



Maryland
Department of
the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

February 10, 2020

Cecil County Dept of Parks and Recreation
c/o Chris Rager
Bayland Consultants & Designers, Inc
7455 New Ridge Road, Ste T
Hanover, MD 21076

Re: Agency Interest Number: 123958
Tracking Number: 201861858
Tidal Authorization Number: 20-WQC-0007

Dear Sir or Ma'am:

Your project did not qualify for approval under the Maryland State Programmatic General Permit (MDSPGP); therefore a separate review and issuance of the federal permit will be required by the U.S. Army Corps of Engineers. The federal permit is not attached.

Additionally, your project required a Wetlands License to be approved and issued by the Maryland Board of Public Works (BPW). The Wetlands License will be sent to you by the BPW's Wetlands Administrator.

A project that does not qualify for approval under the MDSPGP requires an individual Water Quality Certification (WQC) to be issued by the Maryland Department of the Environment, which is attached. Please take a moment to read and review your WQC to ensure that you understand the limits of the authorized work and all of the general and special conditions.

You should not begin any work until you have obtained all necessary State, local, and federal authorizations. If you have any questions, please contact Megan Spindler at megan.spindler@maryland.gov or 410-537-3622.

Sincerely,

Jonathan Stewart, Chief
Eastern Region
Tidal Wetlands Division



STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
WATER AND SCIENCE ADMINISTRATION
WATER QUALITY CERTIFICATION



20-WQC-0007

EFFECTIVE DATE: **February 10, 2020**
EXPIRATION DATE: **February 9, 2023**
CERTIFICATION HOLDER: **Cecil County Dept of Parks and Recreation**

ADDRESS: **200 Chesapeake Blvd**
Elkton, Maryland 21921
PROJECT LOCATION: **River Bend Pkwy**
Elkton, MD 21921
Elk River Area - 02130600 in Cecil

UNDER AUTHORITY OF SECTION 401 OF THE FEDERAL WATER POLLUTION CONTROL ACT AND ITS AMENDMENTS AND IN ACCORDANCE WITH §9-313 THROUGH §9-323, INCLUSIVE, OF THE ENVIRONMENT ARTICLE, ANNOTATED CODE OF MARYLAND, THE WATER AND SCIENCE ADMINISTRATION (“ADMINISTRATION”) HAS DETERMINED THAT THE REGULATED ACTIVITY DESCRIBED IN STATE TIDAL WETLANDS LICENSE NUMBER 18-WL-1111 (“LICENSE”) WILL NOT VIOLATE MARYLAND’S WATER QUALITY STANDARDS, IF CONDUCTED IN ACCORDANCE WITH THE CONDITIONS OF THIS CERTIFICATION AND WITH ALL TERMS AND CONDITIONS OF THE LICENSE. A COPY OF THE LICENSE, INCLUDING APPROVED PROJECT DRAWINGS AND OTHER ATTACHMENTS, IS ATTACHED HERETO AND IS HEREBY INCORPORATED BY REFERENCE.

THIS CERTIFICATION DOES NOT RELIEVE THE APPLICANT OF RESPONSIBILITY FOR OBTAINING ANY OTHER APPROVALS, LICENSES, OR PERMITS IN ACCORDANCE WITH FEDERAL, STATE, OR LOCAL REQUIREMENTS AND DOES NOT AUTHORIZE COMMENCEMENT OF THE PROPOSED PROJECT. A COPY OF THIS REQUIRED CERTIFICATION HAS BEEN SENT TO THE CORPS OF ENGINEERS.

THE CERTIFICATION HOLDER SHALL COMPLY WITH THE CONDITIONS LISTED BELOW.

SPECIAL CONDITIONS

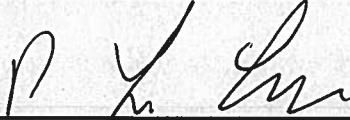
- A. The terms and conditions of Tidal Wetlands License No. **18-WL-1111** are hereby incorporated, by reference, into this Water Quality Certification. The Certification Holder shall comply with these conditions to ensure that the authorized activities will not result in a violation of the State's water quality standards.

GENERAL CONDITIONS

- A. The proposed project shall be constructed in a manner which will not violate Maryland's Water Quality Standards as set forth in COMAR 26.08.02. The applicant is to notify this Department ten (10) days prior to commencing work. Verbal notification is to be followed by written notice within ten (10) days.
- B. The Maryland Department of the Environment has determined that the proposed activities comply with, and will be conducted in a manner consistent with the State's Coastal Zone Management Program, as required by Section 307 of the Federal Coastal Zone Management Act of 1972, as amended.
- C. If the authorized work is not performed by the property owner, all work performed under this Tidal Wetlands License shall be conducted by a marine contractor licensed by the Marine Contractors Licensing Board (MCLB) in accordance with Title 17 of the Environment Article of Annotated Code of Maryland. A list of licensed marine contractors may be obtained by contacting the MCLB at 410-537-3249, by e-mail at MDE.MCLB@maryland.gov or by accessing the Maryland Department of the Environment, Environmental Boards webpage.
- D. The Certification Holder shall ensure the proposed project shall be constructed in accordance with the authorized plan and any authorized revisions.
- E. The Certification Holder shall ensure that all fill and construction materials not used in the project shall be removed and disposed of in a manner which will prevent their entry into waters of this State.
- F. The Certification Holder shall notify the Water and Science Administration, Tidal Wetlands Division, in writing, upon transferring property ownership or responsibility for compliance with these conditions to another person. The new owner/operator shall request, in writing, transfer of this Water Quality Certification to his/her name.
- G. The Certification Holder shall allow representatives of the Maryland Department of the Environment to inspect the authorized activities.
- H. The Certification Holder shall ensure that a copy of this Permit, including the approved plans, is available at the site until the authorized work is complete.
- I. The Certification does not relieve the Certification holder from the responsibility of obtaining all necessary federal, State, and local government authorizations.
- J. The Certification Holder shall comply with all Critical Area requirements and obtain all necessary authorizations from local jurisdiction. This Certification does not constitute authorization for disturbance in the 100-foot Critical Area Buffer. "Disturbance" in the Buffer means clearing, grading, construction activities, or removal of any size of tree or vegetation. Any anticipated Buffer disturbance requires prior written approval, before commencement of land disturbing activity, from local jurisdiction in the form of a Buffer Management Plan.

Failure to comply with these conditions shall constitute reason for suspension or revocation of the Water Quality Certification, and legal proceedings may be instituted against the Certification Holder in accordance with the Annotated Code of Maryland. In granting this certification, the Department reserves the right to inspect the operations and records regarding this project at anytime

CERTIFICATION APPROVED



D. Lee Currey, Director
Water and Science Administration

Feb 13, 2020

Date

Tracking Number: 201861858
Agency Interest Number: 123958

Effective Date: February 10, 2020

Enclosure: Executed Tidal Wetlands License No. **18-WL-1111** with all plans and attachments.

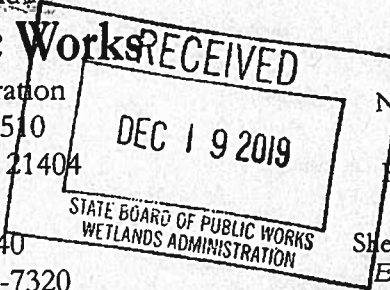
cc: WMA Inspection & Compliance Program



William Morgante, PWS
Wetlands Administrator

State of Maryland
Board of Public Works

Wetlands Administration
Post Office Box 1510
Annapolis, Maryland 21404
410-260-7791
Fax: 410-974-5240
Toll Free: 1-877-591-7320



Larry Hogan
Governor
Nancy K. Kopp
Treasurer
Peter Franchot
Comptroller
Sheila C. McDonald
Executive Secretary

November 20, 2019

Cecil County Dept of Parks & Rec.
c/o BayLand Consultants
7455 New Ridge Road, Suite T
Hanover, MD 21076

RE: Wetlands License 18-1111, Elk River, Cecil County, MD

Dear Licensee(s):

Enclosed please find the original and one copy of the above-mentioned wetlands license issued to you on November 20, 2019.

After you have read all the conditions of the license, please ensure that the license is signed by the licensee (or designee) and the entire original license (including plans) is returned to this office *within 15 business days* in the enclosed envelope. The Executive Secretary signs and validates the license after BPW receives the license signed by the licensee. Retain the copy of the license for your records.

Please note that you must notify the MD Department of the Environment, Inspections and Compliance Program, by calling (410) 537-3510 in Baltimore, or (410) 901-4020 in Cambridge, five days prior to commencing work.

This does not constitute your federal authorization. Contact the U.S. Army Corps of Engineers, Baltimore District, (410) 962-4500 (Maryland Section Southern) or (410) 962-4252 (Maryland Section Northern) regarding the status of the federal permit.

If you have any questions concerning this license, please contact me.

Sincerely,

William Morgante
Wetlands Administrator

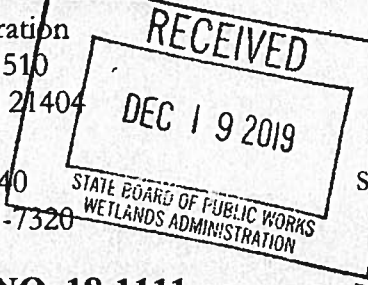
Enclosure
cc: MDE, Tidal Wetlands Division



William Morgante, PWS
Wetlands Administrator

State of Maryland
Board of Public Works

Wetlands Administration
Post Office Box 1510
Annapolis, Maryland 21404
410-260-7791
Fax: 410-974-5240
Toll Free: 1-877-591-7320



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Nancy K. Kopp
Treasurer
Peter Franchot
Comptroller
Sheila C. McDonald
Executive Secretary

WETLANDS LICENSE NO. 18-1111

**CECIL COUNTY
DEPARTMENT OF PARKS AND RECREATION**

The Maryland Board of Public Works authorizes you to:

- I. Hydraulically or mechanically maintenance dredge two segments of the Elk River main channel with the following dimensions:
 - a. Segment A: A 3,945-foot long by 50-foot wide channel to a depth of -4.5 feet at mean low water (MLW);
 - b. Segment B: A 2,300-foot long by 50-foot wide channel to a depth of -4.5 feet at MLW, and to deposit approximately 23,178 cubic yards of dredged material via hydraulic pipes or watertight trucks to an approved upland disposal site located at the Elk River Dredged Material Placement Site, Oldfield Point Road, Elkton, Cecil County, Maryland 21921.
- II. Periodically maintenance dredge for six years.
- III. Collect 3 sediment core samples totaling no more than 0.1 cubic yards.

Elk River, Elkton, Cecil County, Maryland

Issuance of this Tidal Wetlands License constitutes the State's determination that the authorized activities are consistent with the Maryland Coastal Zone Management Program, as required by Section 307 of the Federal Coastal Zone Management Act of 1972, as amended [16 U.S.C. §1456]. Accordingly, the State concurs with the Licensee's certification in the Joint Permit Application that the project complies with, and will be conducted in a manner consistent with the Maryland CZMP.

THIS LICENSE AUTHORIZES YOU TO PERFORM THE WORK ONLY IF YOU COMPLY WITH THE FOLLOWING SPECIAL CONDITION(S):

GENERAL (APPLIES TO BOTH MECHANICAL AND HYDRAULIC)

- A. No dredging shall be performed in the channel reach in Segment A (as shown on sheets 3 through 6 of 14) from February 15 through June 15 of any year to minimize impacts to spawning anadromous and resident fish species.
- B. No dredging shall be performed in the channel reach in Segment A (as shown on sheet 7 of 14) or all of segment B from November 15 through June 15 of any year to minimize impacts to

spawning anadromous and resident fish species and disturbance to wintering and/or staging waterfowl.

