Reach: Nansemond River
Maintained Depth: Not Maintained

- ⊕ Benchmark
- ● Shoalest Sounding in Quarter/Parameter of each Reach
- Channel Toes
- Channel Quarter/Parameter Line
- Maintained Depth Contour Line

Bathymetry

🟥	0' - 1.9'	🟩	10' - 10.9'
🟥	2' - 3.9'	🟦	11' - 11.9'
🟧	4' - 5.9'	🟦	12' - 12.9'
🟨	6' - 7.9'	🟦	13' and Deeper
🟩	8' - 9.9'		

Aids to Navigation

- Can
- Nun
- Green Lighted Buoy
- Red Lighted Buoy
- Junction Buoy
- ! Flashing Green
- ! Flashing Red
- ■ Green Daybeacon
- ▲ Red Daybeacon
- ◇ Danger

US Army Corps
of Engineers
Norfolk District

NOTES:
1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

2. NOT FOR NAVIGATION USE. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATE(S) INDICATED & CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

3. SOUNDINGS: SHOWN IN FEET CENTERED ON POINT OF SHOALEST DEPTH IN 20 FT RADIUS GENERATED FROM HYDROSURVEY DATA.

4. BACKGROUND: VIRGINIA BASE MAPPING PROGRAM MOST RECENT IMAGERY GIS WEB SERVICE.

5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET.

6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY eHYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
HORIZONTAL ZONE:	VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	SINGLE-BEAM
BIN SIZE:	N/A
BIN SELECTION METHOD:	N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 1 of 22
Map Produced: 4/30/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

US Army Corps of Engineers
Norfolk District

NOTES:
1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

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PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: PPK/NOAA VDATUM MDL
SYSTEM/METHOD: SINGLE-BEAM
BIN SIZE: N/A
BIN SELECTION METHOD: N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 2 of 22
Map Produced: 4/30/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

⊕ Benchmark
● Shoalest Sounding in Quarter/Parameter of each Reach
Channel Toes
Channel Quarter/Parameter Line
Maintained Depth Contour Line

Bathymetry

🟥 0' - 1.9'	🟩 10' - 10.9'
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🟨 6' - 7.9'	🟦 13' and Deeper
🟩 8' - 9.9'	

0 75 150 300 Feet

1 in = 150 feet

Aids to Navigation

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- Nun
- Green Lighted Buoy
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US Army Corps
of Engineers
Norfolk District

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PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
HORIZONTAL ZONE:	VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	SINGLE-BEAM
BIN SIZE:	N/A
BIN SELECTION METHOD:	N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 3 of 22
Map Produced: 4/30/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

US Army Corps
of Engineers
Norfolk District

NOTES:
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DATUM NAME:	NAD 83
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PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
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IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	SINGLE-BEAM
BIN SIZE:	N/A
BIN SELECTION METHOD:	N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 4 of 22
Map Produced: 4/30/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

US Army Corps
of Engineers
Norfolk District

NOTES:
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DATUM NAME:	NAD 83
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PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
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IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	SINGLE-BEAM
BIN SIZE:	N/A
BIN SELECTION METHOD:	N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 5 of 22
Map Produced: 4/30/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

76°30'0"W 36°52'30"N

SHEET 6 of 22

Map Produced: 4/30/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
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TIDE APPLICATION:	PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	SINGLE-BEAM
BIN SIZE:	N/A
BIN SELECTION METHOD:	N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
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US Army Corps
of Engineers
Norfolk District

US Army Corps
of Engineers
Norfolk District

NOTES:

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DATUM NAME:	NAD 83
HORIZONTAL ZONE:	VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	SINGLE-BEAM
BIN SIZE:	N/A
BIN SELECTION METHOD:	N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 7 of 22
Map Produced: 4/30/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

US Army Corps of Engineers
Norfolk District

NOTES:

