

**SCOPE OF WORK  
NAVAL FACILITIES ENGINEERING COMMAND WASHINGTON**

**COOPERATIVE AGREEMENT**

for

**Wetland Construction**

at

**Cedar Point Wildlife Management Area**

**November 23, 2020**

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## A. BACKGROUND

Background. The U.S. Naval Research Laboratory (NRL), Blossom Point Tracking Facility (BPTF), is located on 41 acres within the U.S. Army Garrison Adelphi Laboratory Center, Blossom Point Research Facility (Blossom Point) in Charles County, Maryland. The BPTF is an integral part of NRL's Space Systems Development Department for research and development of space systems to support Navy mission requirements and new technologies for use in space. BPTF requires an expansion of satellite ground communications terminal facilities and operations for NRL's Southern Drawl expansion and the addition of two antennas which will join the existing National Aeronautics and Space Administration (NASA) antennas. The expansion of operations at BPTF is to provide communication links with NASA Space Network and NRL satellites in orbit over the Atlantic Ocean region. The BPTF operates continuously 24 hours a day, 7 days a week in support of numerous spacecraft.

The Southern Drawl facility would be located immediately north of NASA's antenna site and adjacent to the BPTF. In order to successfully execute the Southern Drawl project, trees within the combined line-of-site (LOS) zone for NASA and NRL antennas would need to be cut at ground level and the vegetation maintained at that height for the life of the antennas. In order for the Southern Drawl facility to be constructed, there would be a permanent loss of 0.31 acre (13,504 sf) of forested nontidal wetlands for the construction of the antenna footprint. Approximately 3.08 acres (134,165 sf) of forested wetlands would be converted to emergent wetlands for the LOS zone clearance.

Regulated wetlands are defined as lands that are transitional between terrestrial and aquatic systems, areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and fill materials in all Waters of the United States, including wetlands under the Clean Water Act. Any discharge into Waters of the U.S. requires a permit from the USACE. In addition, under Section 401 of the Clean Water Act, the Maryland Department of the Environment (MDE) oversees impacts to State waters and isolated wetlands in Maryland. MDE Tidal/Nontidal Wetlands Division maintains a cooperative permit process with the USACE under the Maryland State Programmatic General Permit-4 (MDSGP-4) for activities regulated under Section 404 of the Clean Water Act.

The Navy's responsibilities pursuant to the Clean Water Act and EO 11990, Protection of Wetlands, requires Federal agencies to avoid undertaking or providing assistance for new construction located in wetlands unless there is no practicable alternative, and all practicable measures to minimize harm to wetlands have been implemented. The Navy is required to comply with the national goal of no net loss of wetlands, and to avoid loss of size, function, and value of wetlands. In some instances, wetland disturbance is only allowed if losses are compensated through mitigation. Compensatory mitigation involves actions taken to offset unavoidable adverse impacts to wetlands authorized by Section 401/404 permits. The Navy received authorization for Minor Nontidal Fills work at BPTF from the USACE on 22 June 2015. In accordance with the terms and conditions of MDSGP-4 permit number 2014-61196, the Navy must meet compensatory wetland mitigation permit conditions for the impacts to wetlands associated with the BPTF Southern Drawl project. The Navy will fulfill the compensatory mitigation conditions by creating wetlands to offset impacts on 0.31 acre (13,504 sf) of forested nontidal fill for the planned antenna footprint and 3.08 acres (134,165 sf) of forested nontidal wetland conversion to emergent nontidal wetland for the line-of-site clearance.

Potential mitigation projects on the BPTF installation were discussed, but due to the presence of various constraints (including unexploded ordnance, protected species, archaeology, and base operations) at Blossom Point, creating wetlands on the installation would not be possible. With all of these things considered, mitigating offsite for the impacts associated with the Southern Drawl expansion project at BPTF is the only feasible option. To mitigate the impacts to wetlands at BPTF, the Navy entered into a Memorandum of Agreement (MOA) with Maryland Department of Natural Resources (MD DNR) to create wetlands on the Cedar Point Wildlife Management Area (WMA) in Charles County, Maryland. Cedar Point WMA is owned by the MD DNR and immediately adjacent to BPTF, therefore allowing for in-kind, off-site mitigation. The majority of the site has been farmland since before MD DNR acquired the property in 2009.

## **B. POINTS OF CONTACT**

Prior to agreement award, inquiries regarding the negotiation and other aspects of the project should be directed to the Contract Specialist. After agreement award, technical and contract inquiries shall be directed to the Technical Point of Contact.

### Contract Specialist

Ms. Olisha Costa  
NAVFAC Washington  
1314 Harwood Street, SE Bldg. 212  
Washington Navy Yard, DC 20374  
Telephone: (202) 685-1257  
Email: olisha.costa@navy.mil

### Technical Point of Contact (TPOC)

Mr. Adrian Dascalu  
NAVFAC Washington  
1314 Harwood Street, SE Bldg. 212  
Washington Navy Yard, DC 20374  
Telephone: (202) 433-2495  
Email: adrian.dascalu@navy.mil

### Station Point of Contact (SPOC)

The Station Point of Contact for this Cooperative Agreement will be named by the TPOC after Cooperative Agreement Award (CAA).

## **C. PERIOD OF PERFORMANCE**

The estimated period of performance for the base year is 24 months after award of the Cooperative Agreement (CA). The estimated final completion date if all options are exercised is 84 months after award of the CA.

