



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Ecological Services
6669 Short Lane
Gloucester, Virginia 23061

January 3, 2014

Mr. William T. Walker
Chief, Regulatory Branch
Norfolk District, Corps of Engineers
803 Front Street
Norfolk, VA 23510-1096

Attn: Robert Cole, Regulatory Branch

Re: Peacock Holdings, LLC Shoreline
Stabilization, Northampton County,
VA, Permit NAO-2009-00115/13-
V1222, Project # 2014-F-0209

Dear Mr. Walker:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the referenced project and its effects on the federally listed threatened Northeastern beach tiger beetle (*Cicindela dorsalis dorsalis*) (NBTB) in accordance with section 7 of the Endangered Species Act (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA). Your August 15, 2013 request for formal consultation was received on August 15, 2013.

This biological opinion is based on information provided in the May 29, 2013 project proposal, telephone conversations, field investigations, a July 25, 2013 site visit, and other sources of information. A complete administrative record of this consultation is on file in this office.

CONSULTATION HISTORY

- 04-22-13 The Service received a phone call from the U.S. Army Corps of Engineers (Corps) asking if we would support an application to repair the stone revetment fronting the Aqua Restaurant in the Town of Cape Charles.
- 04-25-13 The Service contacted the Corps and the applicant separately to discuss the proposed project. We explained that we would support a revetment project that included breakwaters with beach augmentation.

- 05-02-13 The Service received a phone call from the Town of Cape Charles planning office regarding an application to repair the revetment. We explained why we could not support the project as proposed.
- 05-29-13 The Service received a project review package from the Corps for a proposed project from Peacock Holdings, LLC to repair the existing revetment and construct four breakwaters with beach augmentation.
- 05-29-13 The Service emailed the Corps confirming receipt of the project review package.
- 07-25-13 The Service visited the site with the Corps, landowner, and Town of Cape Charles representatives.
- 08-15-13 The Service received the Corps' request to initiate formal consultation.
- 11-08-13 The Service sent a letter to the Corps acknowledging initiation of formal consultation.

BIOLOGICAL OPINION

DESCRIPTION OF PROPOSED ACTION

The project site is located along a section of shoreline that forms the southern side of the mouth of Kings Creek, Parcel # 83A1-14-MV1 and 83A1-14-MV2, Bay Creek Marina, Cape Charles, Northampton County, VA (Figure 1). The area supports a restaurant, shops, and marina. The proposed action is the issuance of a Corps permit for the repair of a 300 foot (ft) long stone revetment (Figures 2-4) and construction of four stone breakwaters (200 ft by 33 ft, with 50 ft gaps between structures) with beach augmentation (Figures 5-6). The breakwaters will tie into existing breakwaters to the south. The applicant plans to construct three breakwaters initially and assess the site one year later to determine if the fourth breakwater (northernmost structure) is needed.

Approximately 63,900 ft² of subaqueous bottom will be covered by the four breakwaters and sand placed (approximately 16,200 cubic yards of beach quality sand) for beach augmentation. When completed, the project will protect 135,128 ft² of non-vegetated wetlands and dunes.

Access to the beach will be from a single point adjacent to the southern end of the project site. The equipment will traverse the project area to place sand, construct access paths for each breakwater, off-load rock to the site and move it for construction of each breakwater, and grade sand placed for beach nourishment.

The Service assisted the applicant with developing construction methods and project conditions to minimize impacts to NBTBs. These construction methods and project conditions include:

1. No construction, earth-moving, or placement of materials or equipment on the beach between June 1 and September 15 of any year.
2. No placement and operation of heavy equipment on the beach area for the purpose of breakwater maintenance or sand replenishment between June 1 and September 15 of any year.
3. No refueling of equipment or vehicles on the beach.
4. No use of pesticides on the beach.
5. Use of appropriate sand for beach nourishment activities. Beach quality sand (D_{50} of 0.4-0.7 millimeter grain size with no high clay/organics) will be utilized.