- C. Licensee shall submit a detailed dredged material disposal plan to and approved by the Maryland Department of the Environment's (MDE) Water and Science Administration, Tidal Wetlands Division, within six months of the effective date of this license or prior to commencement of any work under the license, whichever comes first. The dredged material disposal plan shall include the Licensee's choice of mechanical or hydraulic dredging. Failure to comply with this condition shall result in automatic suspension of the license.
- D. Licensee shall conduct subsequent maintenance dredging within the scope of this license in terms of authorized dredge area and authorized depths. Licensee shall:
 - a. Dredge no more than 500 cubic yards of material at each maintenance dredging.
 - b. Comply with all applicable conditions of this license.
 - c. Submit a detailed dredged material disposal plan to be approved by Maryland Department of the Environment's (MDE) Water and Science Administration, Tidal Wetlands Division, prior to the start of dredging.
- E. Notify and receive approval from MDE's Water and Science Administration, Compliance Program, a minimum of 10 days prior to the start of each maintenance dredging operation.
- F. Licensee shall stake the dredge area and receive approval from MDE's Water and Science Administration's Compliance Division prior to the start of dredging.
- G. Licensee shall conduct a post dredge bathymetric survey and forward to MDE's Water and Science Administration, Tidal Wetlands Division, within 45 days after the termination of any phase of dredging.
- H. Licensee may dispose of dredged material only at an MDE-approved dredge disposal site.

IF MECHANICALLY DREDGING:

- I. Licensee shall transport all dredged material in watertight trucks. No dredged material shall be discharged onto the roadways of the State.

IF HYDRAULICALLY DREDGING:

- J. Licensee shall contact the Commander (O-2), Fifth Coast Guard District, Federal Building, 431 Crawford Street, Portsmouth, Virginia 23705 and obtain approval for the installation of the hydraulic dredge pipe along the proposed route., 757-398-6225
- K. If Licensee does not obtain approval from the U.S. Coast Guard, or the U.S. Coast Guard denies Licensee's application, Licensee may only proceed with mechanical dredging or submit an application to MDE for a modification to this License.
- L. If the U.S. Coast Guard's approval alters the proposed pipeline route, Licensee shall submit an application and revised plans to MDE for a modification to this License.
- M. To ensure navigational safety, Licensee shall conspicuously mark the location of the pipeline along the entire length of the pipeline route. Licensee shall verify that the signs/markers on the pipeline remain visible and conspicuous throughout the dredging operations.
- N. The dredge operator shall have a person at the discharge point of the DMP in constant radio communication. If a problem is incurred, the dredging operation shall be immediately shut

down until the reason for the problem can be ascertained and rectified. MDE compliance shall be notified.

- O. In the event of any inadvertent releases of dredged material into State tidal wetlands from a pipe breakage, all dredging operations shall immediately cease. Licensee shall take steps to stop all dredged material from entering State tidal wetlands and shall immediately notify MDE's Compliance Program of the pipe breakage. Licensee shall not resume dredging operations until receiving approval from MDE's Compliance Program.
- P. The dredged material placement-site (DMP) shall be constructed to limit turbidity in the discharge to waters of the State. A turbidity sample of the discharge water shall be performed every hour of active pumping to the DMP or when there is an observed change in the clarity of the water. Turbidity in the discharge may not exceed 150 units at any time or 50 units as a monthly average. Units shall be measured in Nephelometer Turbidity Units. A logbook of all turbidity monitoring shall be kept on site. The dredger shall have a person at the discharge point of the DMP in constant radio communication. If a problem is incurred, the dredging operation shall be immediately shutdown until the reason for the problem can be ascertained and rectified.

**THIS LICENSE AUTHORIZES YOU TO PERFORM THE WORK ONLY IF YOU COMPLY WITH
THE FOLLOWING STANDARD CONDITIONS:**

1. Licensee shall conduct the authorized work in accordance with the plans and drawings dated and revised September 2019, which are hereby incorporated into this License. Until the authorized work is complete, Licensee shall have available at the site a copy of this License including the plans and drawings.
2. This License constitutes Maryland's authorization to conduct the authorized work under the State Tidal Wetlands Law. This License does not bestow any other federal, State, or local government authorization.
3. Licensee shall have all proposed work above Mean High Water reviewed and authorized by the local county Department of Planning and Zoning or applicable agency.
4. Licensee shall notify MDE's Inspection and Compliance Program by phone (410-537-3510) AND in writing (MDE, Inspection and Compliance Program, 1800 Washington Boulevard, Baltimore, MD 21230) of the following:
 - start date at least five business days before beginning work; and
 - completion date no more than five business days after project completion.
5. If MDE has issued a Water Quality Certification with respect to the authorized work, Licensee shall comply with all conditions of that certification.
6. Licensee shall conduct the authorized work in accordance with Critical Area Commission requirements. This License does not authorize disturbance in the Buffer. If authorized work will disturb the Buffer, Licensee shall have a Commission-approved or locally-approved Buffer Management Plan before beginning the authorized work.
"Buffer" means the 100-foot Critical Area Buffer and any expanded area that is immediately landward of the mean high water line of the tidal waters or is immediately landward of tidal wetlands. The Buffer includes expanded contiguous area if the contiguous area includes steep slopes, hydric soil, or highly erodible soil, or otherwise meets the criteria of COMAR 27.01.09.01.E(7). "Disturbance" means

- any alteration or change to the land including any amount of clearing. Clearing includes vegetation removal, grading, and construction activity.
7. Licensee may not fill, dredge, or otherwise alter or destroy tidal marsh or its vegetation unless this License specifically authorizes the activity.
 8. Licensee may not stockpile material in State tidal wetlands or State tidal waters of the U.S.
 9. Licensee shall allow unfettered public use of State wetlands and State tidal waters of the U.S.
 10. This License does not transfer a property interest of the State.
 11. Licensee shall file a Miss Utility ticket for the proposed work at least 10 days before beginning work. *Miss Utility: 800-257-7777*
 12. Licensee shall ensure that structures (for example, piers and piles) removed from the site are taken to an upland disposal facility approved by MDE's Inspection and Compliance Program.
 13. If the authorized work impacts more than 5,000 square feet or includes 100 or more cubic yards of fill, Licensee shall conduct the authorized work in accordance with a locally-approved Soil Erosion and Sediment Control Plan.
 14. If the authorized work is not performed by the property owner, all work performed under this Tidal Wetlands License shall be conducted by a marine contractor licensed by the Marine Contractors Licensing Board (MCLB) in accordance with Title 17 of the Environment Article of Annotated Code of Maryland. A list of licensed marine contractors may be obtained by contacting the MCLB at **410-537-3249**, by email at ***MDE.MCLB@maryland.gov*** or by accessing the ***Maryland Department of the Environment, Environmental Boards webpage***.
 15. Licensee shall allow State officials and employees to make inspections at reasonable times and cooperate with those inspections.
 16. This License is granted only to the Licensee. Licensee may transfer the license only with written approval from the Board of Public Works. If the Board of Public Works approves the transfer, the transferee is subject to all License terms and conditions.
 17. Licensee shall indemnify, defend, and save harmless the State of Maryland, its officials, officers, and employees from and against any and all liability, suits, claims, and actions of whatever kind, caused by or arising from, the work this License authorizes.
 18. The Board of Public Works or its Wetlands Administrator may modify, suspend, or revoke this License in its reasonable discretion.
 19. This License expires November 20, 2022. If the authorized work is not completed by the expiration date, all activity must stop.

NOTE: A three-year license may be renewed for one additional three-year term if the Licensee requests an extension before the expiration date and all other conditions are met. A six-year license may not be renewed; instead Licensee must reapply to MDE for a new license. Contact the Board of Public Works to determine if this License may be extended.
Board of Public Works: 410-260-7791

By the authority of the Board of Public Works:

Sheila C. McDonald
Sheila C. McDonald
Executive Secretary

Effective Date: November 20, 2019
Approved as: Secretary's Agenda Item 6
Board of Public Works Meeting Date: November 20, 2019

I accept this License and all its conditions.

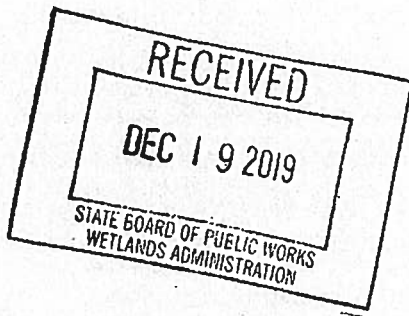
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Date

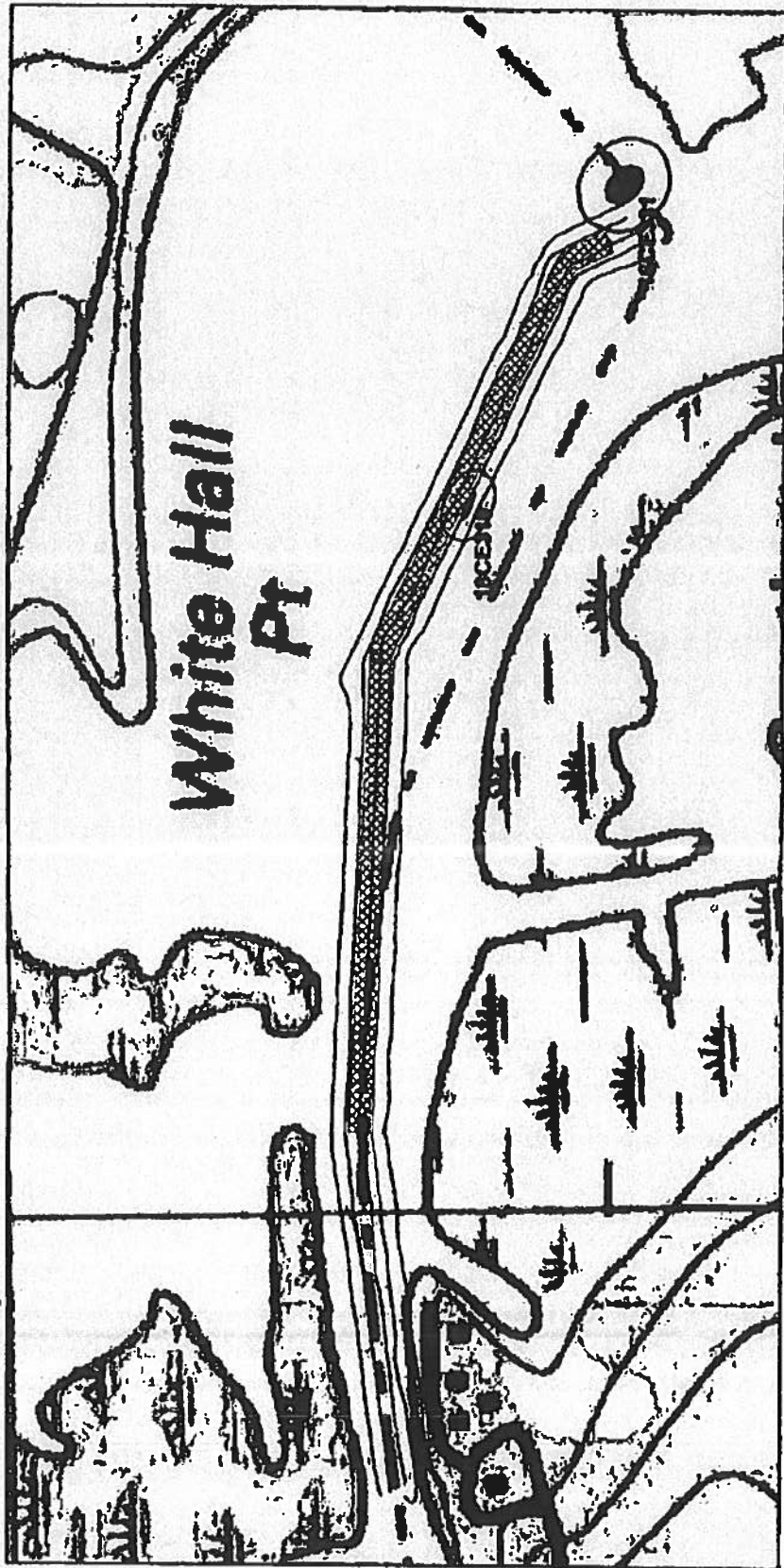
Alfred C. Wein, Jr.
Licensee (Signature)

Alfred C. Wein, Jr.
Name (Printed)