<b>Fiscal Year</b>	<b>Period of Performance</b>	<b>Work Authorized</b>
Base Year	CAA + 24 months	Construction initiation, grading, hydrology monitoring, planting, construction completion
Option 1, Task 6	Base Year end + 12 months	Monitoring Year 1
Option 2, Task 7	Option Task 6 end + 12 months	Monitoring Year 2
Option 3, Task 8	Option Task 7 end + 12 months	Monitoring Year 3
Option 4, Task 9	Option Task 8 end + 12 months	Monitoring Year 4
Option 5, Task 10	Option Task 9 end + 12 months	Monitoring Year 5

**D. GENERAL REQUIREMENTS**

1. The Cooperator shall manage the total work effort and assure fully adequate and timely completion of services required under this Scope of Work. Included in this function shall be a full range of management duties including, but not limited to, planning, scheduling, inventory, analysis, and quality control.
2. The Cooperator shall prepare and submit all required permits to the Contracting Officer via the TPOC prior to the initiation of any fieldwork that requires permitting.
3. The Cooperator shall provide all equipment (unless otherwise stated) and analyses necessary to complete the work described within this Scope of Work. All data (raw and associated electronic files including data summaries and analyses), photographs, maps, figures, tables, slides, etc. produced under the Agreement, and equipment greater than or equal to \$100 purchased with Agreement funds (including computer software) are the property of the U.S. Navy.
4. The Cooperator shall comply with all applicable federal and state laws, such as, but not limited to, the Sikes Act, the Clean Water Act, Coastal Zone Management Act, Endangered Species Act, Migratory Bird Treaty Act, Archeological Resources Protection Act, and the National Historic Preservation Act. The Cooperator shall comply with all necessary permits/authorizations during the execution of fieldwork under the Agreement.
5. The Cooperator shall comply with all applicable laws and regulations pertaining to the provision of safe and respectful workplace and to provide a work environment free of harassment and intimidation for such party's own employees and third parties.
6. If applicable, the Cooperator shall conduct literature reviews, field investigations and interviews with experts and authorities as necessary to accomplish the work described within this Scope of Work. The Cooperator shall, in particular, attempt to contact and utilize information from the local U.S. Navy offices and other professionals who are experienced with the technical requirements under Section E of the Agreement.
7. The Cooperator shall ensure that the data obtained under the Agreement be scientifically defensible and suitable for publication. Methods of data collection and/or analyses shall be provided in the Cooperator's required work plan under Section G of the Agreement. The

U.S. Navy, at its discretion, may subject work plans, draft reports or draft manuscripts to external peer review.

8. The Cooperator shall assign a project manager for this project, and shall advise the Government within fourteen (14) days before changing a project manager during the execution of this Agreement.
9. The Cooperator shall inform, in writing (via email), the Contracting Officer (via the TPOC) of its intent to publish or present any data or findings resulting from activities/research completed under the Agreement.
10. The Cooperator shall inform in writing (via email) the TPOC and SPOC of any unusual activity observed while conducting surveys in the field (e.g. trespassers or persons in unauthorized areas). Information should include location, date, time, and any detailed facts regarding the activity. In addition, information regarding trespassers should be reported to the Installation Security Office as soon as possible.
11. Throughout the term of the Agreement, the Cooperator shall allow the TPOC and SPOC the opportunity to periodically observe the Cooperator's field activities, to review files of raw data, prepared data (such as data analyses, summaries, maps, figures, tables, etc.), or any record deemed appropriate by the Contracting Officer in establishing the Cooperator's performance in fulfilling the requirements of the Agreement.
12. The Contracting Officer, via the TPOC, may request updated data (presented on maps, figures and/or tables) at their discretion. The Cooperator shall forward the requested data electronically within ten (10) days from the date of request. If the requested data cannot be provided within this time frame, the Cooperator shall forward electronically the most updated raw data to the Contracting officer, via the TPOC. The Cooperator shall document the amount of the amount of effort and its translated cost incurred by the Cooperator to complete the request for updated data and forward this information electronically to the Contracting Officer (via TPOC).
13. The Government will not be responsible for the loss of or damage to property of the Cooperator, or for personal injuries to the Cooperator arising from or incident to the use of Government facilities or equipment.

The Cooperator shall indemnify and hold harmless the Government, its officers, agents, and employees from all liability under the Federal Tort Claims Act (28 U.S.C. sec. 2671 et seq.) or otherwise, for death or injury to all persons, or loss or damage to the property of all persons resulting from the use of the premises by the Cooperator. This covenant shall survive the termination of the Agreement.

In the event of damage, including contamination, to any Government property by the Cooperator, its officers, agents, servants, employees, subgrantees, subawardees, or invitees, the Cooperator, at the election of the Government, shall promptly repair, replace, or make monetary compensation for the repair or replacement of such property to the satisfaction of the Government.

14. The Cooperator must obtain insurance. All insurance required by the Agreement shall be in such form, for such periods of time, and with such insurers as the Contracting Officer

does not disapprove. A copy of each policy of insurance taken out hereunder shall be provided to the Contracting Officer's local representative prior to use of the premises and facilities at each installation. The Cooperator agrees that not less than thirty (30) days prior to the expiration of any insurance required by the Agreement, it will deliver to the Contracting Officer's local representative a certificate of insurance or a certified copy of each renewal policy to cover the same risks. The Cooperator shall furnish the insurance specified as follows and each policy of insurance covering bodily injuries and third party property damage shall contain an endorsement reading substantially as follows:

- a. The insurer waives any right of subrogation against the United States of America and the State of Maryland which might arise by reason of any payment made under this policy.
  - b. NAVFAC Washington shall be given thirty (30) days written notice prior to making any material change in or the cancellation of the policy.
  - c. The United States of America (Dept. of the Navy) and the State of Maryland are added as an additional insured in operations of the policy holder at or from premises designated under the Agreement and owned by the United States.
  - d. This insurance policy is for use of facilities under the Agreement.
  - e. Loss, if any, under this policy shall be adjusted with the Cooperator and the proceeds, at the direction of the Government, shall be payable to the Cooperator, and proceeds not paid to the Cooperator shall be payable to the State of Maryland.
15. The Cooperator shall notify the TPOC and SPOC in writing as to coordinate the work to be accomplished and the area(s) where work will be accomplished.
16. Unexploded ordnance may be encountered while conducting fieldwork. The Cooperator shall not touch or attempt to pick-up any suspected ordnance. The Cooperator shall notify the TPOC and SPOC of the exact location of the ordnance as soon as possible. This notification may be made by telephone.
17. The Cooperator shall comply with all security rules, regulations, requirements, and day-to-day operational changes thereto. Unannounced changes to day-to-day operational procedures may, at times, prohibit the Cooperator access to the project area. The primary use of the Installation is for its military mission. Without prior notice, designated areas may become closed to the activities of the Cooperator. In such cases the Cooperator will be provided notification of such as soon as possible. It is the responsibility of the Cooperator to reschedule this work to the maximum extent possible. Should the U.S. Navy require the Cooperator to leave the Installation for a period greater than thirty (30) days (such as in the case of a national emergency), the Agreement may be terminated by either party unless an alternative agreement is reached between the Cooperator and the U.S. Navy through a signed, written amendment of the Agreement.
18. Photography is restricted on the Installation. The Cooperator is required to obtain permission from the U.S. Navy prior to taking any photographs on the Installation. Only photographs of Agreement-related activities will be permitted.

19. Access. The Cooperator shall coordinate with the TPOC and SPOC for site access at least ten (10) days prior to the intended visit (including kick-off meeting) for review and approval. Site access for foreign nationals shall be coordinated at least thirty (30) days prior to the intended visit for review and approval. Failure to do so will result in denial of site access.
20. In order for personnel to access U.S. Government property in an automobile, a valid driver's license, vehicle registration, and proof of insurance are required. Copies of these documents shall be provided to the Installation Security Office. The Cooperator shall comply with all requirements for accessing the installation under the Agreement.
21. Installation Permits. In addition to any regulatory required permits, the Cooperator shall coordinate with the TPOC and SPOC to obtain any installation specific permits (*i.e.*, dig permits for intrusive work), if any, required prior to the initiation of any field work. Please be aware that dig permits may take up to ten (10) days for approval. The Cooperator shall supply proof that all necessary installation specific permits have been received to the TPOC and SPOC prior to the start of field activities.
22. Utilities. In addition to using any government or utility company locating services available (*e.g.*, Miss Utility), the Cooperator shall utilize a qualified private utility locating service company to locate all underground utilities in the work area. Any markings made during the utility investigation must be maintained throughout the duration of the field work. The Cooperator must physically verify underground utility locations by hand digging using wood or fiberglass handled tools when any adjacent exploration, excavation or construction work is expected to come within three (3) feet of the utility.

## **E. SPECIFIC TASKS**

The Cooperator shall provide personnel in sufficient numbers and with relevant expertise to fulfill the requirements of the Agreement.

The Cooperator will conduct the work under this agreement at the Cedar Point WMA site (see Figure 1 - Location of Mitigation Site) to create wetlands as mitigation for impacts on BPTF. The wetlands that are created at this site will contain no less than 3.7 acres (161,173 sf) of forested nontidal wetlands and approximately 0.8 acres (34,848 sf) of emergent nontidal wetlands with a 0.5 acre (21,780 sf) pond.

1. The Navy shall provide the Final Wetland Mitigation Plan and Designs. The Cooperator shall implement the final plan to construct the mitigation site and create no less than 3.7 acres of forested nontidal wetlands and 0.8 acres of emergent nontidal wetlands with a 0.5 acre pond for waterfowl habitat at the Cedar Point WMA site.
2. The Cooperator shall plant only approved native, non-invasive plant species within the limits of disturbance defined in the approved design. The Cooperator shall guarantee an 85% survival rate of the plantings one year after the initial planting. This survival rate will be reviewed and approved of by the TPOC and SPOC prior to completion of this Agreement.

3. The Cooperator will be responsible for removal of all debris generated during the project. All debris, including excavated materials with the exception of what is planned for reuse within the design or unless a stockpile location is identified, is to be taken off the site and properly disposed of. All disturbed areas (including laydown areas, stockpile zones, spoil areas, stabilized construction entrances, access routes, etc.) shall be stabilized and returned to original conditions after completion of the wetland construction.
4. The Project is divided into multiple tasks:
  - a. Task 1- Kickoff
  - b. Task 2- Pond Construction
  - c. Task 3- Emergent Wetland Construction
  - d. Task 4- Forested Wetland Construction
  - e. Task 5 – Post-Grading Monitoring (1 year)
  - f. OPTION Task 6- Post Construction Monitoring Year 1
  - g. OPTION Task 7- Post Construction Monitoring Year 2
  - h. OPTION Task 8- Post Construction Monitoring Year 3
  - i. OPTION Task 9- Post Construction Monitoring Year 4
  - j. OPTION Task 10- Post Construction Monitoring Year 5
5. The wetland construction will take place in multiple phases:
  - a. Construction (Tasks 1 through 5)- The Cooperator shall install sediment and erosion controls and grade the wetland zone to establish the desired topography and hydrology. The Cooperator shall stabilize the site and monitor the progression of hydrology and topography of the site for 12 months after the grading to ensure that conditions will be appropriate for further restoration. The Cooperator shall adjust and change the grading as needed to ensure success of the wetland mitigation. Finally, the Cooperator shall finalize the construction and restoration activities including, but not limited to, planting and seeding, installation of vegetation protection measures, removal of sediment control measures and equipment, final stabilization, etc.
  - b. OPTION YEARS for Monitoring (Tasks 6 through 10)- After the wetland is fully constructed, the Cooperator shall monitor the compensatory wetland mitigation work areas for 5 consecutive years. Each year of monitoring may be awarded separately. Within 30 days after completion of the wetland creation, the Cooperator must contact the USACE to identify themselves as the responsible parties for monitoring the wetland creation site. Annual monitoring reports summarizing the findings of the monitoring must be submitted to the TPOC and SPOC for review and approval prior to delivery to the USACE. The reports must be submitted to the TPOC and SPOC no later than 30 November of each year to ensure the submission can be made to the USACE no later than 31 December of each year. The reports must include information describing the success or failure of the wetland creation site; an inventory of plant species; a description of any necessary remedial actions; and prescribe remedial actions with a time frame for implementing such actions. The monitoring report must include, but not be limited to, the following additional information:

- i. A narrative description of the wetland creation site and work efforts;
- ii. Dates of site inspections;
- iii. Description of species and measurements of vegetative coverage with mapping of planting zones;
- iv. Listing of plants species in order of dominance and stratum;
- v. Soil sampling;
- vi. Field verified final grade elevations;
- vii. Digital photographic documentation, taken within the same time frame during each monitoring year at established photographic plot points;
- viii. Copies of field data sheets and/or forms; and
- ix. Documentation, including completion dates of remedial actions completed.

These monitoring OPTION YEARS, each consisting of an addition of 12 months of performance to the cooperative agreement, shall be separated into the following individual tasks and may be exercised at a later date at the Government's discretion:

- c. OPTION Task 6- Post Construction Monitoring Year 1
- d. OPTION Task 7- Post Construction Monitoring Year 2
- e. OPTION Task 8- Post Construction Monitoring Year 3
- f. OPTION Task 9- Post Construction Monitoring Year 4
- g. OPTION Task 10- Post Construction Monitoring Year 5

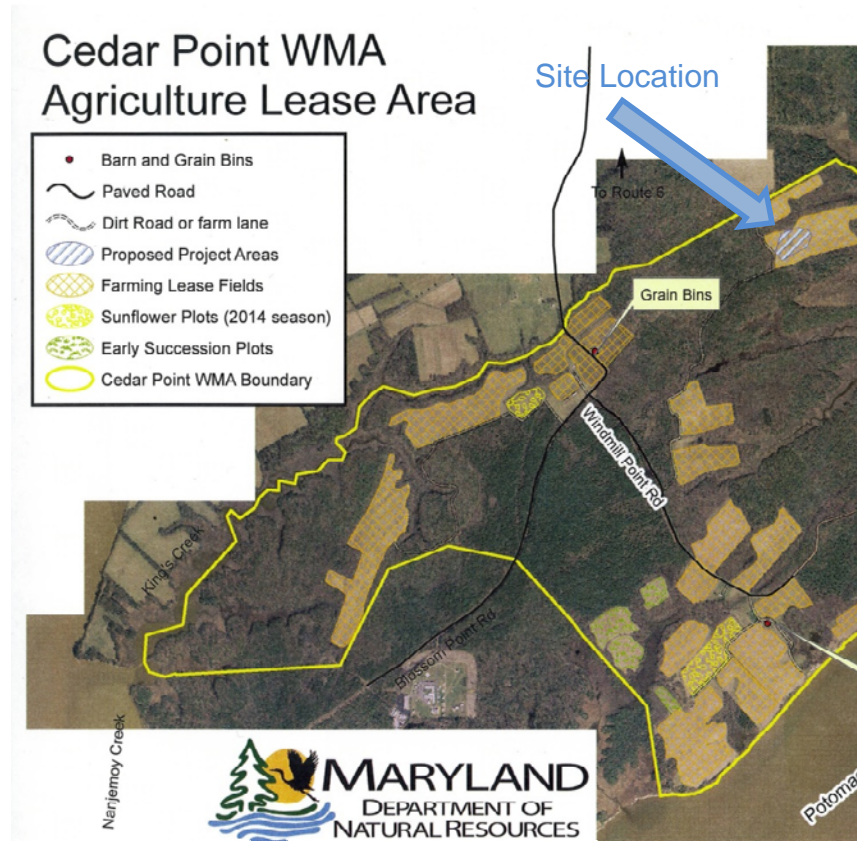


Figure 1 - Location of Mitigation Site

## F. MEETINGS

1. The Cooperator shall attend a kick-off meeting within fourteen (14) days of the Agreement award date. The kick-off meeting shall primarily discuss a proposed schedule of critical project milestones, a site visit schedule, and proposed working dates for tasks under the Agreement.
2. The Cooperator and any personnel conducting the tasks identified in the Agreement must attend the meeting so that they may be introduced to the personnel in charge of any restricted areas.
3. The Cooperator shall provide meeting minutes, as required under Section G of the Agreement, via email within seven (7) days of meetings held under this the Agreement to the TPOC and SPOC.
4. Site visits shall be arranged by the Cooperator as needed to complete the tasks under the Agreement, or as requested by the TPOC and SPOC.
5. The Cooperator shall be available throughout the Agreement period to the TPOC and SPOC in such matters regarding the tasks to be completed under the Agreement. At a

minimum, the Cooperator will submit monthly status reports (via email) to the TPOC and SPOC.

## **G. DELIVERABLES**

Safety Plan. The Cooperator shall prepare and submit one (1) hardcopy and one (1) electronic copy (via email) to the TPOC and SPOC within thirty (30) days of Agreement award and at least three weeks prior to the projected start of any field activities. The Safety Plan must be approved by the Installation Safety Office prior to the start of any fieldwork. The TPOC and SPOC will provide the Cooperator with specific information about the required format and content of the Safety Plan; this may include an EM-385 compliant Safety Plan. The Safety Plan shall include personal protective equipment (PPE) requirements, installation emergency POC and any conditions that would require an immediate work stoppage and a site evaluation by installation safety personnel.

Work Plan. The Cooperator shall provide a preliminary work plan and schedule at the kick-off meeting for discussion. Comments from the Navy will be submitted to the Cooperator within twenty-one (21) days of the kickoff meeting. The Cooperator shall submit a final work plan (via email) to the TPOC and SPOC within thirty (30) days or less of Navy comment receipt. Work schedules shall be updated and submitted by the Cooperator electronically (via email) to the TPOC and SPOC monthly or on request from the TPOC for all field activities.