Additionally, the applicant agreed to notify the Service before initiation of construction and upon completion of the project.

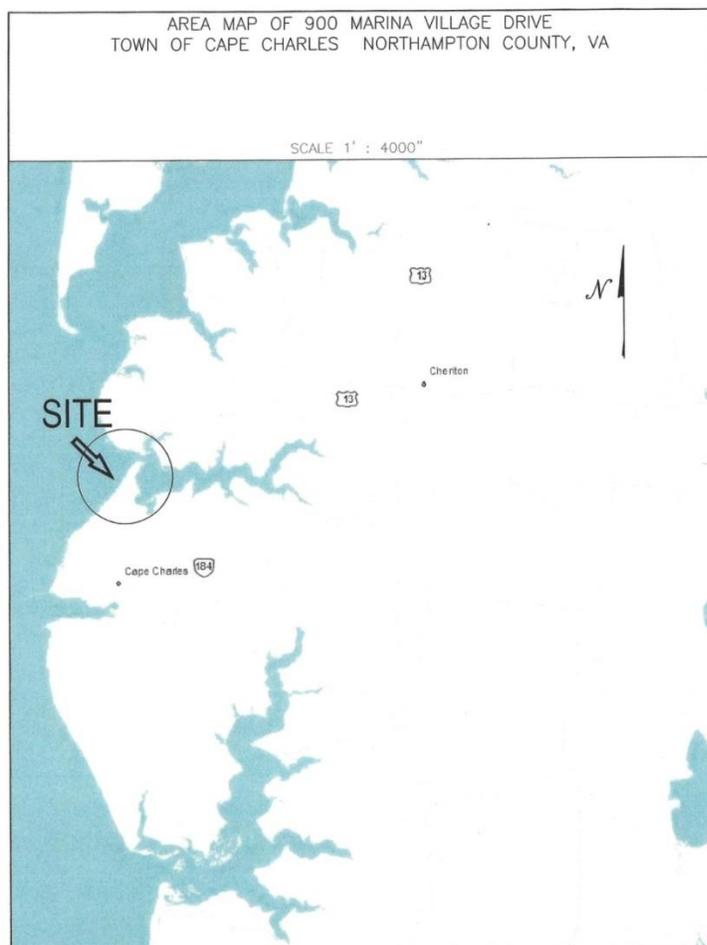


Figure 1. Peacock Holdings, LLC breakwater project, Northampton County, VA.