Director of Administration
Title

awein@ccgov.org
Email (To receive completed license.) ✓

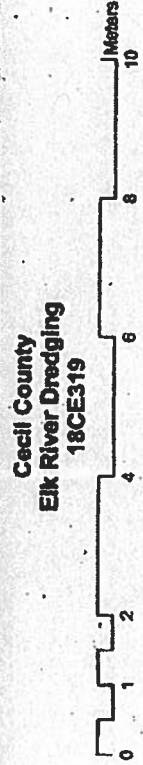





**Cecil County
Elk River Dredging
Archeological Site Locations and Recommended Avoidance Areas**

 Elk River Channel	 Phase I Survey Tractlines
 18CE319	 18CE319 Recommended Avoidance Area (15 m)
 18CE331	 18CE331 Recommended Avoidance Area (20 m)

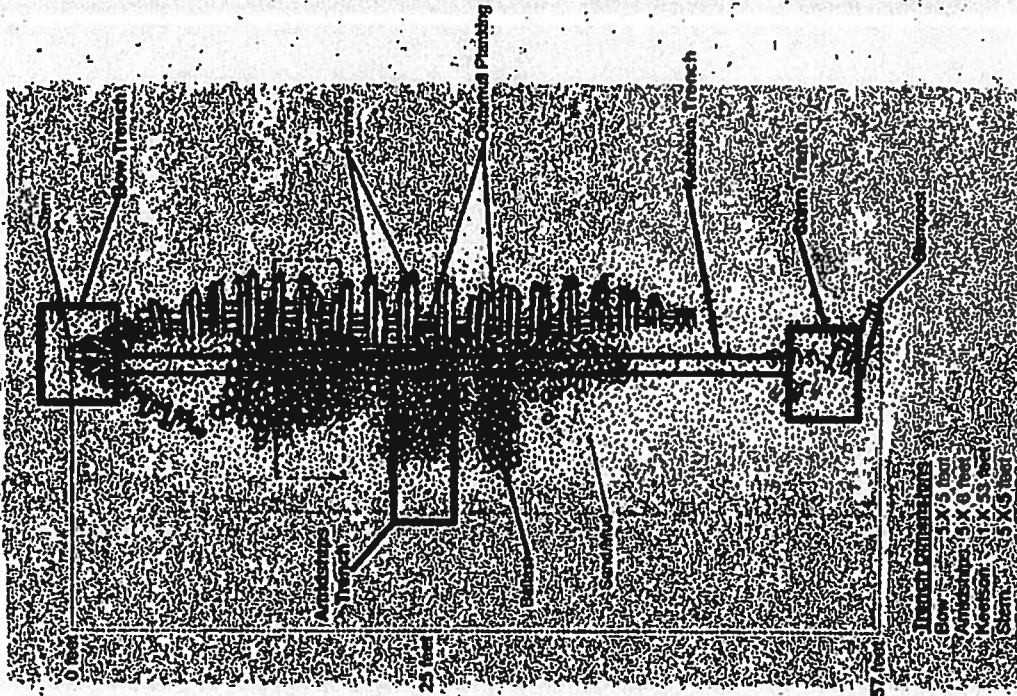
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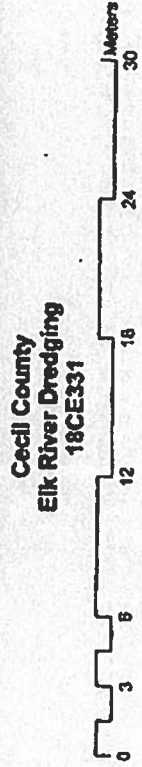


 Elk River Channel

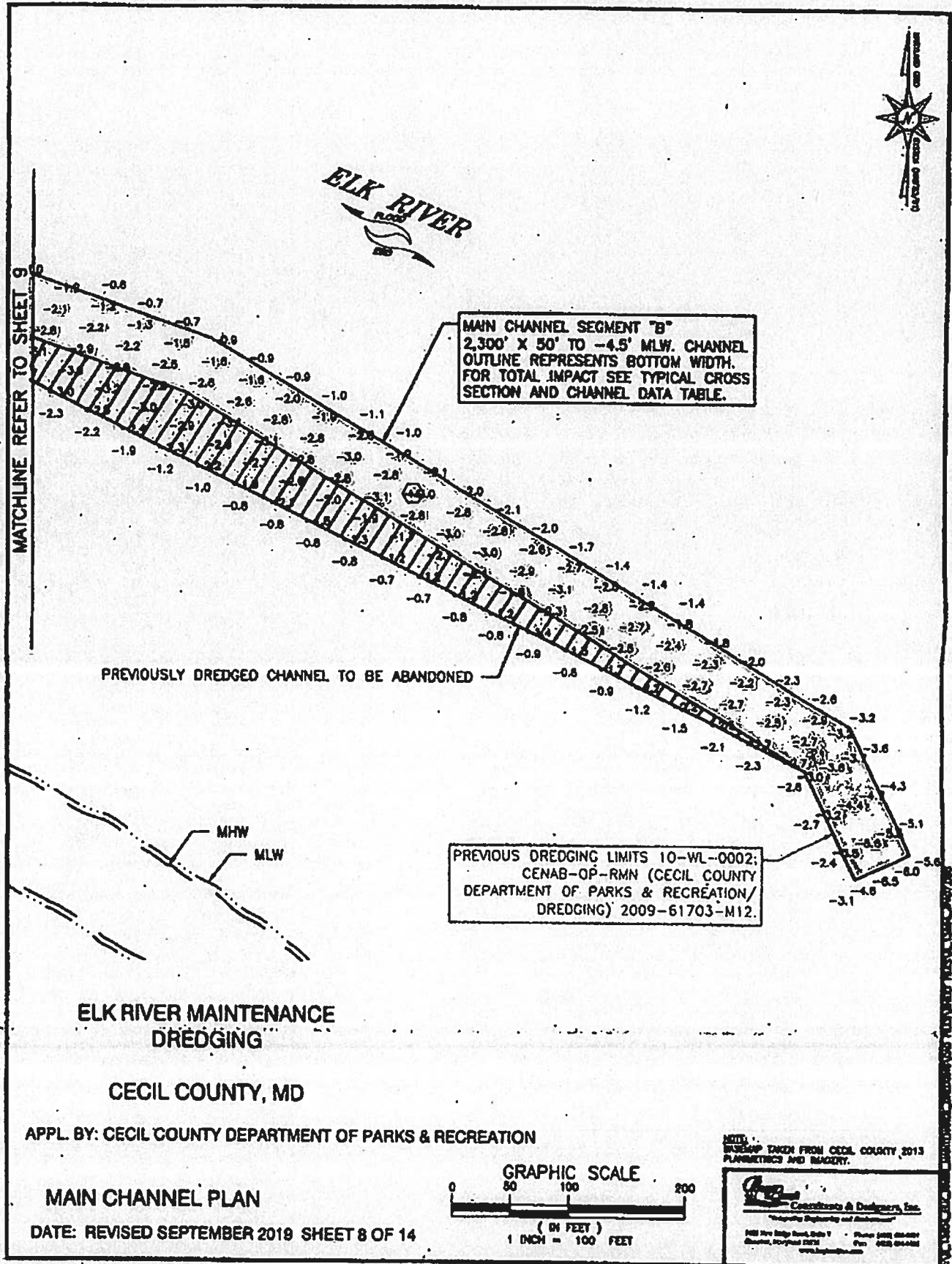


18CE319





 Elk River Channel



MATCHLINE REFER TO SHEET 9

MAIN CHANNEL SEGMENT "B"
 2,300' X 50' TO -4.5' MLW. CHANNEL
 OUTLINE REPRESENTS BOTTOM WIDTH.
 FOR TOTAL IMPACT SEE TYPICAL CROSS
 SECTION AND CHANNEL DATA TABLE.

PREVIOUSLY DREDGED CHANNEL TO BE ABANDONED

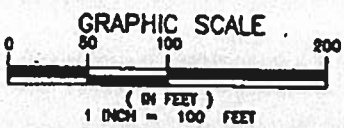
PREVIOUS DREDGING LIMITS 10-WL-0002;
 CENAB-OP-RMN (CECIL COUNTY
 DEPARTMENT OF PARKS & RECREATION/
 DREDGING) 2009-61703-M12.

**ELK RIVER MAINTENANCE
 DREDGING**
CECIL COUNTY, MD

APPL. BY: CECIL COUNTY DEPARTMENT OF PARKS & RECREATION

MAIN CHANNEL PLAN

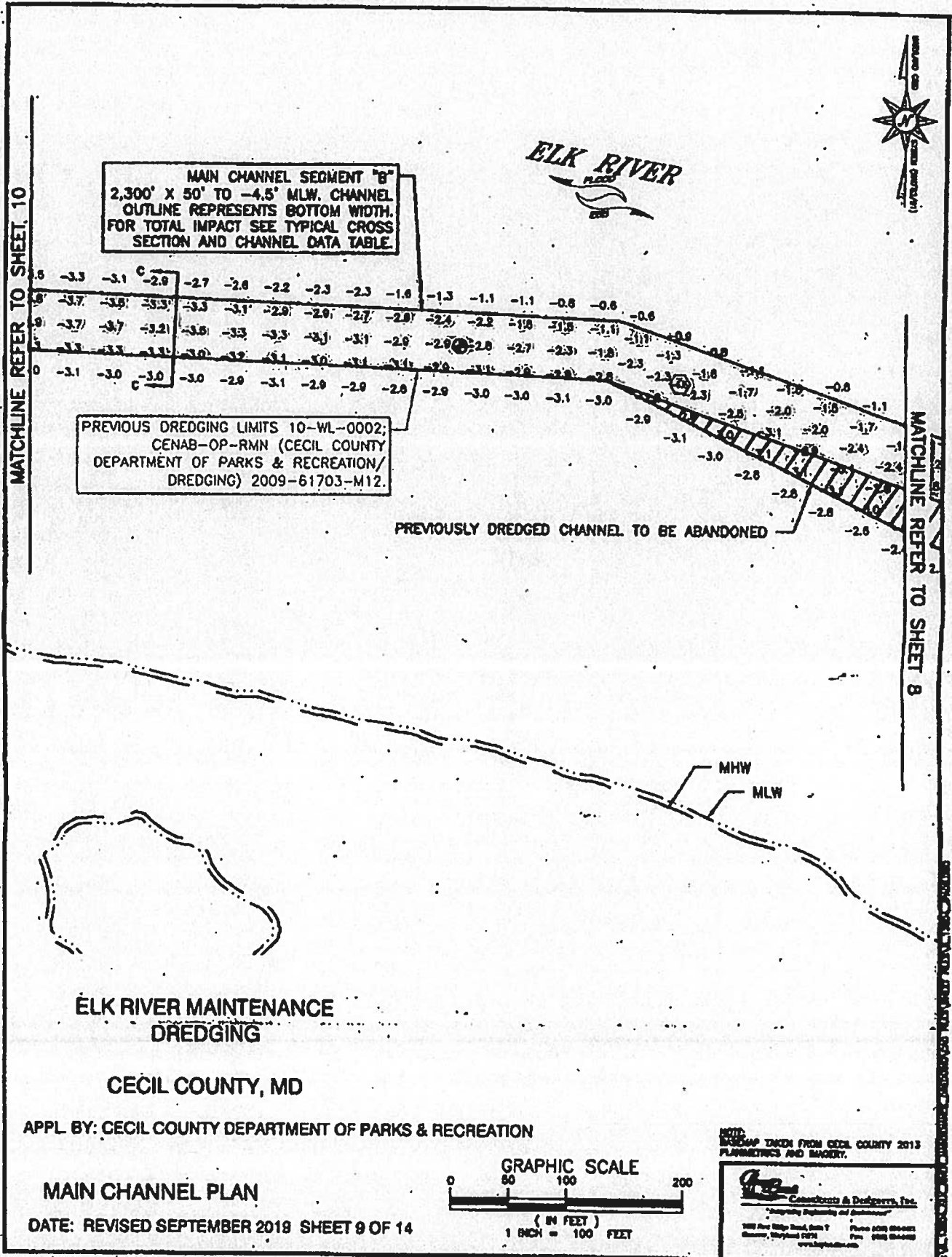
DATE: REVISED SEPTEMBER 2019 SHEET 8 OF 14



NOTES:
 BASEMAP TAKEN FROM CECIL COUNTY, 2013
 PLANNIMETRICS AND IMAGERY.