1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

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PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
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HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: PPK/NOAA VDATUM MDL
SYSTEM/METHOD: SINGLE-BEAM
BIN SIZE: N/A
BIN SELECTION METHOD: N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
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NANSEMOND RIVER
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eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 8 of 22
Map Produced: 4/30/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

⊕ Benchmark
● Shoalest Sounding in Quarter/Parameter of each Reach
Channel Toes
Channel Quarter/Parameter Line
Maintained Depth Contour Line

Bathymetry

0' - 1.9'	10' - 10.9'
2' - 3.9'	11' - 11.9'
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0 75 150 300 Feet
1 in = 150 feet

Aids to Navigation

- Can
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- Green Lighted Buoy
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US Army Corps
of Engineers
Norfolk District

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 9 of 22
Map Produced: 4/30/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
HORIZONTAL ZONE:	VIRGINIA SOUTH ZONE
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IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
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VERTICAL CONTROL:	POSPAC PPK
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SYSTEM/METHOD:	SINGLE-BEAM
BIN SIZE:	N/A
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GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
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- 🟥 0' - 1.9'
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0 75 150 300 Feet
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US Army Corps
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PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: PPK/NOAA VDATUM MDL
SYSTEM/METHOD: SINGLE-BEAM
BIN SIZE: N/A
BIN SELECTION METHOD: N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 10 of 22
Map Produced: 4/30/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

⊕ Benchmark
● Shoalest Sounding in Quarter/Parameter of each Reach
Channel Toes
Channel Quarter/Parameter Line
Maintained Depth Contour Line

Bathymetry

0' - 1.9'	10' - 10.9'
2' - 3.9'	11' - 11.9'
4' - 5.9'	12' - 12.9'
6' - 7.9'	13' and Deeper
8' - 9.9'	

0 75 150 300 Feet
1 in = 150 feet

Aids to Navigation

- Can
- Nun
- Green Lighted Buoy
- Red Lighted Buoy
- Junction Buoy
- Flashing Green
- Flashing Red
- Green Daybeacon
- Red Daybeacon
- ◇ Danger

US Army Corps
of Engineers
Norfolk District

NOTES:
1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

2. NOT FOR NAVIGATION USE. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATE(S) INDICATED & CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

3. SOUNDINGS: SHOWN IN FEET CENTERED ON POINT OF SHOALEST DEPTH IN 20 FT RADIUS GENERATED FROM HYDROSURVEY DATA.

4. BACKGROUND: VIRGINIA BASE MAPPING PROGRAM MOST RECENT IMAGERY GIS WEB SERVICE.

5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET.

6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY eHYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: PPK/NOAA VDATUM MDL
SYSTEM/METHOD: SINGLE-BEAM
BIN SIZE: N/A
BIN SELECTION METHOD: N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 11 of 22
Map Produced: 4/30/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

US Army Corps
of Engineers
Norfolk District

NOTES:

1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

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PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: PPK/NOAA VDATUM MDL
SYSTEM/METHOD: SINGLE-BEAM
BIN SIZE: N/A
BIN SELECTION METHOD: N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 12 of 22
Map Produced: 4/30/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

SHEET 13 of 22
Map Produced: 4/30/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
HORIZONTAL ZONE:	VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	SINGLE-BEAM
BIN SIZE:	N/A
BIN SELECTION METHOD:	N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

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US Army Corps
of Engineers
Norfolk District

US Army Corps
of Engineers
Norfolk District

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PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: PPK/NOAA VDATUM MDL
SYSTEM/METHOD: SINGLE-BEAM
BIN SIZE: N/A
BIN SELECTION METHOD: N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 14 of 22
Map Produced: 4/30/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

US Army Corps
of Engineers
Norfolk District

NOTES:

1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

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PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
HORIZONTAL ZONE:	VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	SINGLE-BEAM
BIN SIZE:	N/A
BIN SELECTION METHOD:	N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 15 of 22
Map Produced: 4/30/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

US Army Corps
of Engineers
Norfolk District

NOTES:

1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

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PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: PPK/NOAA VDATUM MDL
SYSTEM/METHOD: SINGLE-BEAM
BIN SIZE: N/A
BIN SELECTION METHOD: N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 16 of 22
Map Produced: 4/30/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

⊕ Benchmark
● Shoalest Sounding in Quarter/Parameter of each Reach
Channel Toes
Channel Quarter/Parameter Line
Maintained Depth Contour Line

Bathymetry

0' - 1.9'	10' - 10.9'
2' - 3.9'	11' - 11.9'
4' - 5.9'	12' - 12.9'
6' - 7.9'	13' and Deeper
8' - 9.9'	

0 75 150 300 Feet
1 in = 150 feet

Aids to Navigation

- Can
- Nun
- Green Lighted Buoy
- Red Lighted Buoy
- Junction Buoy
- Flashing Green
- Flashing Red
- Green Daybeacon
- Red Daybeacon
- Danger

US Army Corps
of Engineers
Norfolk District

NOTES:

1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

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PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
HORIZONTAL ZONE:	VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	SINGLE-BEAM
BIN SIZE:	N/A
BIN SELECTION METHOD:	N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 17 of 22
Map Produced: 4/30/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

⊕ Benchmark

● Shoalest Sounding in Quarter/Parameter of each Reach

Channel Toes

Channel Quarter/Parameter Line

Maintained Depth Contour Line

Bathymetry

🟥	0' - 1.9'
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🟦	13' and Deeper

0 75 150 300 Feet

1 in = 150 feet

Aids to Navigation

Can

Nun

Green Lighted Buoy

Red Lighted Buoy

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Flashing Green

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US Army Corps
of Engineers
Norfolk District

NOTES:

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PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: PPK/NOAA VDATUM MDL
SYSTEM/METHOD: SINGLE-BEAM
BIN SIZE: N/A
BIN SELECTION METHOD: N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 18 of 22
Map Produced: 4/30/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

US Army Corps
of Engineers
Norfolk District

NOTES:

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PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
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TIDE APPLICATION:	PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	SINGLE-BEAM
BIN SIZE:	N/A
BIN SELECTION METHOD:	N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 19 of 22
Map Produced: 4/30/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

US Army Corps
of Engineers
Norfolk District

NOTES:

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PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	SINGLE-BEAM
BIN SIZE:	N/A
BIN SELECTION METHOD:	N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 20 of 22
Map Produced: 4/30/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

US Army Corps
of Engineers
Norfolk District

NOTES:

1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

2. NOT FOR NAVIGATION USE. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATE(S) INDICATED & CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

3. SOUNDINGS: SHOWN IN FEET CENTERED ON POINT OF SHOALEST DEPTH IN 20 FT RADIUS GENERATED FROM HYDROSURVEY DATA.

4. BACKGROUND: VIRGINIA BASE MAPPING PROGRAM MOST RECENT IMAGERY GIS WEB SERVICE.

5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET.

6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY eHYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
HORIZONTAL ZONE:	VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	SINGLE-BEAM
BIN SIZE:	N/A
BIN SELECTION METHOD:	N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 21 of 22
Map Produced: 4/30/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

US Army Corps
of Engineers
Norfolk District

NOTES:
1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

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3. SOUNDINGS: SHOWN IN FEET CENTERED ON POINT OF SHOALEST DEPTH IN 20 FT RADIUS GENERATED FROM HYDROSURVEY DATA.

4. BACKGROUND: VIRGINIA BASE MAPPING PROGRAM MOST RECENT IMAGERY GIS WEB SERVICE.

5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET.