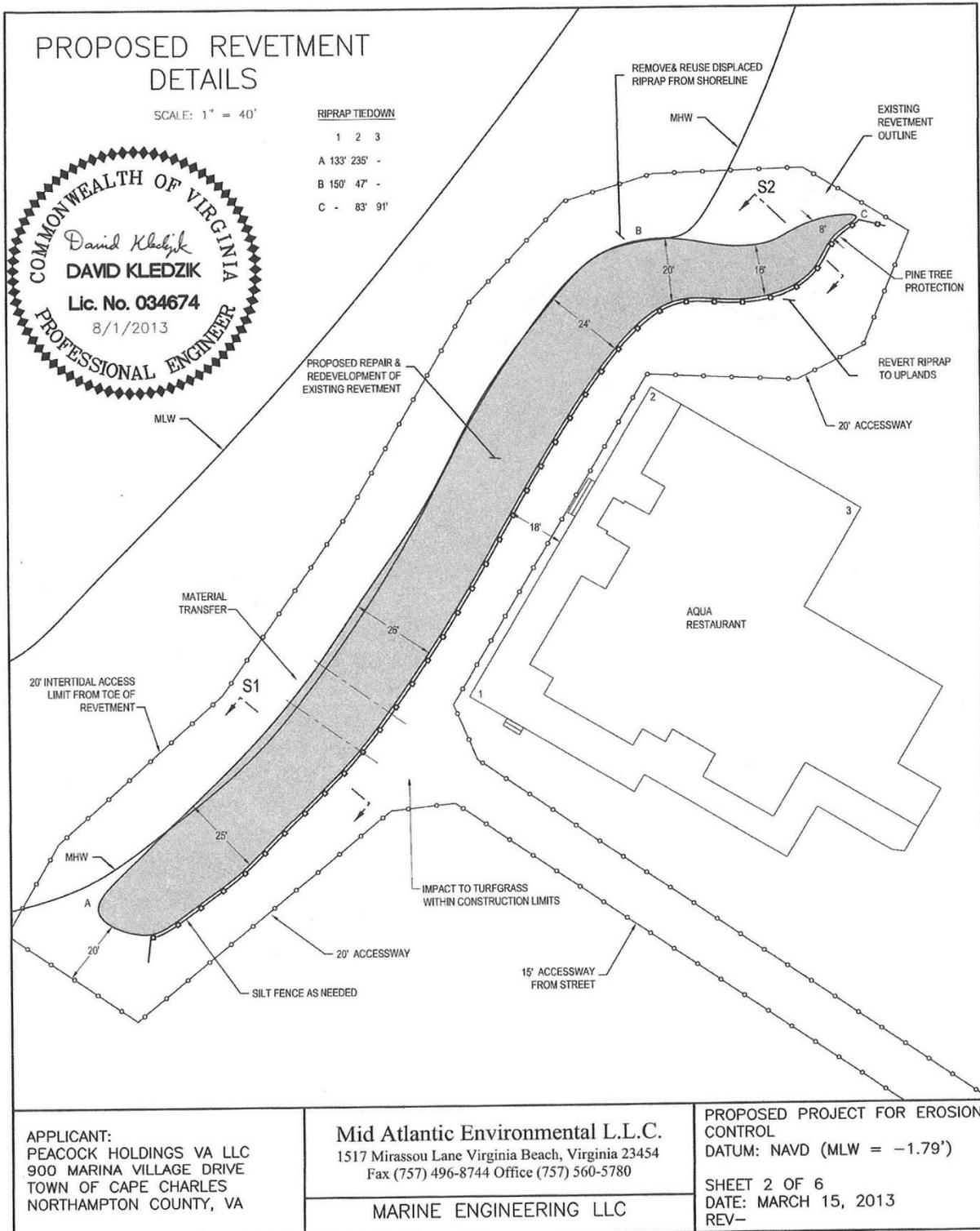


Figure 2. Revetment design, Peacock Holdings, LLC shoreline stabilization project, Northampton County, VA.

