Information for a Complete Mitigation Bank Prospectus per CFR 332.8(d)(2)

The prospectus initiates the planning and review process by the Interagency Review Team (IRT) and must be sufficiently detailed to support informed comment from the public and IRT regarding the bank's potential to provide successful and sustainable compensatory mitigation projects. This information list is intended to provide bank sponsors, their agents, and other interested parties with a better understanding of the level of detail that is needed for each of the components for a complete prospectus, pursuant to the mitigation rule (332.8(d)(2)(i)-(vii)). Information provided in the prospectus and this initial evaluation process will serve as the basis for establishing the mitigation banking instrument.

While optional, submittal of a draft prospectus (33 CFR 332.8(d)(3)) is strongly recommended for IRT comment and consultation to identify potential issues needing to be addressed prior to the start of the formal prospectus review process.

BASIC INFORMATION
1. Proposed Mitigation Bank or Umbrella Bank Site Name: Carpenter Farms Umbrella Mitigation Bank (CFUMB) -- North Bank Site
2. Name of Sponsor: Chandler Van Voorhis Mailing Address: 4243 Jackson St. The Plains, VA 20198 Phone Number: 540-253-2504 Email Address: chandler@acre-investment.com
3. Name of Consultant (if different from sponsor): Ecosystem Planning and Restoration, LLC Mailing Address: 8808 Centre Park Dr Columbia, MD 21045 Phone Number: 443-979-7718 Email Address: rstarr@eprusa.net
4. Project Location (Lat/Long in decimal degrees): 39.1418, -75.8344
5. Type of Mitigation Bank: Wetland ☒ Private Commercial ☐ Public Commercial ☐ Combination Private/Public ☐ Single-Client ☐ Private Non-Profit
6. List of figures, maps, other attachments: See Prospectus Addendum 1
OBJECTIVES OF THE PROPOSED BANK
7. Describe the overall goals and objectives of the proposed mitigation bank: The overall goal of the CFUMB is to responsibly address over 100 years of anthropogenic impacts from land alteration and drainage on wetland, stream, and forested systems within its boundaries. The objectives of the North Bank Site are to restore naturally functioning ecosystems that include the restoration of wetlands and upland forests, as they existed prior to the significant land use changes and drainage alterations that started prior to the 1930's, or to the extent practical with current and future intended land use practices.
8. Aquatic Functions: Identify the aquatic functions to be restored/enhanced/established: The restoration/enhancement of mineral flat wetlands on the North Bank Site will improve water quality, restore natural hydrology, improve soil conditions, and reduce habitat fragmentation (both aquatic and terrestrial).
9. Describe how the work proposed above will result in an improvement in the aquatic functions listed:

The aquatic functions will be improved through the removal of agricultural fields and drainage ditches. This will allow water to flow naturally across the site. The restored hydrology will uplift soil conditions allowing for water to pond, seep, and surface were appropriate. These improved conditions will also create habitat for various species, adding to the number of wildlife corridors.

10. Total acreage of the proposed mitigation bank: 67.5

11. Describe how the proposed aquatic resource functions of the bank will address the functional needs of the watershed and/or ecoregion:
By removing agricultural fields from protection and restoring previously converted wetlands, the project is consistent with the Total Maximum Daily Load for nitrogen and phosphorus developed for the Upper Chester watershed as well as regional plans (e.g., Sassafras Watershed Mitigation Plan) that focus on nutrient source control. In addition, by permanently protecting existing forested wetlands and increasing wetland acreage in the watershed, the project serves to add to the surrounding MDNR Targeted Ecological Area and reduce habitat fragmentation.

12. In the table below, indicate the approximate quantity of wetlands (acres), open water (acres), rivers (linear feet/acres), and streams (linear feet/acres) proposed to be created, restored, enhanced, and/or preserved for purposes of providing compensatory mitigation. Indicate the waterbody type (emergent wetland, scrub/shrub wetland, forested wetland, perennial stream, intermittent stream, ephemeral stream, open water, other) or upland resources. For uplands, indicate if designated as an upland buffer.