Crestbrook & Duggan, Inc.
 Consulting Engineers and Architects

100 New Hope Road, Suite 1 • Plover, MD 21086
 Phone: 410-326-0000
 Fax: 410-326-0000
 www.crestbrook.com





"Integrating Engineering and Environment"

Archeological Monitoring Plan for the Dredging of Elk River in Cecil County, Maryland

Introduction

The Cecil County Department of Parks and Recreation (DPR) intends to maintenance dredge Elk River located in Cecil County, Maryland. The project area encompasses the section of Elk River south of White Hall Point and north of Locust Point. The proposed dredging will deepen the channel to -4.0 feet (ft.) (-1.22 meters [m]) mean low water (MLW). The current water depth in the project area ranges from approximately 1 to 8 ft. (0.30 to 2.44 m). According to Maryland Historical Trust (MHT), the project has the potential to cause adverse effects to historic properties. Subsequently a survey was performed in the project vicinity to ascertain the locations of two previously identified archeological sites in coordination with MHT and the United States Army Corps of Engineers (USACE).

Both historic properties were located in the northern section of the proposed dredging channel and recommended for avoidance. The channel alignment was slightly modified to avoid impacts to historic properties pursuant to Section 106 of the National Historic Preservation Act. The new channel alignment is shown in Figure 1, attached. Site and avoidance area details are available from MHT and USACE.

This monitoring plan is designed to permit the dredging of Elk River by applying techniques to avoid and minimize impacts to these sites.

Survey Control for Avoidance

To protect historic properties, the channel is being relocated and avoidance measures are being implemented in coordination with the Maryland Department of the Environment (MDE), MHT and USACE. The visible limits of the avoidance areas will be marked every 25 to 50 ft. using a combination of buoys and stakes with flagging. The limits of each avoidance area will be established using GPS and marked with long poles that are painted with bright colors and flagged. Maps and the coordinates of the avoidance areas (x,y,z's) will be provided to dredging supervisors and inspectors prior to commencement of dredging. The location of avoidance areas as well as the clear marking of their limits will be overseen and coordinated with USACE and MHT.

Monitoring

Prior to commencement of dredging, an informational briefing will be held with all dredging personnel and MHT regarding the sensitivity of the area and to discuss the importance of avoiding these areas. All dredge contractor personnel will tour the buoys and stakes with MHT and the inspection team to ensure all parties are aware of the locations and importance. Dredging plans will be reviewed to ensure the proposed dredging methodologies have adequately accounted for avoidance of the

**Archeological Monitoring Plan
for the Dredging of Elk River
September 12, 2019
Page 2 of 3**

sites and buffers, and that no construction, anchoring, spud placement, or other bottom impacts are planned for the avoidance areas.

The dredging supervisors/inspectors will be directed to verify survey control for the dredging project with reference to the limits of the avoidance areas prior to beginning work. Limits of the dredge channel will also be staked separately using verified survey control with additional stakes placed along the channel nearest to the avoidance areas. This procedure will be subject to an independent quality control check to assure that dredging plans have no effect on the archeological sites. Following quality assurance checks of construction plans, re-verification of survey control, briefing of project participants, and once planned dredging adequately avoids the designated areas, all groups will be notified that work may commence.

On-site full-time inspection during construction activities will be provided within 300 ft. (91.44 m) of the avoidance areas to ensure that dredging and associated activities avoid impacts to the sites. The inspector will be stationed to provide maximum visibility of both the dredging area and the monumented avoidance areas. The inspector will record daily dredging operations with reference to the avoidance areas, take photographs to document both the work and the avoidance, and otherwise ensure dredging, anchoring, spud placement, or any other activities involving bottom impacts do not impinge on the avoidance area. The inspector will report weekly on the progress of the work to the Cecil County DPR in writing. In addition, the inspector will be equipped with radio communication with dredging operations in order to provide timely warning of any impending violation of the avoidance zone prior to such an event occurring. The inspector also will be provided with air horns for use if radio communication fails, the sounding of an air horn signal to the dredging crews to stop all work immediately until an "ALL-CLEAR" is sounded.

All inspectors will be provided with a list of telephone numbers for contacts to be made immediately if any activities with potential to impact the river bottom within the avoidance areas occur. Inadvertent violation of the avoidance area will be treated as an emergency situation. Upon such an occurrence, the dredging supervisor will be notified and directed to halt all work within 300 ft. (91.44m) of the avoidance area. The offices of Cecil County DPR, USACE, MHT and BayLand Consultants & Designers, Inc. (BayLand) will be notified immediately. Investigations will then be conducted to ascertain if the inadvertent violation of the avoidance area affected the sites. These investigations will be overseen by a qualified archeologist. USACE and MHT will provide specific recommendations as necessary which may include sector and side scan sonar, inspection by diving archeologists or other methods.

If no effect is found to have occurred, the incident will be considered a "near-miss," logged and reported to Cecil County DPR. Following such a "near-miss," the preconstruction briefing process will be repeated before work is authorized to begin again, with the inspector remaining on-site.

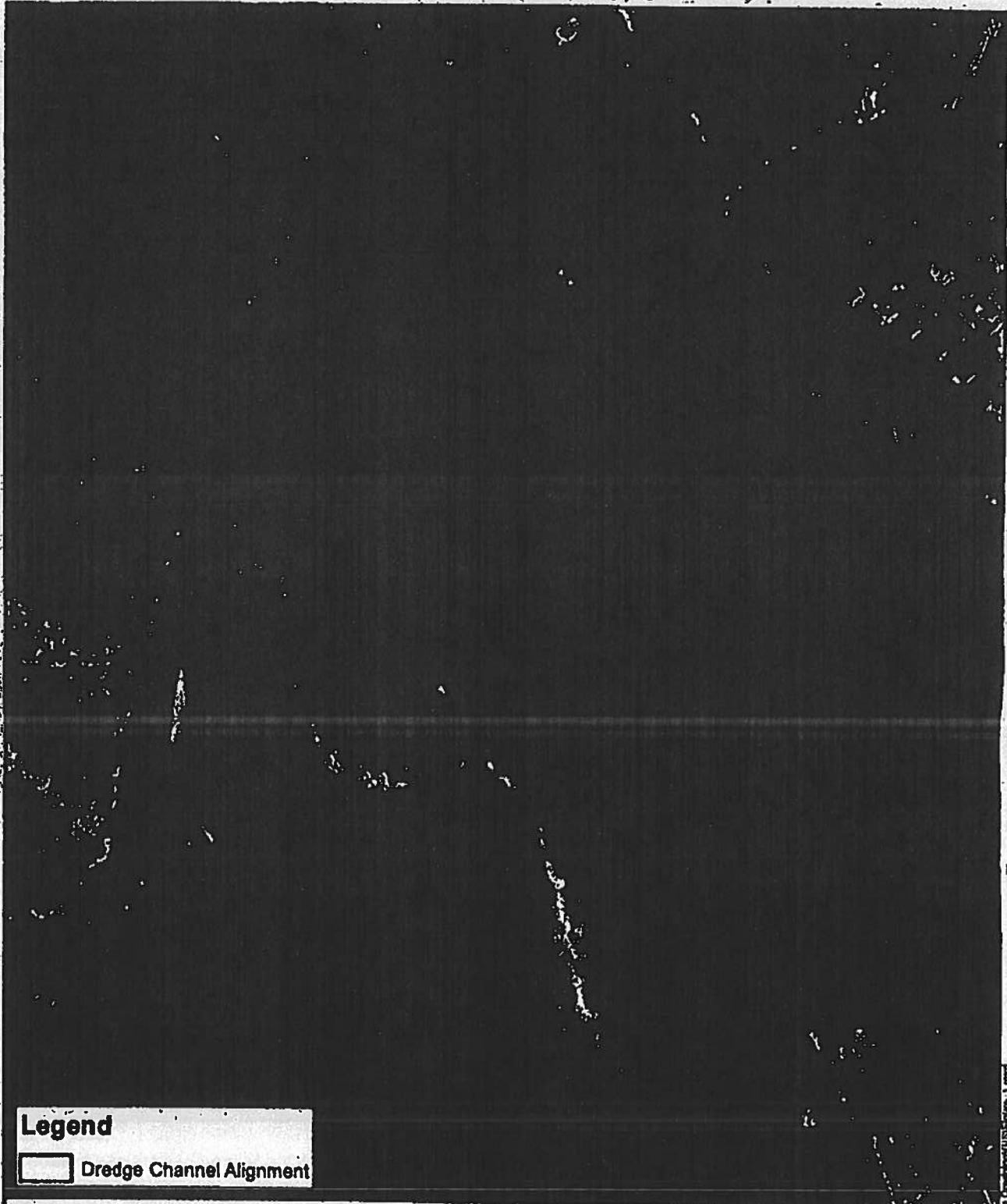
**Archeological Monitoring Plan
for the Dredging of Elk River
September 12, 2019
Page 3 of 3**

If an effect to the site is found to have occurred, Cecil County DPR will be notified immediately so that timely interagency consultation may take place to assess adverse effects, review avoidance and monitoring protocols, and to develop a mitigation plan, if necessary.

Following completion of inspection of the Elk River maintenance dredging, a brief technical inspection report will be prepared for submittal to the Cecil County DPR, USACE, and MHT.

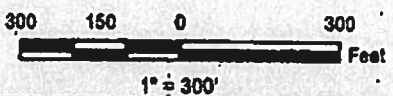
Unanticipated Discoveries

In the event an unanticipated discovery is made by the dredging crews the inspector will be notified, and all work will cease within 300 ft. (91.44 m) of the discovery. Once the inspector is notified, Cecil County DPR, USACE, MHT and BayLand will be notified. The dredging crew and the inspector will document the discovery in as much detail as possible. The report, as well as photos and any other forms of documentation taken will be sent to Cecil County DPR, USACE, MHT and BayLand. The dredging crew will not continue working within 300 ft. (91.44 m) of the discovery until USACE authorizes work to continue.



Legend
 Dredge Channel Alignment

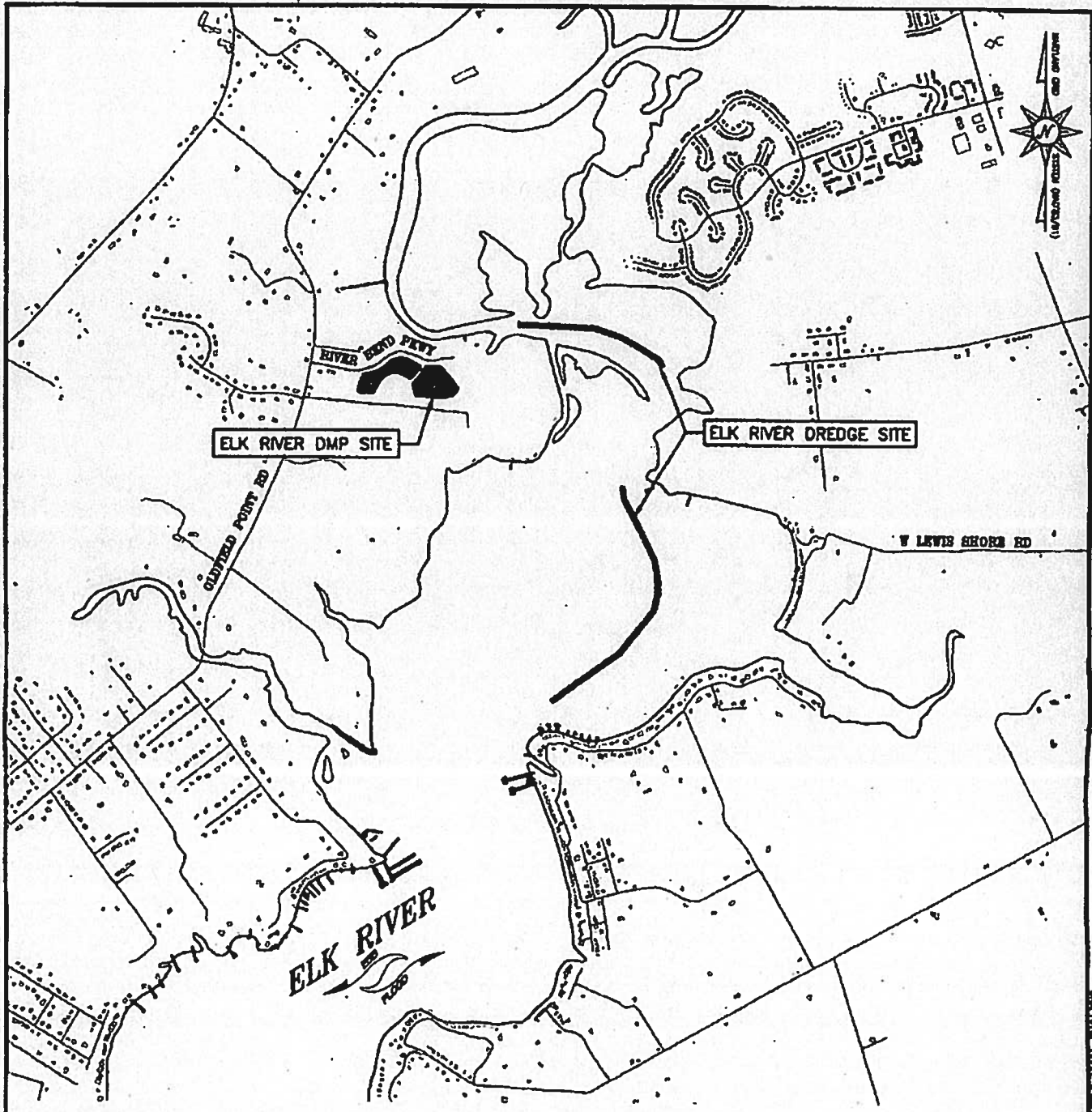
Notes:
 1. Aerial Photography for Maryland IMap 2013.