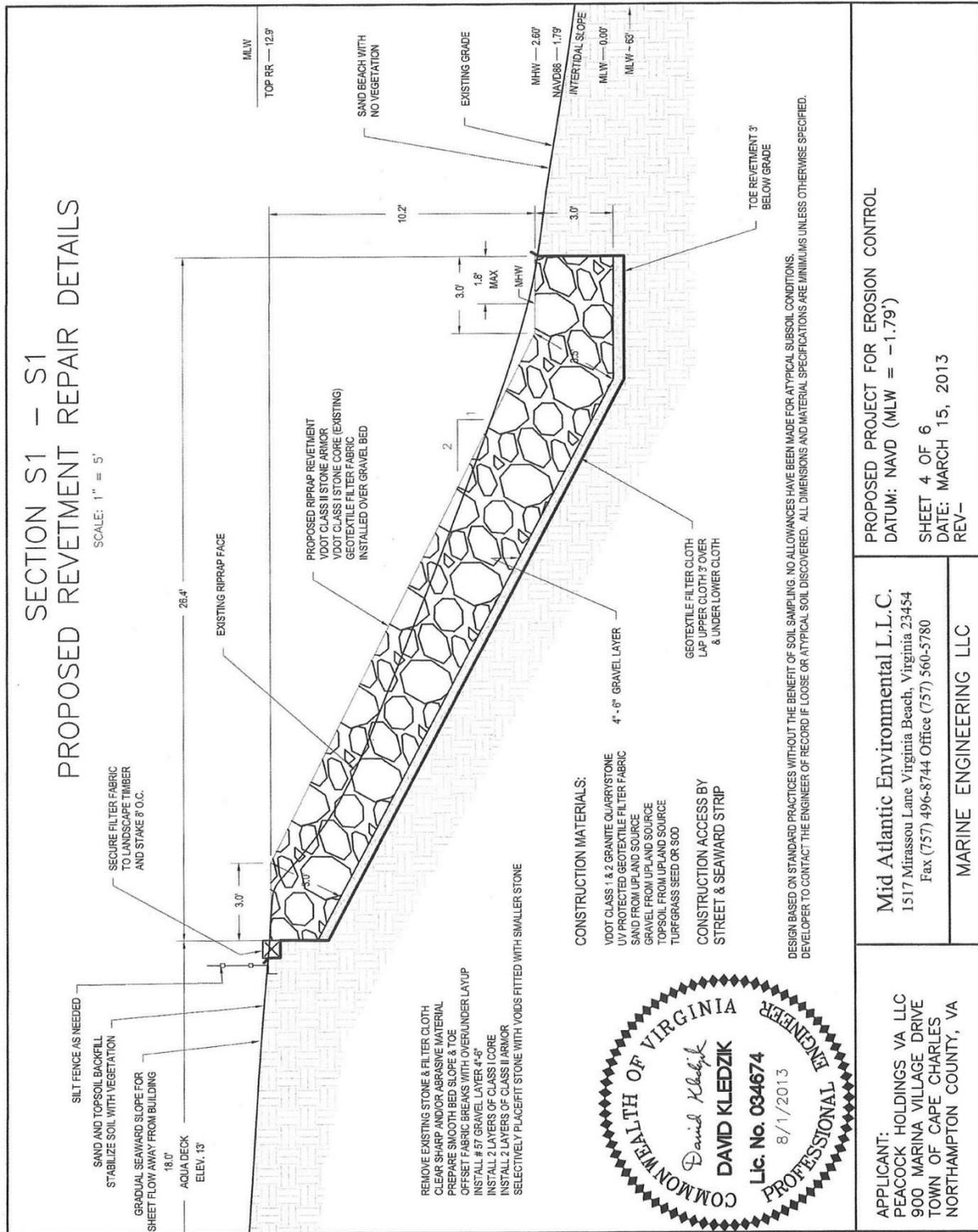


Figure 3. Retevment design, Peacock Holdings, LLC shoreline stabilization project, Northampton County, VA.