Table 1: Proposed Mitigation by Aquatic Resource Type

Proposed Aquatic Resource Type/Upland Resources	Created	Restored	Enhanced	Protected
Forested Wetland (non-tidal)		30.8	11	
Upland Buffer (planted)	5.1			

13. In the table below, indicate the approximate total quantity of existing delineated wetlands (acres) and waterways (linear feet) located in the project area

Table 2: Existing Wetlands by Aquatic Resource Type

Existing Aquatic Resource Type	Linear Feet in Project Area	Acres in Project Area
Emergent wetland		0
Scrub/Shrub wetland		0
Forested wetland		5.06
Perennial stream		0
Intermittent stream		0
Ephemeral stream		0
Other:		0

ESTABLISHMENT AND OPERATION OF THE BANK

14. Baseline Conditions: Provide the following figures and maps in pdf format with the bank boundaries identified:
☒ A vicinity map
☒ A USGS 7.5' topographic map
☒ A current aerial photograph
☒ A soil survey map
☒ A map of the drainage area contributing to the bank, including the size in acres

☒ A map showing proposed bank location in relationship to USGS 8-digit HUC watershed
15. ☒ Proposed Conditions: Provide a conceptual mitigation development plan in pdf format showing all proposed mitigation type locations, existing wetlands and waterways, property boundaries, bank boundaries, boundaries of conservation easement, excluded areas (e.g., easements and rights-of-way, etc.), buffer widths, hydrological modifications, and acreage/linear footage of all proposed wetlands and waterways. Label all resources and features.
16. If applicable, describe the functional/conditional assessment methodology proposed to assess wetland and/or other aquatic resource restoration, creation, enhancement, and/or preservation activities: The MDWAM form was used to assess functions/conditions of the existing and previously converted aquatic resources and will be used to assess them post construction.
17. Describe any funding received or expected to be received for natural resources protection, restoration, acquisition, enhancement, or other purposes on all or a portion of the proposed bank property from federal or state agencies, grants, or nonprofits (e.g., funding source, amount received, purpose, number of acres affected by each purpose, etc.): N/A
PROPOSED SERVICE AREA(S)
18. Describe the proposed primary and secondary service areas: Primary: Chester-Sassafras (HUC 02060002) Secondary: Choptank (HUC 02060005)
19. Provide the basis of the service area(s) and rationale supporting its location and extent: The proposed secondary HUC-8 service areas are in the same HUC-6 watershed as the Central and Southern CFUMB Phases. The ecological similarities between the primary and secondary HUC-8 service areas, such as topography, soils, climate, vegetation, and aquatic resources described below, support their use as secondary service areas for the CFUMB. The proposed bank site will effectively compensate for adverse environmental impacts across the primary and secondary service areas.
20. ☒ Provide a map (8.5” by 11”) in pdf format with the bank location and its position within the limits of the proposed geographic service area(s).
GENERAL NEED AND TECHNICAL FEASIBILITY
21. Describe how the bank project aligns with existing watershed, estuary, or conservation plans and goals (e.g., http://watershedresourcesregistry.org). Include mapping in pdf format to support the basis for this alignment (e.g., green infrastructure, forest interior dwelling species habitat, priority watersheds or habitat for species of concern, etc.): The eastern shore of Maryland is rapidly developing, increasing the ecological degradation that is already prominent from farming. The CFUMB North Bank Site will reduce this fragmentation, assist in increasing valuable habitat areas, and improve overall water quality. See also #11.
22. General need for the type(s) and anticipated number of compensatory mitigation credits that are proposed to be generated by the proposed bank. Discuss past, current, or anticipated demand for proposed compensation: • Wetland Restoration (1:1 @ 90% success): Footprint – 30.8 ac; Credits – 26.7 ac. • Wetland Enhancement (4:1 @ 90% success): 11 ac; Credits – 2.5 ac. • Upland Buffer (1:1 @ 90% success): Footprint – 5.1 ac; Credits – 4.6 ac. Based on recent land development trends across the eastern shore, the land use surrounding the site will likely either continue to be used for agriculture or become developed. The Bank Consultant conducted an initial mitigation market need analysis and site assessment. The analysis concluded that there is a mitigation need and limited availability of mitigation

credits in the proposed service areas. The need for additional mitigation credits could significantly increase if a new Chesapeake Bay bridge is constructed. The mitigation needs for the bridge alone and likely future development that will result once the bridge is constructed, will be high.