Bayland
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 7455 New Ridge Road, Suite Y Phone: (410) 694-9401
 Hanover, Maryland 21076 Fax: (410) 694-9495
 Website: www.baylandinc.com

**Elk River
 Dredge Channel
 Figure 1**

FIG. 1-1000 - Elk River Maintenance Design/0101-fig. 1.dwg

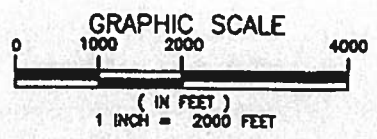


**ELK RIVER MAINTENANCE
 DREDGING** 18-62-1111
 201861856
 123958
CECIL COUNTY, MD 9/12/19


APPL. BY: CECIL COUNTY DEPARTMENT OF PARKS & RECREATION

VICINITY MAP

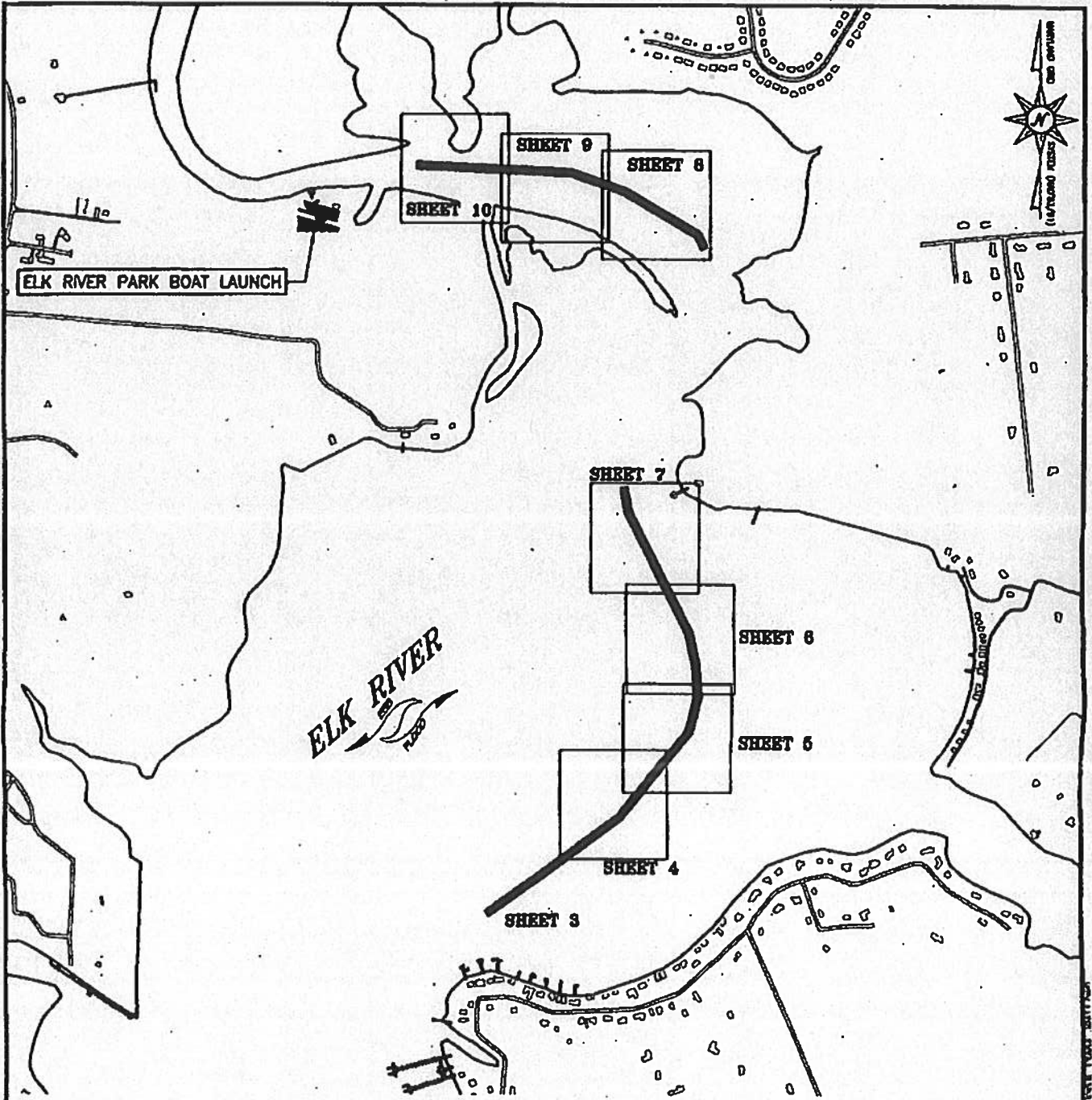
DATE: REVISED SEPTEMBER 2019 SHEET 1 OF 14



NOTE:
 BASEMAP TAKEN FROM CECIL COUNTY 2013
 PLANIMETRICS AND DIAGRY.


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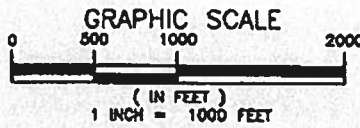


ELK RIVER MAINTENANCE 18-WL-1111
 DREDGING 201861856
 123958
 CECIL COUNTY, MD 9/12/19


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KEY SHEET

DATE: REVISED SEPTEMBER 2019 SHEET 2 OF 14



NOTE:
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 Chesver, Maryland 20776 Fax: (410) 644-0822
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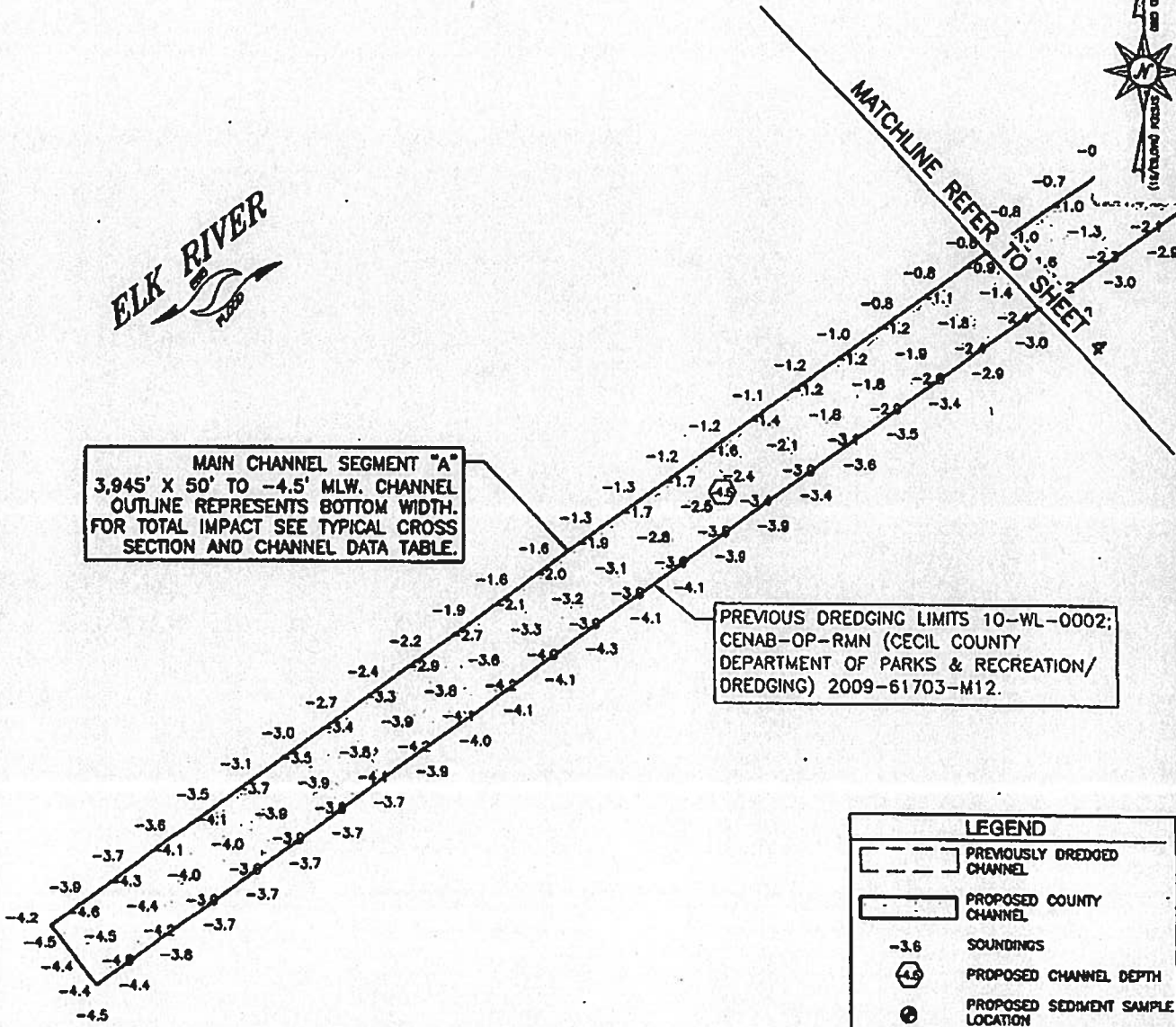
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MATCHLINE REFER TO SHEET 4

MAIN CHANNEL SEGMENT "A"
 3,945' X 50' TO -4.5' MLW. CHANNEL
 OUTLINE REPRESENTS BOTTOM WIDTH.
 FOR TOTAL IMPACT SEE TYPICAL CROSS
 SECTION AND CHANNEL DATA TABLE.

PREVIOUS DREDGING LIMITS 10-WL-0002;
 CENAB-OP-RMN (CECIL COUNTY
 DEPARTMENT OF PARKS & RECREATION/
 DREDGING) 2009-61703-M12.