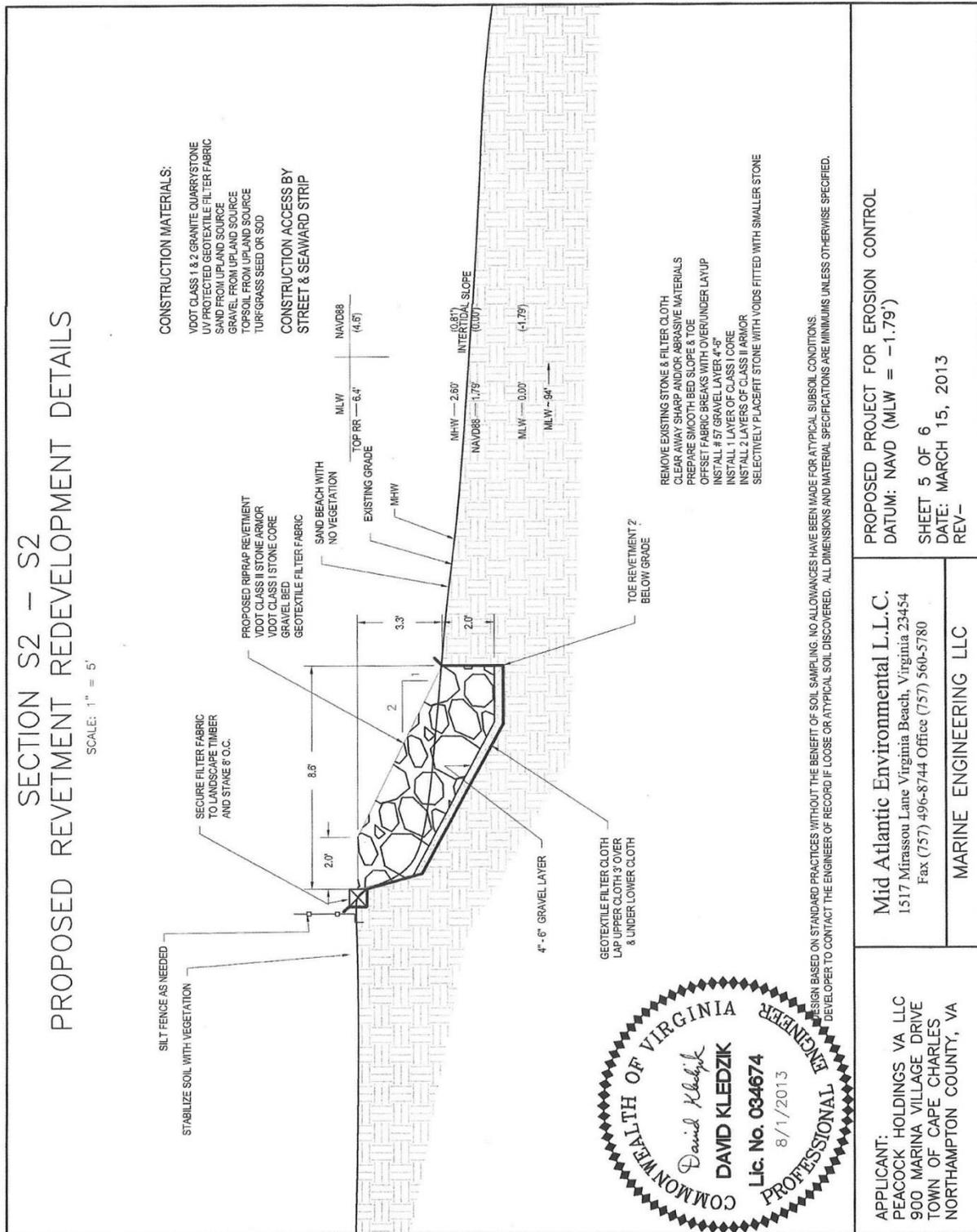


Figure 4. Revetment design, Peacock Holdings, LLC shoreline stabilization project, Northampton County, VA.