23. Summarize the proposed work intended to accomplish site activities and address site impairments and its feasibility, including any alterations to hydrology, anticipated grading needs and proposed structures, soil amendments, plantings, proposed phasing of bank implementation, etc.:

- Plug and/or fil drainage ditches to restore wetland hydrology. Hydrologic controls are not anticipated to be needed to establish wetland hydrology.
- Regrade prior converted wetland agricultural fields to promote retention and attenuation of stormwater runoff and create varying wet and dry conditions.
- Establish a community of native trees, shrubs, and herbaceous species based on site conditions to create a mosaic of vegetation conditions.
- Control of invasive plant species, by herbicide and/or mechanical removal practices where needed. Emphasis will be placed on mechanical removal, when practical, to minimize herbicide use.
- Maintain and/or create a flood flow channel to avoid adjacent roadway increased flooding.
- Establish, at the minimum, a 75-foot vegetative buffer around the entire proposed Phase 1 area.
- Place large wood through the proposed area to increase habitat structure and conditions.

Work will not be phased.

PROPOSED OWNERSHIP ARRANGEMENTS & LONG-TERM MANAGEMENT STRATEGY

24. Describe whether the sponsor owns the land or is acquiring an interest in the proposed bank site (e.g., fee simple acquisition, mitigation easement, etc.):

The sponsor is acquiring an interest in the proposed bank site. The landowner is involved and supportive of the project.

25. Is the bank located on public lands? ☐ Yes ☒ No

26. ☒ Preliminary Title Report: Attach a current (dated within six months of submittal) preliminary title report identifying any easements, mortgages, liens, right of ways, or other encumbrances.

27. ☐ Attach a map in pdf format depicting the location of all easements and encumbrances in relation to the proposed bank boundary and all relevant property lines.

28. ☒ Provide a property assessment that summarizes and explains each recorded or unrecorded lien or encumbrance on, or interest in, the proposed bank property, including, without limitation, each exception listed in the preliminary title report:

29. ☒ Provide a written statement from the property owner that there are no easements, encumbrances, or other interests in the property, not previously disclosed to the Corps (e.g., leases, mechanic's liens that might not show up in the title report):

None.

30. Describe the manner in which each encumbrance may affect the operation or ecological value and services and long-term sustainability of the mitigation bank and how the conflict(s) are intended to be resolved: None.
31. Describe any prior permitting history for the bank site: None.
32. Identify the proposed form of site protection instrument (e.g., conservation easement, declaration of restrictive covenants, etc.) that would be utilized for the bank site and the likely responsible parties: Each of the proposed mitigation banking sites included under the Carpenter Farms Umbrella Mitigation Bank will be permanently protected by site-specific conservation easement(s).
33. Identify the proposed long-term ownership and long-term management strategy, including long term financial mechanism(s): Predicted costs of long-term management activities for the mitigation bank will be estimated by the Bank Sponsor and a non-wasting endowment fund will be established to support these activities, including plans for that fund to be fully funded at least one year prior to final credit release for each mitigation bank site. The Bank Sponsor will be responsible for management of the bank during the required monitoring period and the long-term management steward and easement holder will be determined during the development of the MBI.
34. Identify the likely party that would be responsible for long-term management: TBD.
SPONSOR QUALIFICATIONS
35. Describe the qualifications of the Sponsor to successfully complete the type(s) of mitigation project proposed: ACRE Investment Management, LLC (Bank Sponsor) operates GreenTrees, the leading carbon reforestation project in the United States, and Conservation+, one of the largest Nutrient Mitigation Bank operations in the Commonwealth of Virginia. To date, GreenTrees has over 136,000 acres of bottomland hardwood reforestation, comprised of 600+ landowners, ranging from 7 acres to 3,500 acres in size. GreenTrees has been issued approximately 6.3m mtCO2e. These volumes have been verified by independent third-party verifiers approved under American Carbon Registry.
36. Provide list of prior mitigation or restoration experience (including design, implementation, and monitoring): Ecosystem Planning and Restoration (EPR) is the Bank Consultant providing design, implementation, and monitoring services for the CFUMB North Bank Site. EPR is a leading provider of environmental restoration services within the Eastern United States. EPR has extensive experience in the designing, permitting, and implementing stream and wetland restoration projects, including full delivery and mitigation bank projects. In the firms' collective personnel experience, we have initiated over 500 projects in the past eight years, restoring hundreds of miles of stream and thousands of acres of wetlands, and implemented numerous water quality and stormwater projects in twelve different states, representing a wide range of conditions and challenges. Detailed staff resumes and specific project experience can be provided upon request of the IRT.
ECOLOGICAL SUITABILITY OF THE SITE