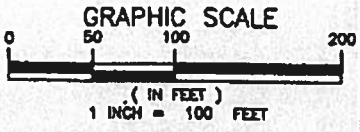
LEGEND	
	PREVIOUSLY DREDGED CHANNEL
	PROPOSED COUNTY CHANNEL
-3.6	SOUNDINGS
	PROPOSED CHANNEL DEPTH
	PROPOSED SEDIMENT SAMPLE LOCATION
	EXISTING MEAN LOW WATER
	EXISTING MEAN HIGH WATER
	APPROX. PROPERTY LINES
	COMMUNITY BOAT RAMP

ELK RIVER MAINTENANCE 18-WL-1111
 DREDGING 201861856
 123958
 CECIL COUNTY, MD 9/12/19

APPL BY: CECIL COUNTY DEPARTMENT OF PARKS & RECREATION

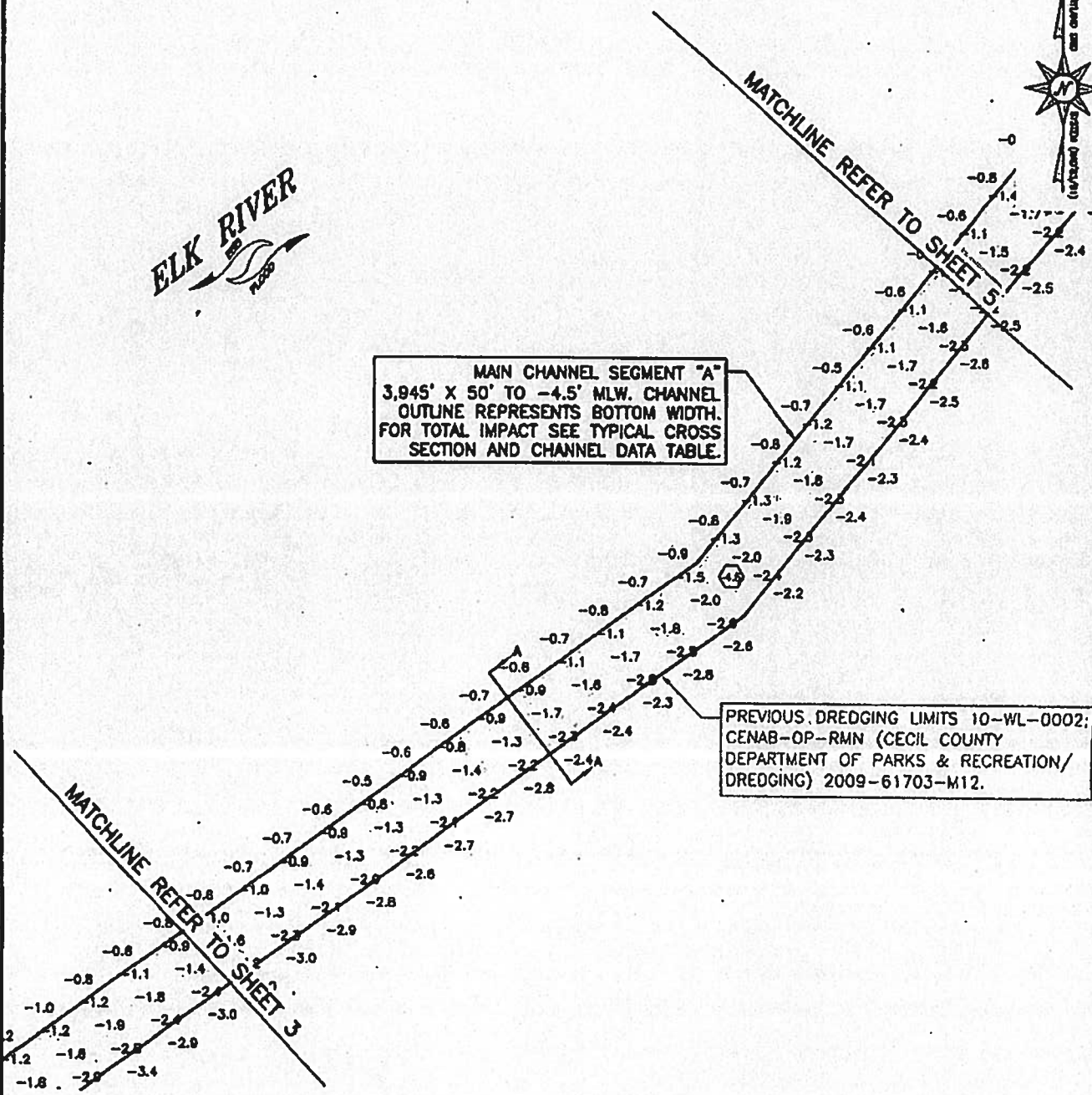
MAIN CHANNEL PLAN

DATE: REVISED SEPTEMBER 2019 SHEET 3 OF 14



NOTE:
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MAIN CHANNEL SEGMENT "A"
3,945' X 50' TO -4.5' MLW. CHANNEL
OUTLINE REPRESENTS BOTTOM WIDTH.
FOR TOTAL IMPACT SEE TYPICAL CROSS
SECTION AND CHANNEL DATA TABLE.

PREVIOUS DREDGING LIMITS 10-WL-0002;
CENAB-OP-RMN (CECIL COUNTY
DEPARTMENT OF PARKS & RECREATION/
DREDGING) 2009-61703-M12.

**ELK RIVER MAINTENANCE
DREDGING**

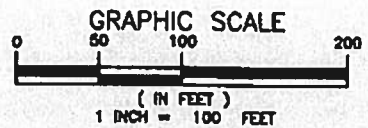
CECIL COUNTY, MD

18-WL-1111
201861856
123958
9/12/19

APPL. BY: CECIL COUNTY DEPARTMENT OF PARKS & RECREATION

MAIN CHANNEL PLAN

DATE: REVISED SEPTEMBER 2019 SHEET 4 OF 14



NOTE:
BASEMAP TAKEN FROM CECIL COUNTY 2013
PLANIMETRICS AND DRAINERY.

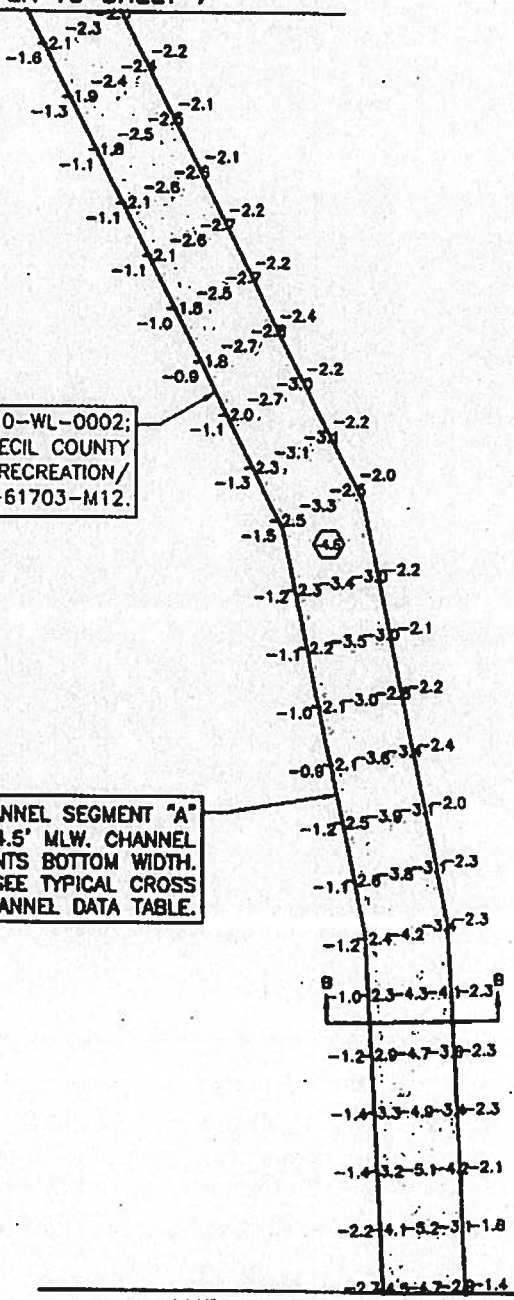
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"Sustaining Engineering and Environment"
1028 New Bridge Road, Suite 1
Baltimore, Maryland 21276
Phone: (410) 684-0011
Fax: (410) 684-0017
www.bjg.com

MATCHLINE REFER TO SHEET 7



PREVIOUS DREDGING LIMITS 10-WL-0002;
CENAB-OP-RMN (CECIL COUNTY
DEPARTMENT OF PARKS & RECREATION/
DREDGING) 2009-61703-M12.

MAIN CHANNEL SEGMENT "A"
3,945' X 50' TO -4.5' MLW. CHANNEL
OUTLINE REPRESENTS BOTTOM WIDTH.
FOR TOTAL IMPACT SEE TYPICAL CROSS
SECTION AND CHANNEL DATA TABLE.



MATCHLINE REFER TO SHEET 5

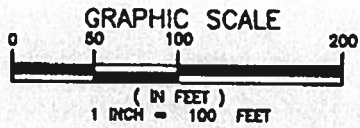
ELK RIVER MAINTENANCE DREDGING
CECIL COUNTY, MD

18-WL-1111
201861856
123958
9/12/19

APPL. BY: CECIL COUNTY DEPARTMENT OF PARKS & RECREATION

MAIN CHANNEL PLAN

DATE: REVISED SEPTEMBER 2019 SHEET 6 OF 14



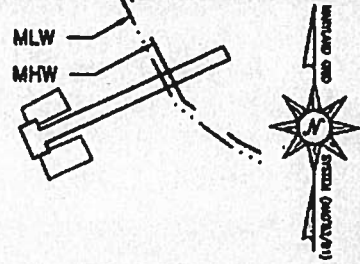
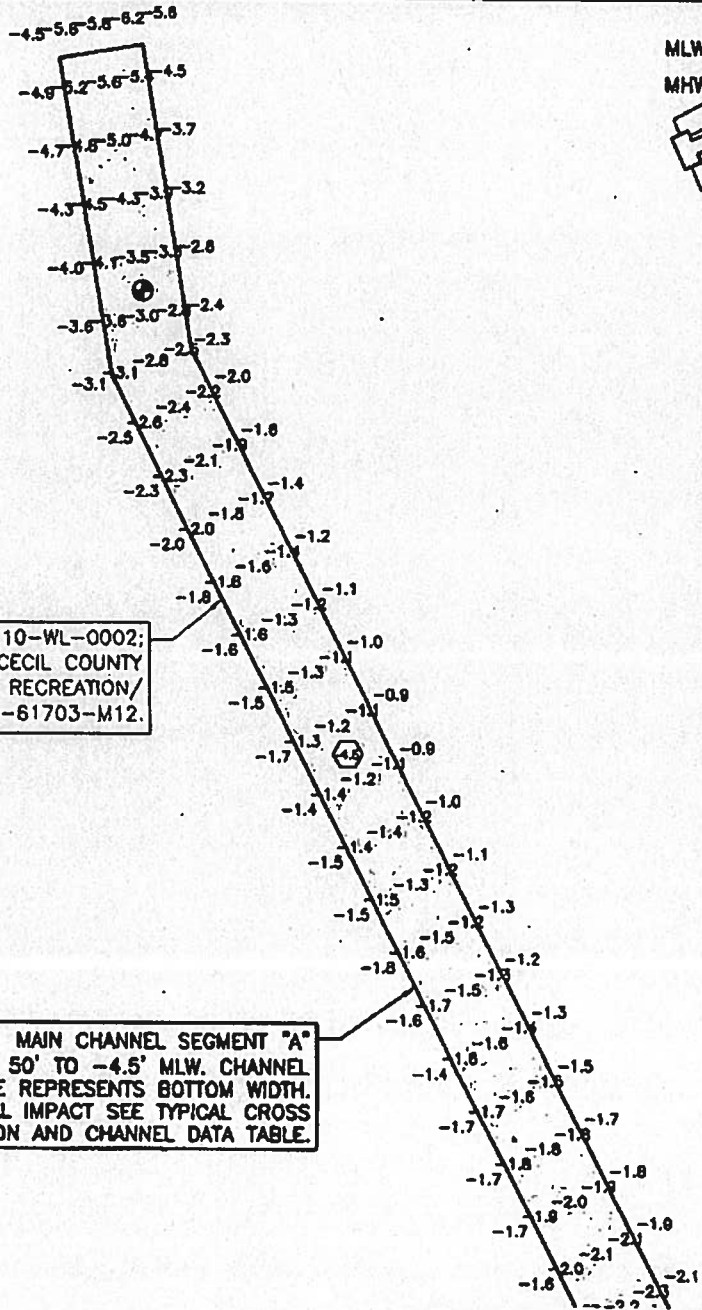
NOTE:
BASEMAP TAKEN FROM CECIL COUNTY 2013
PLANIMETRICS AND BATTERY.