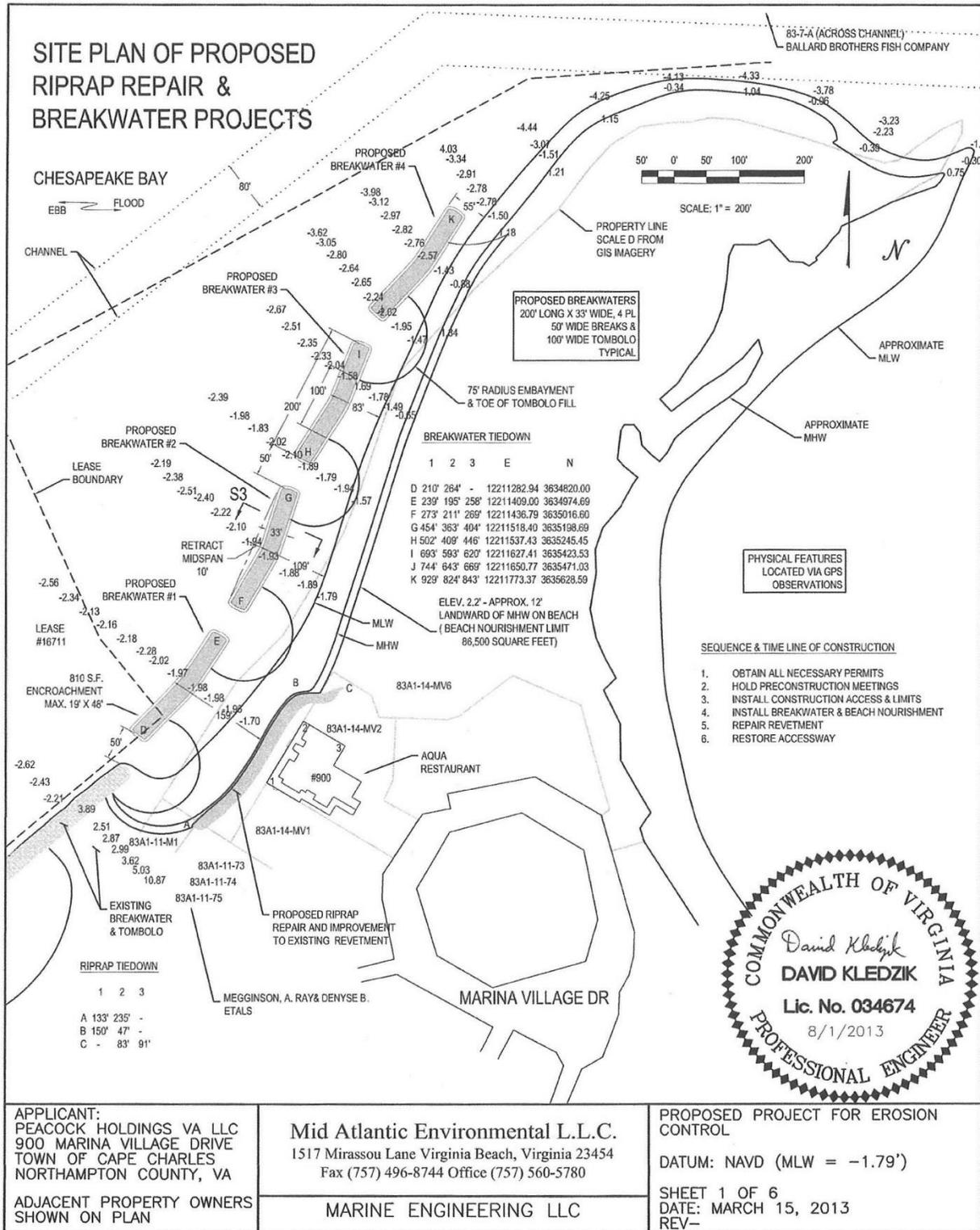


Figure 5. Breakwaters design, Peacock Holdings, LLC shoreline stabilization project, Northampton County, VA.