6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY eHYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: PPK/NOAA VDATUM MDL
SYSTEM/METHOD: SINGLE-BEAM
BIN SIZE: N/A
BIN SELECTION METHOD: N/A

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE "DECOYS 2018"	10.53'	8.75'	2.89'	0+00 to 995+00

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS

SHEET 22 of 22
Map Produced: 4/30/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

⊕ Benchmark
● Shoalest Sounding in Quarter/Parameter of each Reach
Channel Toes
Channel Quarter/Parameter Line
Maintained Depth Contour Line

Bathymetry

🟥	0' - 1.9'	🟩	10' - 10.9'
🟥	2' - 3.9'	🟦	11' - 11.9'
🟧	4' - 5.9'	🟦	12' - 12.9'
🟨	6' - 7.9'	🟦	13' and Deeper
🟩	8' - 9.9'		

Aids to Navigation

- Can
- Nun
- Green Lighted Buoy
- Red Lighted Buoy
- Junction Buoy
- ! Flashing Green
- ! Flashing Red
- ■ Green Daybeacon
- ▲ Red Daybeacon
- ◇ Danger

US Army Corps
of Engineers
Norfolk District

NOTES:

1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.
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3. SOUNDINGS: SHOWN IN FEET CENTERED ON POINT OF SHOALEST DEPTH IN 20 FT RADIUS GENERATED FROM HYDROSURVEY DATA.
4. BACKGROUND: VIRGINIA BASE MAPPING PROGRAM MOST RECENT IMAGERY GIS WEB SERVICE.
5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET.
6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY eHYDRO FILE NAME.

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	POSPAC PPK/NOAA VDATUM
SYSTEM/METHOD:	MULTIBEAM
BIN SIZE:	3x3
BIN SELECTION METHOD:	AVERAGE CELL CENTER

PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
HORIZONTAL ZONE:	VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)
eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 1 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

US Army Corps
of Engineers
Norfolk District

NOTES:

1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

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3. SOUNDINGS: SHOWN IN FEET CENTERED ON POINT OF SHOALEST DEPTH IN 20 FT RADIUS GENERATED FROM HYDROSURVEY DATA.

4. BACKGROUND: VIRGINIA BASE MAPPING PROGRAM MOST RECENT IMAGERY GIS WEB SERVICE.

5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET.

6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY eHYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
HORIZONTAL ZONE:	VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	POSPAC PPK/NOAA VDATUM-MDL
SYSTEM/METHOD:	MULTIBEAM
BIN SIZE:	3x3
BIN SELECTION METHOD:	AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 2 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

US Army Corps of Engineers
Norfolk District

NOTES:

1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

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4. BACKGROUND: VIRGINIA BASE MAPPING PROGRAM MOST RECENT IMAGERY GIS WEB SERVICE.

5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET.

6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY eHYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
HORIZONTAL ZONE:	VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	POSPAC PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	MULTIBEAM
BIN SIZE:	3x3
BIN SELECTION METHOD:	AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 3 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

US Army Corps of Engineers
Norfolk District

NOTES:

1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

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4. BACKGROUND: VIRGINIA BASE MAPPING PROGRAM MOST RECENT IMAGERY GIS WEB SERVICE.

5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET.

6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY eHYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
HORIZONTAL ZONE:	VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	POSPAC PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	MULTIBEAM
BIN SIZE:	3x3
BIN SELECTION METHOD:	AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 4 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

Reach: Nansemond River
Maintained Depth: Not Maintianed

⊕ Benchmark
● Shoalest Sounding in Quarter/Parameter of each Reach
Channel Toes
Channel Quarter/Parameter Line
Maintained Depth Contour Line

Bathymetry

🟥	0' - 1.9'	🟩	10' - 10.9'
🟥	2' - 3.9'	🟦	11' - 11.9'
🟧	4' - 5.9'	🟦	12' - 12.9'
🟨	6' - 7.9'	🟦	13' and Deeper
🟩	8' - 9.9'		

0 50 100 200 Feet
1 in = 150 feet

Aids to Navigation
- Can
- Nun
- Green Lighted Buoy
- Red Lighted Buoy
- Junction Buoy
- ! Flashing Green
- ! Flashing Red
- ■ Green Daybeacon
- ▲ Red Daybeacon
- ◇ Danger

US Army Corps of Engineers®
Norfolk District

NOTES:
1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

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3. SOUNDINGS: SHOWN IN FEET CENTERED ON POINT OF SHOALEST DEPTH IN 20 FT RADIUS GENERATED FROM HYDROSURVEY DATA.