Monthly Reports. Two (2) electronic copies of a monthly progress report are due by the seventh (7th) of the following month or the next workday if the 7th falls on a weekend, for work performed during the previous month, for the duration of the Agreement. Electronic copies of these reports shall be concurrently submitted to the TPOC and SPOC via e-mail. The progress report shall include, at a minimum, Agreement number, report date, report period, project name, names of investigators, meeting minutes (minutes shall include the date/time/location the meeting was held, attendees, relevant discussion notes, *etc.*), work performed during reporting period, including problems encountered and recommendations to resolve issues, work anticipated for the next reporting periods and project status. Small maps (8.5" x 11") may be used to show locations.

Meeting Minutes. The Cooperator shall submit meeting minutes electronically only to the TPOC and SPOC within seven (7) days of the meeting occurrence. The TPOC and SPOC will provide comment within seven (7) days of receipt of draft minutes. Final meeting minutes may be included in the monthly progress report submittal.

Draft Report. The Cooperator shall prepare and submit two (2) electronic copies (via CDs) summarizing the planned wetland creation for Cedar Point WMA. The draft report shall include information obtained through investigations and data analysis conducted by the Cooperator for the wetland delineation, topographic survey, well installation/monitoring, and the draft permitting package as an appendix. All text, maps and illustrations must be of high quality and easily reproducible on standard or color copiers. Measurements and/or quantities identified within the reports prepared under this Agreement shall be displayed in English and metric units. The Cooperator shall distribute this document to the TPOC and SPOC. The TPOC and SPOC shall provide their respective comments, suggestions, or edits (if any) on the draft report within thirty (30) days from the date of receipt. Once the TPOC and SPOC have reviewed and commented on this submission, the Cooperator shall make the changes and

provide the TPOC and SPOC a proof copy (via email) for approval before printing and releasing the final report.

Final Report. The final report shall include the final wetland delineation report, topographic survey, well installation/monitoring, and the as-built drawings as an appendix. The Cooperator shall prepare three (3) hardcopies and three (3) electronic copies (via CDs) of the final report to be submitted to the TPOC and SPOC. All electronic source files for tables and figures shall be labeled and submitted. All digital photographs shall be labeled with at least the following information: (1) subject/activity, (2) location (specific place), (3) date, and (4) name of photographer.

Annual Monitoring Report. The Cooperator shall prepare and submit two (2) electronic copies (via email) of the Annual Monitoring Report, in accordance with the terms and conditions of MDSPGP-4 permit number 2014-61196, to the TPOC and SPOC for review no later than 30 November of each year. The TPOC and SPOC shall provide their respective comments, suggestions, or edits (if any) on the Annual Monitoring Report within fifteen (15) days from the date of receipt to ensure the submission can be made to the USACE no later than 31 December of each year.

## **H. GOVERNMENT FURNISHED INFORMATION AND MATERIALS**

1. The Government will provide the following supporting materials in order to assist the Cooperator with the tasks associated with the Agreement:
  - a. Final Wetland Mitigation Plan and Designs
  - b. Applicable information, strategies, or protocols;
  - c. GIS data and maps, if available;
  - d. Aerial photographs, if available; and
  - e. Topographical maps, if available.
2. The Government will provide information, GIS data and maps or indicating areas of special concern, *i.e.*, areas of unique habitat that may harbor sensitive species or land use history that may contain protected cultural resources, if available and applicable.
3. The Government will provide real estate maps and facility information needed to complete the tasks.
4. If necessary the Government will provide prearranged access to the installation lands in keeping with the terms of this Agreement. Weather, illness, and other factors may cause some variation in the proposed schedule.

## **I. COOPERATOR FURNISHED ITEMS**

The Cooperator shall provide all equipment (unless otherwise stated) and analyses necessary to complete the work described within this Scope of Work. All equipment that costs more than \$100 purchased using Agreement funds remains the property of the Navy at the completion of the Agreement. The final report shall include an inventory of all equipment purchased that costs more than \$100, with the name of make, model, serial number, and maintenance records.

## **J. DELIVERABLE FORMAT**

The Cooperator's submittals and compliance with notification requirements must be in writing unless specified otherwise. Writing includes email.

All documents, maps, and illustrations must be of high quality and easily reproducible on standard or color copiers. All documents will be two sided, single spaced, on 8 ½" by 11" paper in manuscript format, with standard outline spacing. Fold out pages should be avoided. If these are necessary, they will be no larger than 11" x 17" and have the same design as the 8 ½" by 11" graph pages, and they will be approved by the Government before document preparation. Pages intentionally left blank shall be labeled as such. All pages of the documents will be appropriately numbered with filename and date listed in the footer of hard copies, and inserted into a 3 ring binder with a labeled edge.

All deliverable documents and maps, charts, etc. shall also be delivered in electronic format, Microsoft Office Word or jpeg formats. If ADOBE ACROBAT is used, files will be scanned per chapter, per figure and per appendix so that files are manageable and easily compliable. Files must be delivered in electronic formats that can be altered or updated by the Government. All chapters shall be saved as separate files on a CD for ease of reproduction.

All databases containing raw data and all associated electronic data summary and analytical files shall be formatted in Excel, Word, Dbase IV, or any compatible Microsoft database software and submitted to the TPOC and SPOC (via CDs). Microsoft ACCESS files shall include all queries, reports, tables etc.

If required, all original still photographs will be captured at a minimum of 1 million pixels and 24-bit color.

## **K. DATA**

All databases containing raw data and all associated electronic data summary and analytical files shall be formatted in 2003 Excel, 2003 Word, Dbase IV, or any compatible Microsoft database software and submitted to the TPOC and SPOC (via CD-ROM). Microsoft ACCESS files shall include all queries, reports, tables etc.