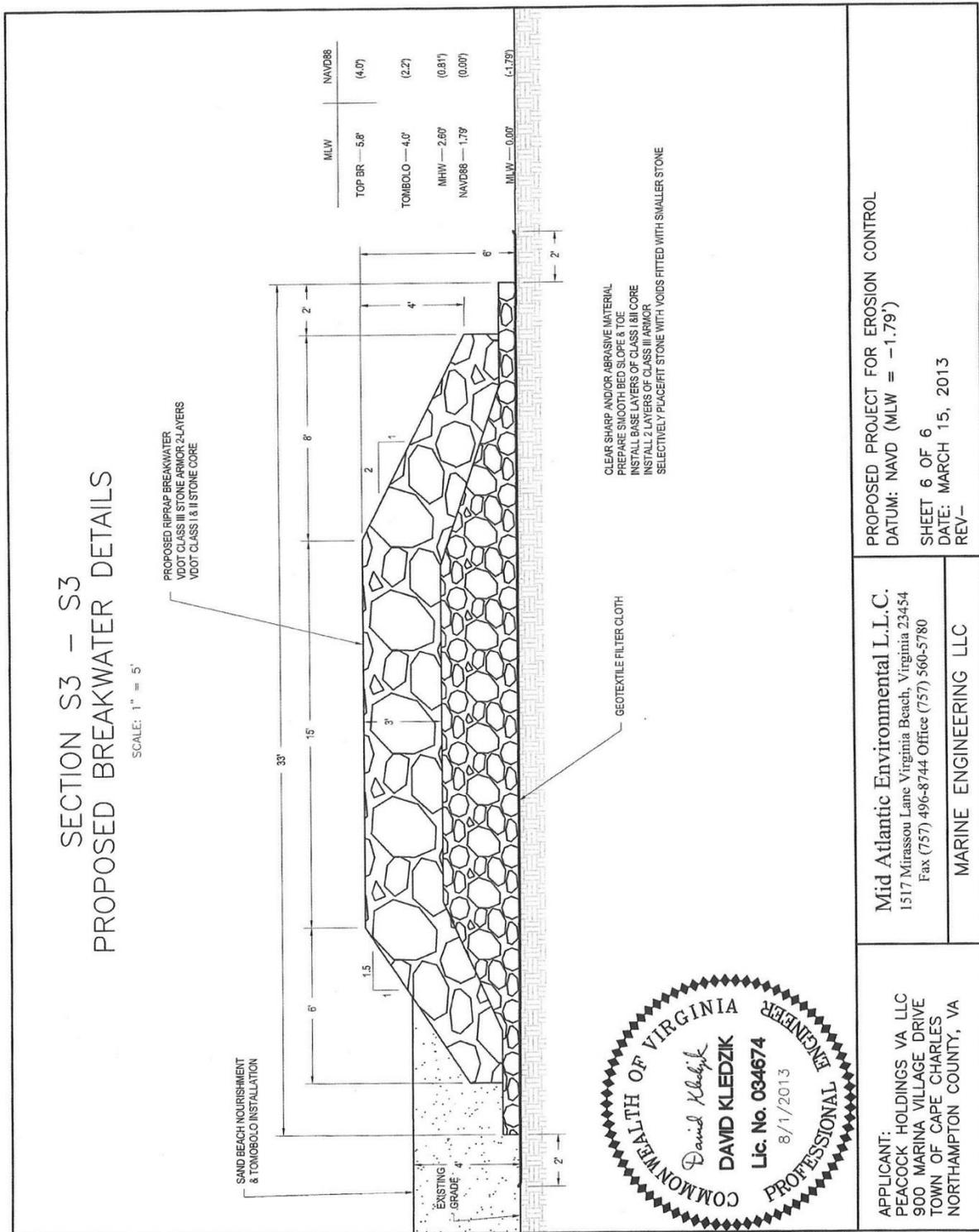


Figure 6. Breakwaters design, Peacock Holdings, LLC shoreline stabilization project, Northampton County, VA.

Action Area

The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. The Service has determined that the action area for this project consists of:

1. Approximately 63,900 ft² of subaqueous bottom covered by the four breakwater structures and beach augmentation.
2. Approximately 58,600 ft² of subaqueous bottom impacted through siltation/turbidity as the breakwater structures and beach augmentation are put in place.
3. The existing beach and dune area (approximately 50,000 ft²) traversed by equipment to construct the project.

The total size of the action area is 172,500 ft² (Figure 7).



Figure 7. Action area, Peacock Holdings, LLC shoreline stabilization project, Northampton County, VA.

STATUS OF THE SPECIES AND CRITICAL HABITAT RANGEWIDE

The species description, life history, population dynamics, status, and distribution and critical habitat description, if applicable, are at: Stamatov 1972; Rosen 1980; Knisley 1987, 1991, 1997a, b, c, 2001, 2002, 2005a, b, c, d, 2009, 2012; Knisley et al. 1987, 2001; Knisley and Hill 1989, 1990, 1998, 1999; Vogler et al. 1993; Blair et al. 1994; Hill and Knisley 1994, 1995; Service 1994, 2005, 2007, 2008, 2009; Vogler and DeSalle 1994; Vogler and Goldstein 1997; U.S. Geological Survey 1998; Nothnagle 2001; Gowan and Knisley 2001; Drummond 2002; Fenster et al. 2006; Pearson et al. 2006; Davis 2007; National Park Service 2007; and Kapitulik 2011.