4. BACKGROUND: VIRGINIA BASE MAPPING PROGRAM MOST RECENT IMAGERY GIS WEB SERVICE.

5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET.

6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY eHYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: POSPAC PPK/NOAA VDATUM-MDL
SYSTEM/METHOD: MULTIBEAM
BIN SIZE: 3x3
BIN SELECTION METHOD: AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 5 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

⊕ Benchmark
● Shoalest Sounding in Quarter/Parameter of each Reach
Channel Toes
Channel Quarter/Parameter Line
Maintained Depth Contour Line

Bathymetry

🟥	0' - 1.9'	🟩	10' - 10.9'
🟥	2' - 3.9'	🟦	11' - 11.9'
🟧	4' - 5.9'	🟦	12' - 12.9'
🟨	6' - 7.9'	🟦	13' and Deeper
🟩	8' - 9.9'		

0 50 100 200 Feet
1 in = 150 feet

Aids to Navigation

- Can
- Nun
- Green Lighted Buoy
- Red Lighted Buoy
- Junction Buoy
- ! Flashing Green
- ! Flashing Red
- 🟩 Green Daybeacon
- ▲ Red Daybeacon
- ◇ Danger

US Army Corps of Engineers
Norfolk District

NOTES:
1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.
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3. SOUNDINGS: SHOWN IN FEET CENTERED ON POINT OF SHOALEST DEPTH IN 20 FT RADIUS GENERATED FROM HYDROSURVEY DATA.
4. BACKGROUND: VIRGINIA BASE MAPPING PROGRAM MOST RECENT IMAGERY GIS WEB SERVICE.
5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET.
6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY eHYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: POSPAC PPK/NOAA VDATUM
SYSTEM/METHOD: MULTIBEAM
BIN SIZE: 3x3
BIN SELECTION METHOD: AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)
eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 6 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section
APPROVED:
Chief, Navigation Support and Survey Section

US Army Corps of Engineers
Norfolk District

NOTES:

1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

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6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY eHYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: POSPAC PPK/NOAA VDATUM
SYSTEM/METHOD: MULTIBEAM
BIN SIZE: 3x3
BIN SELECTION METHOD: AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 7 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

⊕ Benchmark
● Shoalest Sounding in Quarter/Parameter of each Reach
Channel Toes
Channel Quarter/Parameter Line
Maintained Depth Contour Line

Bathymetry

🟥 0' - 1.9'	🟩 10' - 10.9'
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0 50 100 200 Feet

1 in = 150 feet

Aids to Navigation

- Can
- Nun
- Green Lighted Buoy
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- ◇ Danger

US Army Corps
of Engineers
Norfolk District

NOTES:

1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

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3. SOUNDINGS: SHOWN IN FEET CENTERED ON POINT OF SHOALEST DEPTH IN 20 FT RADIUS GENERATED FROM HYDROSURVEY DATA.

4. BACKGROUND: VIRGINIA BASE MAPPING PROGRAM MOST RECENT IMAGERY GIS WEB SERVICE.

5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET.

6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY eHYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
HORIZONTAL ZONE:	VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	POSPAC PPK/NOAA VDATUM/MLLW
SYSTEM/METHOD:	MULTIBEAM
BIN SIZE:	3x3
BIN SELECTION METHOD:	AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 8 of 22
Map Produced: 4/29/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

US Army Corps
of Engineers
Norfolk District

NOTES:

1. A CHANNEL 12 FEET DEEP AND 100 FEET WIDE BETWEEN THE MOUTH AND THE HIGHWAY BRIDGE AT SUFFOLK, WITH A TURNING BASIN 12 FEET DEEP AND 200 FEET SQUARE AT SUFFOLK; AND A CHANNEL IN THE WESTERN BRANCH 10 FEET DEEP (A 6 FOOT CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR CHANGE) AND 80 FEET WIDE BETWEEN ITS MOUTH AND REIDS FERRY.