37. Describe the ecological suitability of the bank site, including the chemical, physical, and biological characteristics, to support the proposed types of mitigation to be implemented and the associated aquatic functions:
    - The majority of the North Bank Site (83%) is underlain by mapped hydric soils, including those areas used for row crops (e.g., hay, soybeans) over the last century. Current hand-augured soil borings throughout the fields found that hydric soils are still present in these areas, even as hydrology has been severely impacted by deep ditches on-site.
    - The upstream drainage area is small (0.27 sq. mi.), so mineral flat/headwater wetlands fed primarily by precipitation would likely have been the aquatic resource present before conversion.
    - No federally threatened or endangered species will be impacted by the project; however, wetland restoration activities will enhance habitat for plants and wildlife and reduce habitat fragmentation.
    - No large-scale development is proposed near the Bank Site.

38. Summarize current conditions of the bank site and surroundings, including land use, vegetation, hydrology, and soils (e.g., forested, row crops, pasture, ditched and drained wetlands, previously channelized stream, etc.). Photos should be provided:
    The Bank Site is a mix of agricultural fields and early to mid-stage successional forest. It is likely that prior converted wetlands were found in some of these fields; however, natural hydrology on-site has been impacted by an extensive ditch network to support agricultural activities. Surrounding parcels are used for crops or low-density residential areas, with forested patches interspersed. Photos can be found in Addendum 1 of the Prospectus.

39. Summarize past and recent land uses of the bank site and adjacent properties:
    Current land use on the Bank Site is as described in #38; the past land use is similar to what exists today, as the Site has been used for agriculture since at least the 1930's. Adjacent current and past land uses are similar to those on the Bank Site. There is minimal urban development in the watershed as a whole.

40. Identify any proposed development adjacent to the bank site:
    None known.

41. Describe the Bank site's location relative to other protected lands and connection to existing aquatic and terrestrial resources:
    The North Bank Site drains northwest into a significant ditch system, then into an unnamed tributary to Red Lion Branch, and ultimately to the Chester River. While not directly connected to other protected lands, the existing forested area in the southeast of the Bank Site is part of a Targeted Ecological Area (TEA) as determined by MDNR and is considered Tier 3 (highly significant for biodiversity conservation) by the MD Biodiversity Conservation Network (BioNet). The Bank Site is also connected to the surrounding TEA network and is contiguous to other Tier 3 lands as well as those considered Tier 4 (moderately significant for biodiversity conservation) and Tier 5 (significant for biodiversity conservation).

42. Describe any potential sources of soil and water chemical contamination of the proposed wetlands and/or other aquatic resources within the bank site from adjacent or upstream sources (https://www.epa.gov/enviroatlas/enviroatlas-interactive-map and https://mywaterway.epa.gov/ for 303d list, brownfields, point source discharges, etc.):
    Subsurface nitrogen and phosphorus are present in the soils from surrounding agriculture through surface runoff and tile drains.