### **1. GPS Data Collection**

All data collected with GPS shall have an error of no more than 2-3 meters of the actual data collected in the field. All GPS data shall be defined with the following coordinate system and parameters: (1) Horizontal Datum: NAD 83; (2) Vertical Datum: GRS 80; (3) Projection: Maryland StatePlane\_FIPS\_1900\_feet; (4) Units: Feet; (5) all data layers must be created in accordance with SDSFIE 3.01. Associated attribute data shall be recorded in a dBase IV compatible format (DBF).

### **2. GIS Data**

Electronic copies of all GIS data developed under this Cooperative Agreement, shall be submitted in accordance with the Naval District Washington Standards for Geographic Information System (GIS) Deliverables (Appendix A). The GIS data shall be submitted to the TPOC and SPOC (via CD-ROM or DVD). The Cooperator shall provide a document (Microsoft Word) that lists all layers developed or updated for the task.

### 3. Maps

All maps created under the Agreement shall be incorporated in the draft and final versions of the Final Report. All maps shall be printed on 8.5" by 11" paper or 11" by 17" paper folded to match the size of the report(s). Unless otherwise indicated, all maps shall be printed at an acceptable scale using Maryland StatePlane\_FIPS\_1900\_feet, North American Datum 1983. Electronic copies of all maps created shall also be provided. All maps created for this Agreement shall contain the following information: title, scale bar, legend, date, north arrow, and author of the map.

## L. DATA AND PUBLICATIONS

1. The Cooperator acknowledges that information and data gathered or received pursuant to the Agreement may have regulatory and national security significance and that the unauthorized dissemination or use of this information might prejudice the interests of the U.S. Navy and Department of Defense. Therefore, the Cooperator agrees not to disclose or use any information or data directly or indirectly acquired through activities associated with the Agreement to any person, organization or entity who is not a party to the Agreement, and to prohibit disclosure or use of the same by the Cooperator's personnel, representatives, agents, contractors, or associates unless disclosure is compelled by process of law, or the Navy authorizes disclosure or use in accordance with the Agreement. The terms "data", "information," "use" and "disclose" (and its forms and derivatives) will be interpreted very broadly. Limitations on disclosure encompass all forms of dissemination including the spoken word, written word, and electronic media. "Use" includes, but is not limited to, inclusion in academic papers, professional presentations and incorporation in other research not associated with the Agreement. All products, reports, field notes, field data forms, photographs or other information or other records or documents, including slide presentations produced using any information obtained under the Agreement are the property of the U.S. Navy. The Cooperator may disclose or use data and information with the prior written approval of the U.S. Navy (via the Contracting Officer) and per the terms of that approval. The Cooperator will submit a written request to disclose or use information or data to the Contracting Officer (cc provided to the TPOC and SPOC) explaining what information is to be disclosed or used, the reason for the disclosure or purpose for which the information or data will be used and to whom the information will be disclosed. Within thirty (30) days from receipt of the request, the TPOC will issue a written recommendation for Contracting Officer approval. If no action is taken within thirty (30) days from receipt of the request, the request will be forwarded to the higher management levels of the NAVFACENGCOCOM Washington for resolution.
2. The U.S. Navy recognizes that the Cooperator may want to use information and data acquired through the Agreement in professional and academic manuscripts, publications and presentations and that such use may benefit not only those with an academic or professional interest in the information or data, but the general public as well. If

authorization is given for such use, the Navy retains the right to review any manuscripts, publication or presentation in advance of publication or presentation for the purpose of ensuring the accuracy and releasability of the information or data presented. The Cooperator agrees that any manuscript, publication or presentation will include a statement as to the origin of the information or data obtained through the Agreement. Authorization for the use of information or data in one context is not to be construed as authorization for subsequent uses or purposes. The Cooperator shall submit at least two (2) hard copies of published manuscripts, and at least one electronic copy of slides, and/or slide or poster presentations to the Navy, at no extra cost to the Navy.

3. Recognizing the significant technical contributions of the Cooperator and U.S. Navy TPOC in the development of the Agreement's scope of work, its goals, objectives, experimental sampling design, data interpretation, review of technical reports, etc., U.S. Navy TPOC and SPOC shall be accorded, if appropriate, joint-authorship credit for any publication of manuscript and technical presentation that is based upon the full use or partial use of the technical information, data, or interpretation of data produced under the Agreement. Appropriate joint-authorship credit means credit commensurate with the amount of work and technical contributions provided by the U.S. Navy TPOC and SPOC, and fair with reference to credit given by the primary author (Cooperator) to other joint authors of the manuscript and technical presentation. Appropriateness of joint authorship is to be determined by reference to applicable authority, for example, the code of ethics, rules, regulations, or guidance set forth by institutions or other recognized venues on the publication of manuscripts and technical presentations.
4. No classified information shall be presented in any document prepared under this Task Agreement. The Cooperator shall not release any information regarding the project, particularly the results developed under this Task Agreement, to any Federal, State or local (public or private) agencies or organizations without permission of the Government
5. The Cooperator shall be responsible for ensuring all personnel, representatives, agents, contractors, and associates participating in activities under the Agreement have read and acknowledged the provisions the Agreement.

#### **M. RELEASE OF PUBLIC INFORMATION**

The Cooperator shall not respond to any third party inquiries concerning the Agreement or concerning data and information obtained under the Agreement. All third party inquiries received by the Cooperator shall be directed to the Contracting Officer (via the TPOC) for response in accordance with applicable law and regulations.

#### **N. COORDINATION**

The TPOC and the SPOC will furnish the necessary personnel, material, and services to fulfill this Task Order as follows:

The TPOC will:

1. Reimburse the Cooperator for all direct and indirect costs of tasks associated with this Cooperative Agreement. These costs should be identified in the Cooperator's estimate as

part of the proposal. Costs not identified in the estimate must be approved by the Contracting Officer and TPOC before they will be paid.

