003 **Survey Type:** N/A

Projection: Maryland **Vertical Datum:** NAVD 88 **Horizontal Datum:** NAD 83

Latitude: 39.3706 **Easting:** 1,578,083

Longitude: -76.0631 **Northing:** 621,714

Approx. First Floor Elevation (Based on Measurement from Mark): N/A

Approx. Distance to Shoreline: 210 FT

Comments:



DSCN0028.jpg

Survey Certification: Coastal High Water Mark location survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level.



PROJECT FEMA-1492-DR-MD High Water Mark Survey Project
COMM. NO. 240045
TYPE High Water Mark Survey **PREL.** 10/05/2003 **FINAL** 11/20/2003 **SHEET** H-8
CONTENTS Individual Historical High Water Mark Survey Report

Historical Mark: UNIT3_17 **Mark Type:** Coastal
Flood Event: Hurricane Isabel **Date of Flood:** 09/19/2003
Flooding Source: Chesapeake Bay **Quality of Mark:** N/A
Flood Elevation: **See comments** **Location:** No surge evident
Flooding Type: None
Mark Address: Georgetown Yacht Basin, on Sassafras River, Route 213 South, Georgetown, Maryland
Description of Mark: N/A

Type of Line: N/A

Description of Physical Structure: N/A

Closest City: Georgetown **County:** Kent **State:** Maryland

Flaggers: Usher **Company/Agency:** Dewberry

Flagging Date: 9/28/2003

Surveyors: **Company/Agency:**

Survey Date: **Survey Type:** N/A

Projection: Maryland **Vertical Datum:** NAVD 88 **Horizontal Datum:** NAD 83

Latitude: 39.3642 **Easting:** 1,629,013

Longitude: -75.8845 **Northing:** 618,646

Approx. First Floor Elevation (Based on Measurement from Mark): N/A

Approx. Distance to Shoreline: 70 FT

Comments:

This entry serves to record a point on the Sassafras River where no appreciable storm surge associated with Hurricane Isabel was evident.



DSCN0029.jpg

Survey Certification: Coastal High Water Mark location survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level.