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PROJECTED COORDINATE UNITS:	US SURVEY FEET
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TIDE APPLICATION:	POSPAC PPK/NOAA VDATUM
SYSTEM/METHOD:	MULTIBEAM
BIN SIZE:	3x3
BIN SELECTION METHOD:	AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 9 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

⊕ Benchmark
● Shoalest Sounding in Quarter/Parameter of each Reach
Channel Toes
Channel Quarter/Parameter Line
Maintained Depth Contour Line

Bathymetry

🟥	0' - 1.9'	🟩	10' - 10.9'
🟥	2' - 3.9'	🟦	11' - 11.9'
🟧	4' - 5.9'	🟦	12' - 12.9'
🟨	6' - 7.9'	🟦	13' and Deeper
🟩	8' - 9.9'		

0 50 100 200 Feet
1 in = 150 feet

Aids to Navigation

- Can
- Nun
- Green Lighted Buoy
- Red Lighted Buoy
- Junction Buoy
- ! Flashing Green
- ! Flashing Red
- ■ Green Daybeacon
- ▲ Red Daybeacon
- ◇ Danger

US Army Corps
of Engineers
Norfolk District

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HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	POSPAC PPK/NOAA VDATUM
SYSTEM/METHOD:	MULTIBEAM
BIN SIZE:	3x3
BIN SELECTION METHOD:	AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 10 of 22
Map Produced: 4/29/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

⊕ Benchmark
● Shoalest Sounding in Quarter/Parameter of each Reach
Channel Toes
Channel Quarter/Parameter Line
Maintained Depth Contour Line

Bathymetry

🟥	0' - 1.9'	🟩	10' - 10.9'
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US Army Corps
of Engineers
Norfolk District

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DATUM NAME:	NAD 83
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PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	POSPAC PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	MULTIBEAM
BIN SIZE:	3x3
BIN SELECTION METHOD:	AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NANSEMOND RIVER

PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 11 of 22
Map Produced: 4/29/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

US Army Corps of Engineers
Norfolk District

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GEODETIC CONTROL MONUMENTS

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NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 12 of 22
Map Produced: 4/29/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

- ⊕ Benchmark
- ● Shoalest Sounding in Quarter/Parameter of each Reach
- Channel Toes
- Channel Quarter/Parameter Line
- Maintained Depth Contour Line

Bathymetry

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US Army Corps of Engineers
Norfolk District

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PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: POSPAC PPK/NOAA VDATUM
SYSTEM/METHOD: MULTIBEAM
BIN SIZE: 3x3
BIN SELECTION METHOD: AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 13 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

US Army Corps
of Engineers
Norfolk District

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MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
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NANSEMOND RIVER
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SHEET 14 of 22
Map Produced: 4/29/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

US Army Corps of Engineers
Norfolk District

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GEODETIC CONTROL MONUMENTS

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eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 15 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

Western Branch Nansemond River
Reach: Western Branch Nansemond River
Maintained Depth: Not Maintianed
MATCH SHEET 17
MATCH SHEET 15
43
Day Beacon Green #43 10/27/2023
3
4
36°47'30"N
76°34'30"W
76°34'0"W
VICINITY MAP
SUFFOLK (CITY)
CHESAPEAKE (CITY)
Suffolk

⊕ Benchmark
● Shoalest Sounding in Quarter/Parameter of each Reach
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Bathymetry

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SHEET 16 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
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HORIZONTAL CONTROL:	POSPAC PPK

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VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	POSPAC PPK/NOAA VDATUM-MDL
SYSTEM/METHOD:	MULTIBEAM
BIN SIZE:	3x3
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GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
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US Army Corps of Engineers
Norfolk District