2. Provide prearranged access to the Cedar Point WMA in keeping with safety requirements within the area regulations. The TPOC and SPOC will provide liaison between all appropriate offices and the Cooperator to schedule research activities to the extent practicable. Weather, illness, mission requirements and other factors may cause some variation in the proposed schedule.
3. Provide installation topographic maps and/or black and white copies of aerial photography, as needed, to plot research locations.
4. Make any available Geographic Information System (GIS) data available to the Cooperator for use in creating custom maps.

The Cooperator will:

1. The Cooperator shall schedule all activities associated with the Agreement at least three weeks in advance to allow for appropriate notification and approval on each installation.
2. The Cooperator shall be responsible for coordinating access to each installation with the SPOC.

## **O. SCHEDULE**

<b>Milestone</b>	<b>Completion Date</b>
Cooperative Agreement Award	CAA
Kick-off Meeting	CAA + 14 days
Wetland Grading	CAA + 6 months
Post-grading Monitoring	CAA + 18 months
Wetland Creation Complete	CAA + 29 months
Final Report	CAA + 30 months
Annual Monitoring Report – Year 1	CAA + 42 months
Annual Monitoring Report – Year 2	CAA + 54 months
Annual Monitoring Report – Year 3	CAA + 66 months
Annual Monitoring Report – Year 4	CAA + 78 months
Annual Monitoring Report – Year 5	CAA + 90 months

## **P. PAYMENTS**

1. The Cooperator shall request reimbursement on a monthly basis.
2. Advance payments may be requested by the Cooperator. Requests for advance payment shall be submitted on SF-270, "Request for Advance or Reimbursement." The form can be downloaded from the internet at <http://www.whitehouse.gov/omb/grants/sf270.pdf>.
3. The Cooperator shall maintain advances of Federal funds in an interest bearing account. The Cooperator shall remit, at least quarterly, to the Navy interest earned on advances. The Cooperator may keep interest amounts up to \$100 per year for administrative expenses. The Cooperator shall submit a SF-272 "Federal Cash Transactions Report" along with interest earned. The form can be downloaded from the internet at <http://www.whitehouse.gov/omb/grants/sf272.pdf>.

4. Partial payments equal to the amount of work accomplished may be made monthly from date of award. An amount not to exceed ten (10) percent of the total Agreement funds will be withheld until the final report, electronic data, and photographic information have been received (via the TPOC) and approved by the Contracting Officer.
5. Any requirement for the payment or obligation of funds, under the terms of the Agreement, shall be subject to the availability of appropriated funds, and no provision herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. §1341 *et seq.* Nothing in the Agreement shall be construed, as implying that Congress will, at a later time, appropriate funds sufficient to meet deficiencies.
6. The provisions of this Cooperative Agreement, including the requirement to remit interest earned on advances, shall be applied to subrecipients and subgrantees performing substantive work under the Cooperative Agreement. Subrecipients and subgrantees are defined below:
  - a. A Subrecipient is the legal entity to which a subaward is made and which is accountable to the recipient for the use of the funds provided.
  - b. A Subgrantee is the government or other legal entity to which a subgrant is awarded and which is accountable to the grantee for the use of the funds provided.
  - c. A subaward is an award of financial assistance in the form of money, or property in lieu of money, made under an award by a recipient to an eligible subrecipient or by a subrecipient to a lower tier subrecipient. The term includes financial assistance when provided by any legal agreement, even if the agreement is called a contract. Subawards are for the performance of substantive work under awards, and are distinct from contracts for procuring goods and services.
  - d. A subgrant is an award of financial assistance in the form of money, or property in lieu of money, made under a grant by a grantee to an eligible subgrantee. The term includes financial assistance when provided by any legal agreement, even if the agreement is called a contract. Subgrants are for the performance of substantive work under awards, and are distinct from contracts for procuring goods and services.

**Q. TERMINATION**

1. The Agreement may be terminated by the Government at any time without cause, for the convenience of the Government.
2. If the Agreement is terminated, the Cooperator shall not bill for work that has not been completed subsequent to the termination date of the Agreement.
3. In the event that personnel or funding used to fulfill obligations under this Agreement are not available from either party, termination or modification this Cooperative Agreement must be made within 30 days of written notification.

## **APPENDIX A: Geographic Information System (GIS) Deliverable Specifications:**

The NAVFAC Washington GeoReadiness Center (GRC) is the single, authoritative source and distribution point for all geospatial shore installation data within the Naval District Washington (NDW) region.

### **1. Government Source GIS Data:**

- a. The government shall provide a copy of any government-held GIS data required for the project to the contractor. All data shall be returned in the same format and structure unless the government specifies otherwise.
- b. A completed NAVFAC Washington GIS Data Release form is required for all data release.

### **2. Submittals, Government Review and Acceptance:**

- a. All submittals shall be reviewed for structure and adherence to the required standards by an NDW GeoReadiness Program GIS Analyst before acceptance.
  - i. Review for accuracy and completeness according to the scope of work is the responsibility of the Project Manager or other designated subject matter expert personnel. NDW GeoReadiness, as part of the NAVFAC Asset Management Business Line, is not responsible for the accuracy and completeness of data acquired by other NAVFAC Business Lines, Navy organizations and commands.
- b. The government shall have two weeks to assess the submittal; the contractor shall then have two weeks to make any corrections and submit the final deliverable.
- c. All source code (ex. Python scripts, html files) and map files (ESRI ArcGIS (mxd)) shall be provided to the government.
- d. Failure to adhere to any of the stated delivery specifications could result in rejection of deliverables and nonpayment.
- e. Contractors should, at a minimum, submit data and documentation samples at 25% and 75% project completion to avoid the rejection of final deliverables.