43. Describe any and all existing and known proposed private or commercial airports located or proposed to be located within 5 miles of the proposed bank site. This information is required in order to comply with the FAA Advisory Circular (AC) 150/5200-33C, Hazardous Wildlife Attractants on or Near Airports, which can be found on the FAA's website at: https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5200-33C.pdf: Two residential airports are within 5 miles of the site. The Whalen field airport (MD25) and the Flying Acres airport (MD70). Both are private, grass strip airfields that are unregulated by the FAA.
44. **STREAM MITIGATION PROJECTS:** For stream compensatory mitigation projects, the following relevant information should also be included.
44a) Identify the percentage of impervious cover in the HUC12 watershed:
44b) Identify any stream barriers to aquatic movement between the mitigation site and large downstream waters (i.e., having at least 20 square miles in drainage area or tidal waters):
44c) Describe any noticeable sheens, odors, unusual color, or excessive algal blooms observed in the streams at the proposed bank site. If applicable, provide a map in pdf format showing those reach locations and extent of the observed impairment:
44d) Describe any topographic or infrastructure constraints limiting stream design options or increasing failure risk (consider both stream and stream valley):
44d) Describe any stream mitigation prioritization model that was used and relevant score and include relevant mapping:
45. **FISH PASSAGE MITIGATION PROJECTS:** For fish passage mitigation projects, the following relevant information should also be included.
45a) Identify the individual barrier prioritization tier scores for anadromous fish and resident fish in the Chesapeake Bay watershed (https://freshwaternetwork.org/chesapeake/):
45b) Sediment management: Describe proposed sediment management plans, anticipated particle sizes, potential accumulated pollutants based on past upstream land uses and discharges, and estimated volumes of sediment removal and sediment release:
ASSURANCE OF SUFFICIENT WATER RIGHTS
46. Describe how the existing water rights and/or hydrologic influences on the bank site are sufficient to support the long-term sustainability of the proposed mitigation bank site: Adjacent surface water resources that flow onto the project site come primarily through precipitation runoff from the surrounding roadways and upstream stream/ditch systems. The connection with these resources will be maintained with the development of the Bank Site.
47. Describe the hydrologic source(s) and losses (precipitation, surface runoff, groundwater, stream, tidal, etc.) for the proposed bank:

Water sources to the site include precipitation, groundwater, surface flows, and upstream ditch systems. Losses consist of lowering water table based on season, evaporation, evapotranspiration, and off-property ditch and surface runoff flows.
48. Describe the hydroperiod (seasonal/continuous depth, duration, and timing of inundation and/or saturation) for the bank site: Hydroperiods proposed throughout the wetland are intended to vary, yielding maximum habitat diversity. The hydroperiod must, at a minimum, meet wetland delineative criteria (5% of the growing season) to be deemed jurisdictional. However, the hydroperiod of an existing reference wetland will be used as a performance standard for the proposed Bank Site (wells placed in April 2023).
49. Describe any existing hydrologic disturbances or alterations on and adjacent to the bank site, including those the Sponsor may not be able to manage or control: Drainage ditching within the project boundaries is greatly affecting the site's ability to function. However, there are no hydrologic disturbances outside of the Sponsor's control on the Bank Site.
50. Identify any temporary or long-term structural management requirements (e.g., levees, weirs, culverts, etc.) needed to assure hydrologic/vegetative restoration: None.
ADDITIONAL INFORMATION (Provide as separate attachments)
51. ☒ Provide a letter from the property owner indicating their interest in developing a mitigation bank and allowing access to the bank site for the sponsor and IRT agencies.
52. ☒ List of adjacent property owners, local post office, local newspaper, and appropriate local officials (name and mailing address) for public notice mailing.
53. ☒ Agency Coordination: If available, attach any reports and/or correspondence regarding historic properties, threatened or endangered species, essential fish habitat, and state environmental resources.
54. ☒ Provide contact information for property owner (name, address, phone, email).
MARYLAND-SPECIFIC COMPENSATORY MITIGATION BANKS
55. ☒ Attach a Maryland Department of the Environment mitigation bank application. This application can be found on MDE Wetlands and Waterways Program website: https://mde.maryland.gov/programs/water/WetlandsandWaterways/AboutWetlands/Documents/MDE-mitigationbank-application-with-instructions-form.pdf