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3. SOUNDINGS: SHOWN IN FEET CENTERED ON POINT OF SHOALEST DEPTH IN 20 FT RADIUS GENERATED FROM HYDROSURVEY DATA.
4. BACKGROUND: VIRGINIA BASE MAPPING PROGRAM MOST RECENT IMAGERY GIS WEB SERVICE.
5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET.
6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY eHYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: POSPAC PPK/NOAA VDATUM
SYSTEM/METHOD: MULTIBEAM
BIN SIZE: 3x3
BIN SELECTION METHOD: AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 17 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

Reach: Nansemond River
Maintained Depth: Not Maintianed

⊕ Benchmark
● Shoalest Sounding in Quarter/Parameter of each Reach
— Channel Toes
— Channel Quarter/Parameter Line
┈ Maintained Depth Contour Line

Bathymetry

■	0' - 1.9'	■	10' - 10.9'
■	2' - 3.9'	■	11' - 11.9'
■	4' - 5.9'	■	12' - 12.9'
■	6' - 7.9'	■	13' and Deeper
■	8' - 9.9'		

0 50 100 200 Feet
1 in = 150 feet

Aids to Navigation
- Can
- Nun
- Green Lighted Buoy
- Red Lighted Buoy
- Junction Buoy
- ! Flashing Green
- ! Flashing Red
- ■ Green Daybeacon
- ▲ Red Daybeacon
- ◇ Danger

SHEET 18 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

PROJECTED COORDINATE SYSTEM:	STATE PLANE
DATUM NAME:	NAD 83
HORIZONTAL ZONE:	VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS:	US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY:	+/- 1 FOOT
HORIZONTAL CONTROL:	POSPAC PPK

VERTICAL REFERENCE DATUM:	NOS MLLW
TIDAL EPOCH:	1983-2001
IMPLIED VERTICAL ACCURACY:	+/- 0.5 FEET
VERTICAL CONTROL:	POSPAC PPK
TIDE APPLICATION:	POSPAC PPK/NOAA VDATUM MDL
SYSTEM/METHOD:	MULTIBEAM
BIN SIZE:	3x3
BIN SELECTION METHOD:	AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NOTES:
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4. BACKGROUND: VIRGINIA BASE MAPPING PROGRAM MOST RECENT IMAGERY GIS WEB SERVICE.

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US Army Corps of Engineers
Norfolk District

US Army Corps
of Engineers
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PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: POSPAC PPK

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: POSPAC PPK
TIDE APPLICATION: POSPAC PPK/NOAA VDATUM
SYSTEM/METHOD: MULTIBEAM
BIN SIZE: 3x3
BIN SELECTION METHOD: AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CE"DECOYS 2018"	10.53'	8.75'	1.89'	0+00 to 995+00

NANSEMOND RIVER
PROJECT CONDITION SURVEY

SURVEY DATES:
September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 19 of 22
Map Produced: 4/29/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section

US Army Corps of Engineers
Norfolk District

NOTES:
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HORIZONTAL CONTROL:	POSPAC PPK

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VERTICAL CONTROL:	POSPAC PPK
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SYSTEM/METHOD:	MULTIBEAM
BIN SIZE:	3x3
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GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
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NANSEMOND RIVER
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September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 20 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

US Army Corps of Engineers
Norfolk District

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SHEET 21 of 22
Map Produced: 4/29/2024

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section

⊕ Benchmark

● Shoalest Sounding in Quarter/Parameter of each Reach

Channel Toes

Channel Quarter/Parameter Line

Maintained Depth Contour Line

Bathymetry

🟥	0' - 1.9'	🟩	10' - 10.9'
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0 50 100 200 Feet

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Aids to Navigation

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- Nun
- Green Lighted Buoy
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US Army Corps
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NANSEMOND RIVER
PROJECT CONDITION SURVEY

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September 26, 27 and November 3, 7 & 11, 2023

SURVEY BY: USACE Team Lead: Abby Satterwhite (Geodynamics)

eHYDRO FILE: NR_01_NAN_20231103_CS_DNU

SHEET 22 of 22
Map Produced: 4/29/2024

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section