### **3. GIS Data Specifications:**

- a. **Data Structure:**
  - i. Unless specifically directed otherwise, all data shall be structured according to the current version of the Spatial Data Standards (SDSFIE) (4.x as of July 2019) in use by NAVFAC.
  - ii. The government shall provide a copy of the current data model implementation (specific GIS layers and any required associated tables) to the contractor.

- iii. **Data Format:** All data submittals shall be delivered in a version compatible with ESRI version 10.5. NAVFAC's GIS data is in **version 10.5 as of November 2019**.

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**b. Data Collection and Attribution:**

- i. The U. S. Navy Installation Geospatial Information and Services (IGI&S) GIS Data Collection Guide (DCG) provides the requirements for GIS data collection, extraction and attribution. The government shall provide a copy of the latest DCG to the contractor before GIS work begins.
- ii. As of November 2019, the DCG does not yet include Stormwater and several other types of GIS data. The government will provide the required direction for any data not covered in the DCG.
- iii. The contractor shall consult with the government GIS POC before populating attribute tables to ensure the results meet the scope requirements.
- iv. The contractor shall identify the classification, type, location, ID number, and any other necessary attributes (specified by the Government) for all new/updated/edited features.

**c. Required Standard Attributes, including Metadata\***

Refer to the DCG for the required attributes for each Feature Class.

This excerpt is typical for most, **see the DCG for complete list with definitions:**

- INSTALLATIONID
- FACILITYFK
- OWNER
- AREASIZE
- AREAUNIT
- DATERECORDED\*
- CREATOR\*
- DATECREATED\*
- COLLECTIONSOURCE\*
- LOCACCY\*
- EDITOR\*
- DATEEDITED\*

**d. Feature Class (Layer) Metadata:**

Populate these elements for each layer in the ArcCatalog Description tab:

- TITLE: Current SDS version layer name
- TAGS: ex. vegetation, hydrology, roads, etc.
- SUMMARY (PURPOSE): Briefly describe the purpose of the data.
- DESCRIPTION (ABSTRACT): SDS 4.x layer definition
- CREDITS:
  - Data Delivery Date
  - Contract #

- Task Order Title
- Company Name
- USE LIMITATIONS: Populate with *“For Official Use Only”*

#### **4. Quality Control and Quality Assurance:**

The contractor shall take all appropriate and needed QA/QC measures to ensure that data is complete, topologically correct, accurate, structured correctly, and formatted correctly per the scope of work and complete (to include):

- a. **\*\*All data shall be visually inspected by the contractor before submittal to the government.\*\***
- b. **The contractor shall add an attribute text field named “QA” to all GIS layer deliverables, and populate each with “Add”, “Modify”, or “Delete” as appropriate. This is necessary for the government to accurately and quickly evaluate the work.**
- c. The numbers of records for all joined tables shall match, or the specific unmatched records shall be identified and explained to the satisfaction of the government.
- d. **All domain constraints shall be adhered to, unless approved by the government, prior to submittal.**
- e. No erroneous overshoots, undershoots, dangles, intersections or slivers.
- f. All area type features shall be closed polygons.
- g. Line features shall be snapped together where appropriate to support networks. For example, do not break linear features for labeling or other aesthetic purposes.
- h. Lines shall be continuous and point features shall be digitized as points. For example, point features, such as manholes, shall not be drawn using only a circle (polygon) to represent its location.
- i. Digital representation of the common boundaries for all graphic features must be coincident, regardless of feature layer
- j. Geometric network connectivity shall be maintained for utility networks, where specified by the scope of work.

#### **5. Field Collection**

- a. Where field data collection is stipulated in the contract, the contractor shall utilize conventional and other methods, such as a total station, or Global Positioning System (GPS) in accordance with the applicable Geospatial Positioning Accuracy Standards published by the Federal Geographic Data Committee (FGDC).
- b. At a minimum, the contractor shall provide, resource grade GPS collection at an accuracy level of +/- < 1m and shall use differential correction to target accuracies of +/- .5 m.

- c. Where appropriate (as stipulated in the contract or as otherwise determined by the Government), the contractor shall use survey grade GPS, at an accuracy level of +/- 2 cm. Global Positioning System (GPS) data collection activities will be based on a post-processed environment using an accurately sighted base station. Base station files for post processing acquired locally (off-site CORS Continuous Operating Reference Station) will be verified for accuracy.
- d. GPS data on the location of utility lines and other features shall be captured at a minimum every 50ft and at each turn or bend in the line and processed as a line feature type. GPS data on the location of utility points and other features shall be captured at the centroid of the feature unless signal obstruction or access prohibits; otherwise points will be captured at a uniform distance and direction from the centroid and the offset captured in the metadata for that feature. Data on polygon features shall be collected at every vertex of the feature and processed as a polygon.
- e. All survey-grade data collected shall be provided to the Government in a digital format with an attached Survey Report identifying survey method, equipment list, calibration documentation, survey layout, description of control points, control diagrams, quality control report and field survey data.
- f. A digital Survey Control Database (consisting of a survey marker database and a survey traverse database) will be produced for all survey control points established under this contract, including the horizontal and vertical order and coordinate location of each point.
- g. Digitizing/Conversion: Where Digitizing/Conversion is stipulated in the contract, the contractor shall digitize/convert features from designated sources (including remotely sensed data, hardcopy scans and vector data) to support various GIS applications. Digitizing/conversion routines will insure that 90 percent of all features will measure within 0.01 inches when reproduced at the scale of original imagery or data source.

**6. CAD Format Deliverables:**

- a. CAD drawings may be accepted as GIS deliverables, but only when specified as such in the scope of work.
- b. All files must be accurately georeferenced and adhere to the requirements regarding the coordinate system, metadata, and the specified data Quality Control and Quality Assurance requirements.
- c. The government shall specify whether files are to adhere to either the SDSFIE or A/E/C CAD standard.

**Nothing Follows**