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"Integrating Engineering and Architecture"

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Bessemer, Maryland 21718
www.hydroinc.com

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Fax: (301) 864-4422

2019-09-12 10:00 AM C:\PROJECTS\18-WL-1111\18-WL-1111-06.dwg



ELK RIVER

PREVIOUS DREDGING LIMITS 10-WL-0002;
 CENAB-OP-RMN (CECIL COUNTY
 DEPARTMENT OF PARKS & RECREATION/
 DREDGING) 2009-61703-M12.

MAIN CHANNEL SEGMENT "A"
 3,945' X 50' TO -4.5' MLW. CHANNEL
 OUTLINE REPRESENTS BOTTOM WIDTH.
 FOR TOTAL IMPACT SEE TYPICAL CROSS
 SECTION AND CHANNEL DATA TABLE.

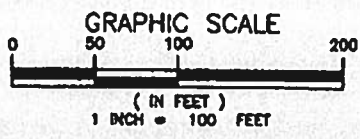
MATCHLINE REFER TO SHEET 6

ELK RIVER MAINTENANCE 18-WL-1111
 DREDGING 201901856
 123958
 CECIL COUNTY, MD 9/12/19

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MAIN CHANNEL PLAN

DATE: REVISED SEPTEMBER 2019 SHEET 7 OF 14



NOTE:
 BASEMAP TAKEN FROM CECIL COUNTY 2013
 PLANIMETRICS AND IMAGERY.

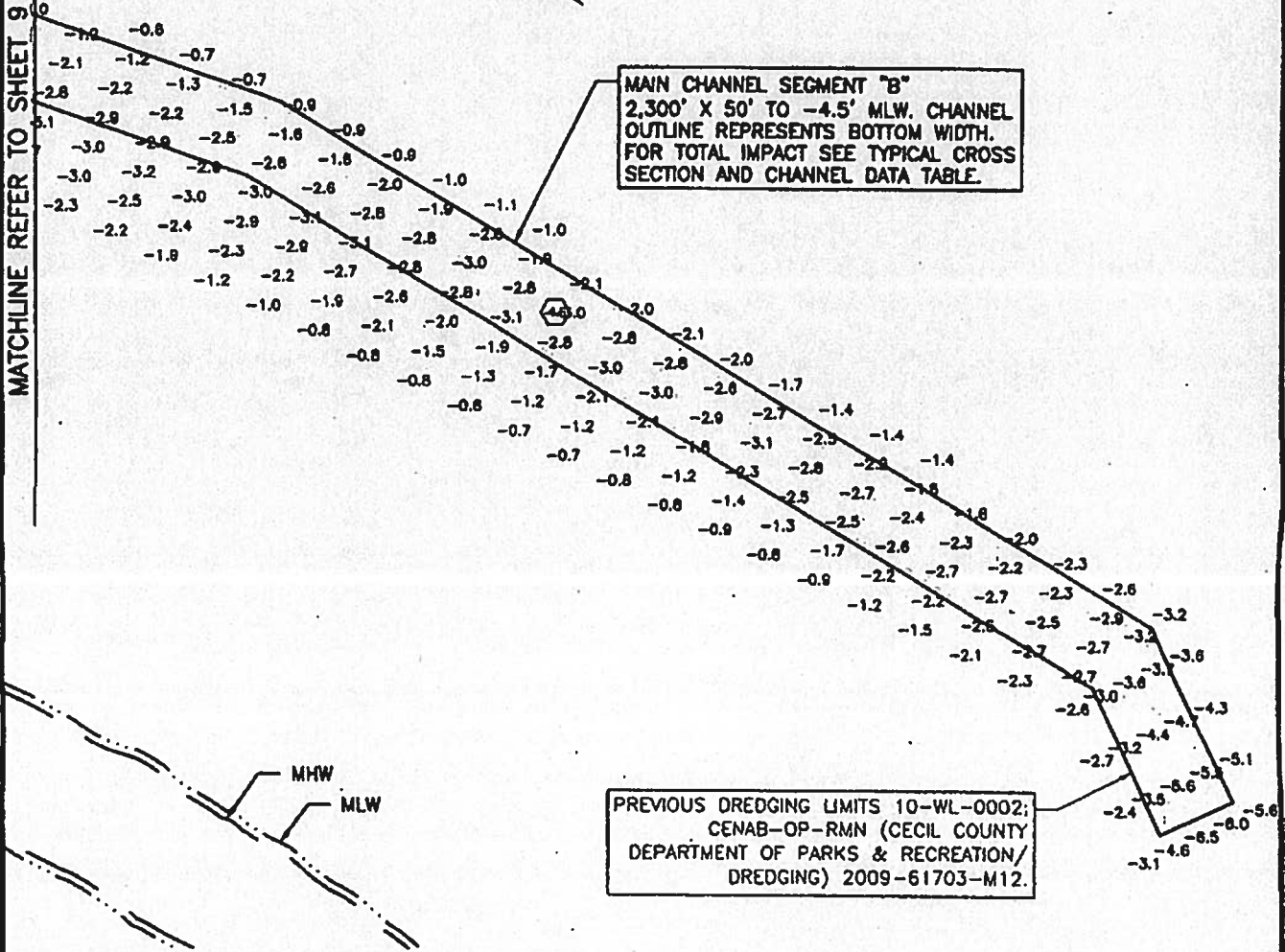
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 285 New Edge Road, Suite 7 Plover, MD 21081
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 www.bjyland.com



ELK RIVER
ROAD

MATCHLINE REFER TO SHEET 9

MAIN CHANNEL SEGMENT "B"
2,300' X 50' TO -4.5' MLW. CHANNEL
OUTLINE REPRESENTS BOTTOM WIDTH.
FOR TOTAL IMPACT SEE TYPICAL CROSS
SECTION AND CHANNEL DATA TABLE.



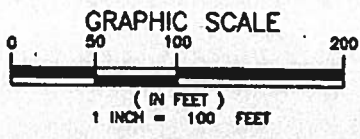
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CENAB-OP-RMN (CECIL COUNTY
DEPARTMENT OF PARKS & RECREATION/
DREDGING) 2009-61703-M12.

ELK RIVER MAINTENANCE DREDGING 18-WL-1111
201961856
125958
9/12/19
CECIL COUNTY, MD

APPL. BY: CECIL COUNTY DEPARTMENT OF PARKS & RECREATION

MAIN CHANNEL PLAN

DATE: REVISED SEPTEMBER 2019 SHEET 8 OF 14



NOTE:
BASEMAP TAKEN FROM CECIL COUNTY 2013
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303 Air College Road, Suite 7 P.O. Box 10208
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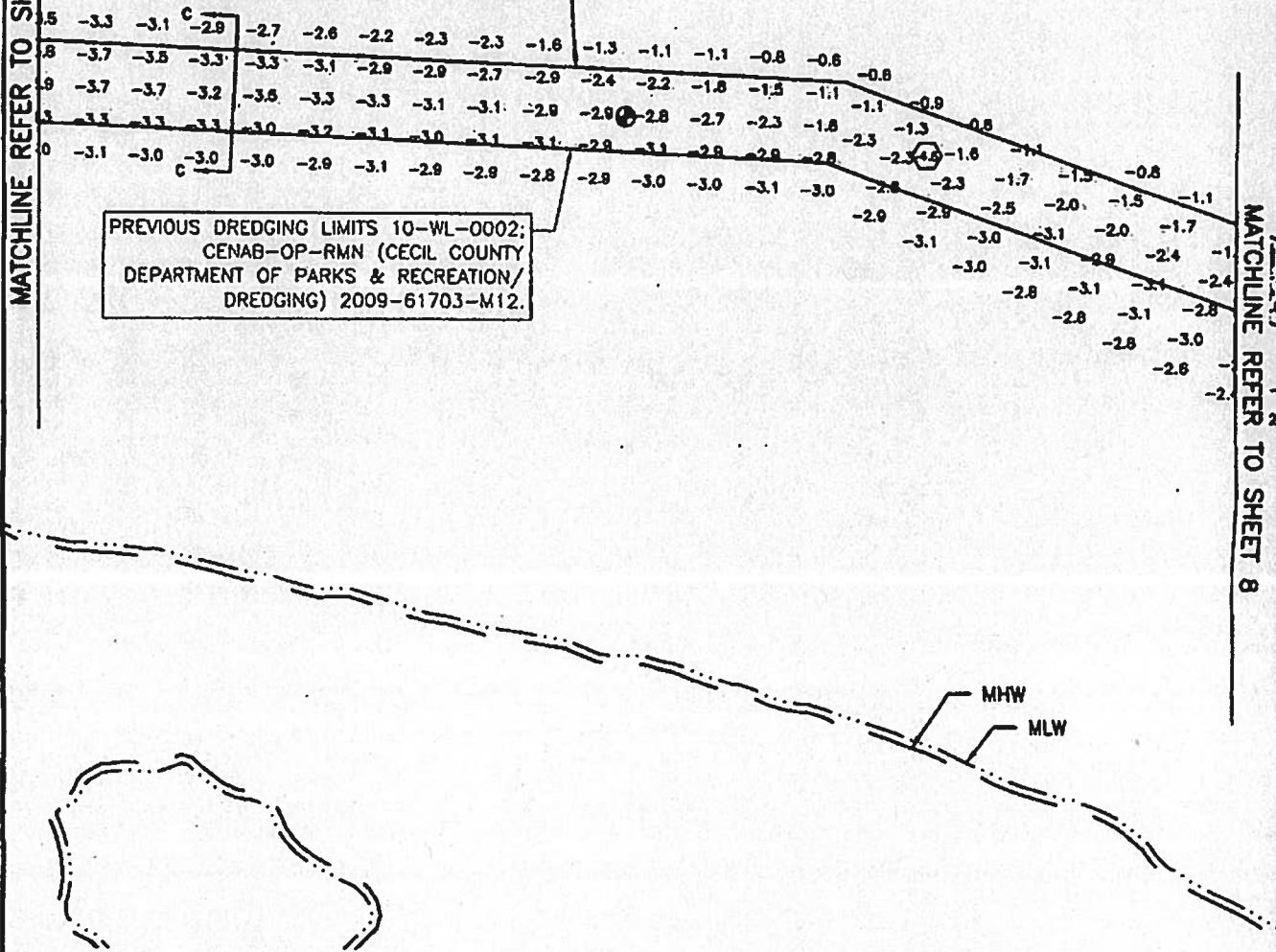


ELK RIVER

MAIN CHANNEL SEGMENT "B"
2,300' X 50' TO -4.5' MLW. CHANNEL
OUTLINE REPRESENTS BOTTOM WIDTH.
FOR TOTAL IMPACT SEE TYPICAL CROSS
SECTION AND CHANNEL DATA TABLE.

MATCHLINE REFER TO SHEET 10

MATCHLINE REFER TO SHEET 8



PREVIOUS DREDGING LIMITS 10-WL-0002;
CENAB-OP-RMN (CECIL COUNTY
DEPARTMENT OF PARKS & RECREATION/
DREDGING) 2009-61703-M12.

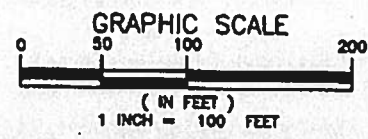


ELK RIVER MAINTENANCE 18-LX-1111
DREDGING 201861856
123958
CECIL COUNTY, MD 9/12/19

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MAIN CHANNEL PLAN

DATE: REVISED SEPTEMBER 2019 SHEET 9 OF 14



NOTE:
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www.bepd.com



MAIN CHANNEL SEGMENT "B"
 2,300' X 50' TO -4.5' MLW. CHANNEL
 OUTLINE REPRESENTS BOTTOM WIDTH.
 FOR TOTAL IMPACT SEE TYPICAL CROSS
 SECTION AND CHANNEL DATA TABLE.

-4.3	-4.5	-4.6	-5.1	-5.1	-5.5	-5.8	-6.2	-6.4	-6.8	-7.2	-7.1	-8.0	-5.7	-5.1	-4.7	-4.3	-4.1	-3.7
-4.3	-4.4	-4.5	-4.6	-4.4	-4.8	-4.9	-4.9	-4.9	-5.1	-5.6	-5.7	-5.8	-5.4	-5.1	-6.0	-5.0	-4.2	-4.1
-4.5	-4.3	-4.2	-4.2	-4.0	-4.0	-4.1	-4.1	-3.9	-3.7	-4.1	-4.4	-4.6	-4.8	-4.6	-4.5	-4.2	-4.1	-4.1
-4.1	-4.0	-3.7	-3.7	-3.4	-3.4	-3.4	-3.3	-3.2	-3.4	-3.3	-3.6	-3.6	-3.7	-3.6	-3.7	-3.5	-3.4	-3.4
-3.8	-3.7	-3.5	-3.3	-3.3	-3.1	-3.2	-2.8	-2.8	-2.7	-2.9	-2.9	-2.7	-2.8	-2.9	-3.1	-2.8	-3.0	-2.9

MATCHLINE REFER TO SHEET 9



PREVIOUS DREDGING LIMITS 10-WL-0002;
 CENAB-OP-RMN (CECIL COUNTY
 DEPARTMENT OF PARKS & RECREATION/
 DREDGING) 2009-61703-M12.

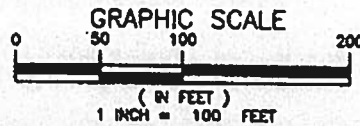
MHW
 MLW

ELK RIVER MAINTENANCE DREDGING 18-WL-1111
 201861856
 123958
 CECIL COUNTY, MD 9/12/19

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MAIN CHANNEL PLAN

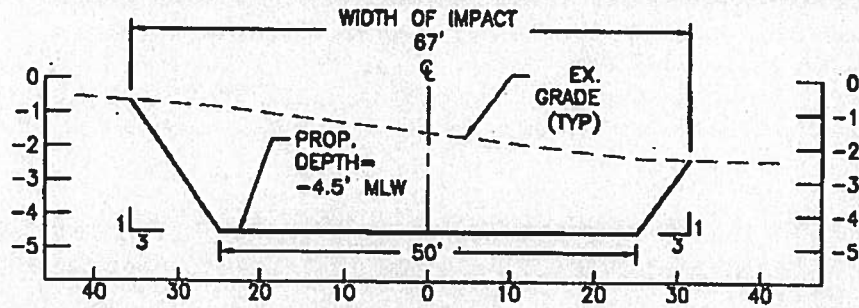
DATE: REVISED SEPTEMBER 2019 SHEET 10 OF 14



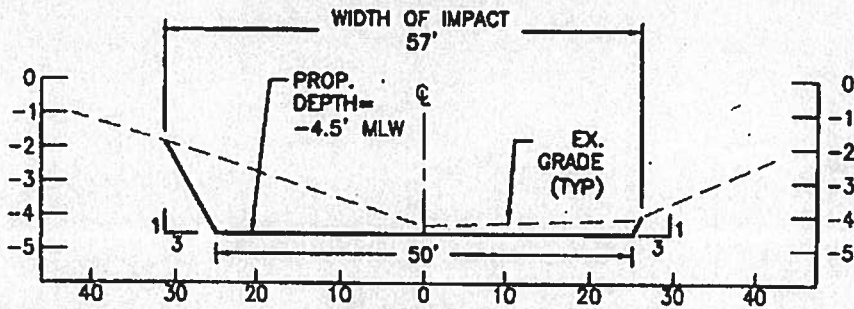
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 Shrewsbury, Maryland 21786 Fax: 915 844-0001
 www.kayhobbs.com

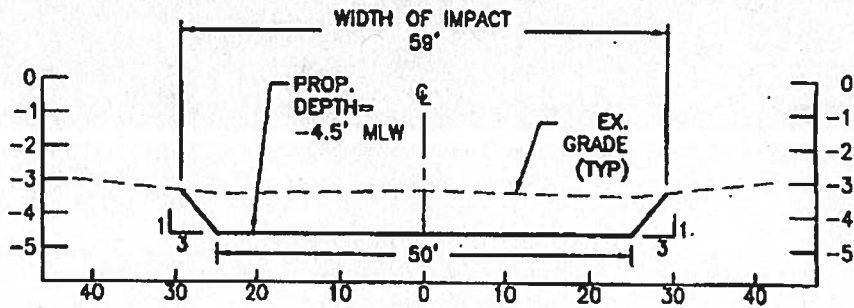
DATE PLOTTED: 10/13/19 10:58 AM



SECTION A-A
SCALE: NTS



SECTION B-B
SCALE: NTS



SECTION C-C
SCALE: NTS

ELK RIVER MAINTENANCE DREDGING
 CECIL COUNTY, MD

18-WL-111
 201861854
 123958
 9/12/19

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CHANNEL SECTIONS

DATE: REVISED SEPTEMBER 2019 SHEET 11 OF 14

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 www.kspdesign.com

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CHANNEL DETAILS

CHANNEL	LENGTH (FT)	WIDTH (FT)	DEPTH (FT)	VOLUME (CY)
SEGMENT A	3,945	50	-4.5'	16,375
SEGMENT B	2,300	50	-4.5'	6,803
TOTAL MAIN CHANNEL LENGTH				6,245 LF
TOTAL MAIN CHANNEL VOLUME				23,178 CY
TOTAL AREA OF IMPACT				381,131 SF = 8.75 AC
TOTAL MAIN CHANNEL AREA OF IMPACT TO 2017 SAV				0 SF = 0.00 AC

NOTES:

1. BASEMAP COMPILED FROM CECIL COUNTY 2013 PLANIMETRICS AND IMAGERY.
2. TIDAL RANGE IS 2.3 FEET.
3. BATHYMETRY FROM BAYLAND SURVEY DATED SEPTEMBER 12, 2018 AND SEPTEMBER 20, 2018.
4. SOUNDINGS ARE IN FEET AND REFER TO MLW.
5. THE ELK CREEK COUNTY CHANNEL PROPOSED FOR MAINTENANCE DREDGING WAS PREVIOUSLY PERMITTED UNDER 10-WL-0002 CENAB-OP-RW (CECIL COUNTY DEPARTMENT OF PARKS AND RECREATION/DREDGING) 2009-61703-M12.
6. THESE ARE PERMIT DRAWINGS ONLY. DESIGN DRAWINGS WILL BE PREPARED SEPARATELY.

**ELK RIVER MAINTENANCE
DREDGING**

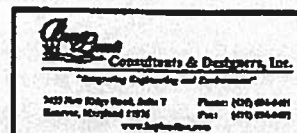
CECIL COUNTY, MD

18-WL-1111
201861856
123958
9/12/19

APPL BY: CECIL COUNTY DEPARTMENT OF PARKS & RECREATION

CHANNEL DETAILS

DATE: REVISED SEPTEMBER 2019 SHEET 12 OF 14



18-WL-1111-201861856-123958-9/12/19-SHEET 12 OF 14



ELK RIVER

RIVER BEND PKWY

**EX. WEIR BOX AND OUTFALL
STRUCTURE TO BE MAINTAINED**

**LIMITS OF UPPER CELL
CONTAINMENT AREA**

**LIMITS OF LOWER CELL
CONTAINMENT AREA**

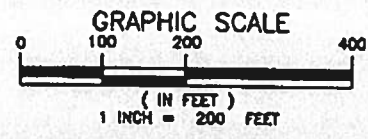
SCOTLAND POINT RD

ELK RIVER MAINTENANCE 18-WL-1111
DREDGING 201861856
123758
CECIL COUNTY, MD 9/12/19

APPL. BY: CECIL COUNTY DEPARTMENT OF PARKS & RECREATION

ELK RIVER DMP SITE

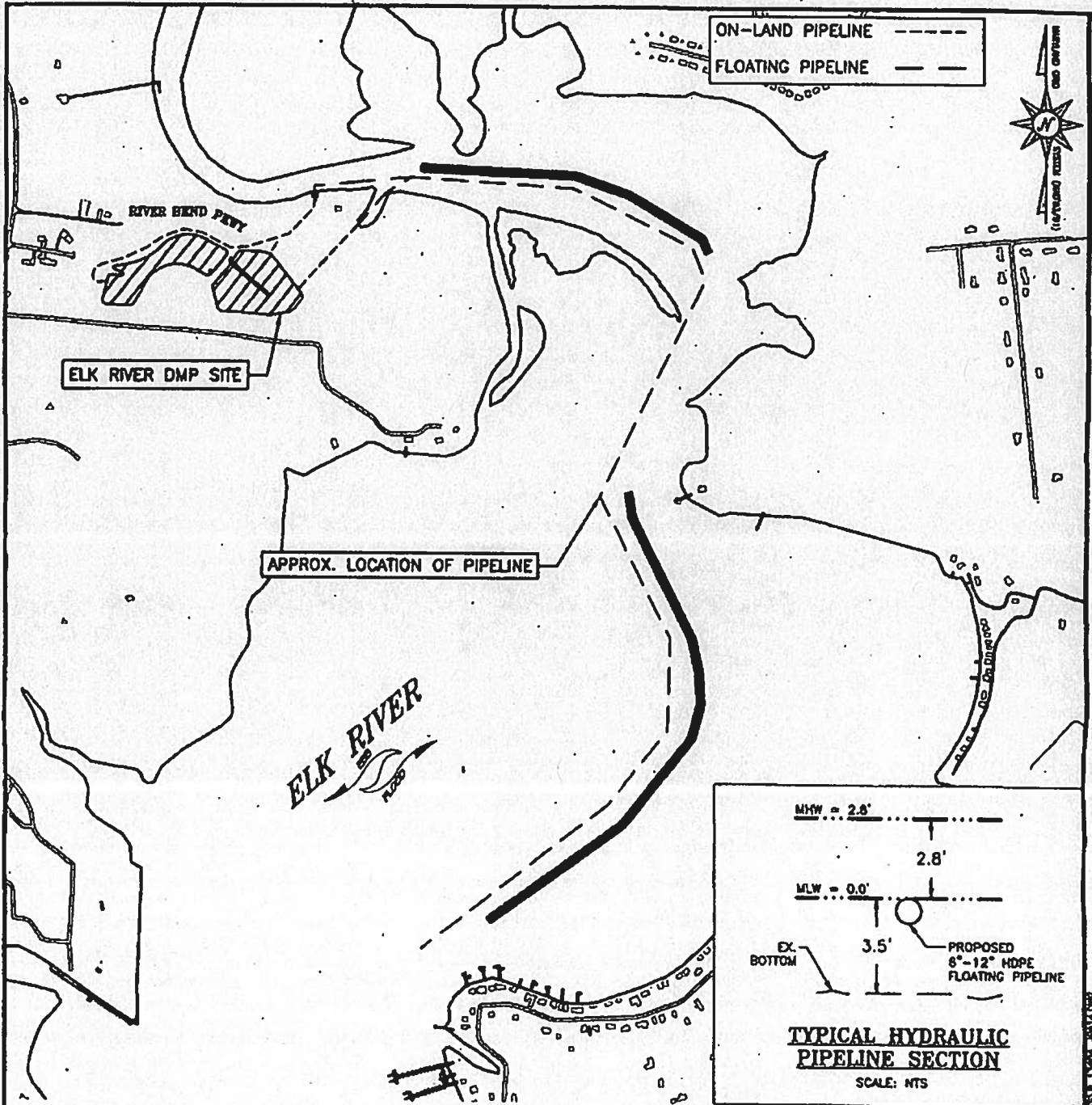
DATE: REVISED SEPTEMBER 2019 SHEET 13 OF 14



NOTES:
1. BASEMAP COMPILED FROM CECIL COUNTY
2013 PLANIMETRICS AND DIAGNOSTIC.
2. CURRENT AVAILABLE CAPACITY: 62,908 CY

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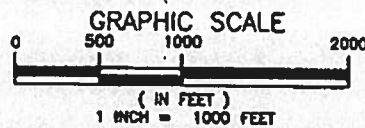


ELK RIVER MAINTENANCE DREDGING 18-60L-1111
 201861856
 123958
 CECIL COUNTY, MD 9/2/19

APPL. BY: CECIL COUNTY DEPARTMENT OF PARKS & RECREATION

HYDRAULIC PIPELINE PLAN

DATE: REVISED SEPTEMBER 2019 SHEET 14 OF 14



NOTE: BASEMAP TAKEN FROM CECIL COUNTY 2013 PLANIMETRICS AND IMAGERY.

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