ENVIRONMENTAL BASELINE

Status of the Species/Critical Habitat Within the Action Area - The action area is within the section of shoreline referenced by the Service as the Kings Creek NBTB site. The 1999 NBTB survey documented 176 adult NBTBs (Knisley and Hill 1999). Adult NBTB numbers increased in 2002 to 1,247 (Knisley 2002) and decreased to 751 in 2005 (Knisley 2005a). The most recent survey conducted in 2009 documented 531 adult NBTBs (Knisley 2009).

The action area contains 50,000 ft² of adult NBTB habitat. The presence of larval NBTBs is assumed by the presence of adult NBTBs and on site observations made by the Service (M. Drummond, Service, pers. obs. July 25, 2013) that the existing shoreline supports larval NBTB habitat. The southernmost end of the shoreline within the action area does not support larval habitat due to erosion caused by the existing revetment. The section of shoreline north of the revetment supports 25,000 ft² of larval NBTB habitat. The effects of Hurricane Sandy in 2012 on adult and larval NBTBs at this site are unknown.

Factors Affecting Species Environment Within the Action Area – In 2009 the existing stone revetment was permitted by the Corps without consulting the Service pursuant to the ESA and was subsequently constructed. The revetment failed due to use of undersized stone and there is no longer a sandy beach fronting the structure that supports larval or adult NBTB habitat. The property was foreclosed on in 2012 and sold to Peacock Holdings, LLC. The changes in land ownership have played a part in how the shoreline has been managed both for NBTB and the human infrastructure backing the shoreline. Peacock Holdings, LLC approached the Corps and Service about repairing the existing revetment and constructing breakwaters with beach augmentation to better stabilize the shoreline and improve NBTB habitat.

The shoreline in the action area is owned by a single property owner, and due to restrictions associated with the Chesapeake Bay Preservation Act, the peninsula north of the restaurant and shops is undevelopable. As such, future use of this shoreline will be limited to low impact human activities such as foot traffic, nature walks, sun-bathing, fishing, and swimming access. These types of activities pose minimal threat to the NBTB.

The Kings Creek site is 20 miles from the mouth of the Chesapeake Bay. The mouth of the Chesapeake Bay is experiencing a sea level rise of 0.16 inches/year, a rate higher than the

worldwide average (U.S. Geological Survey 1998). A data analysis collected from tide stations from the last 75 years supports earlier estimates of a constant rate of sea level rise of 0.17 inches/year at Norfolk, VA which will result in an increase of 0.8 ft in mean sea level by 2050 (Boon 2012). Increased sea level is changing the dynamics that maintain beach habitats, including increased shoreline erosion rates in some areas, and changes in sand deposition (U.S. Geological Survey 1998). Field observations from Service personnel indicate that increased sea level rise is impacting NBTB sites. A number of sites are under water or have eroded to the back marsh, resulting in a permanent loss of that site.

EFFECTS OF THE ACTION

Direct Effects – Because no project-related actions will occur on the beach during NBTB breeding and egg-laying, no direct effects to adult NBTBs are expected.

The amount of larval NBTB habitat impacted by construction of the three breakwaters will be approximately 22,000 ft². Larval NBTBs will be impacted from placement of materials, use of equipment, and construction-related foot traffic, resulting in injury or death. Larvae not killed outright may be prevented from feeding due to their sensitivity to vibrations, movements, and shadows, possibly resulting in injury or death.

If a fourth breakwater is constructed one year later, the equipment, materials, and personnel will traverse the newly created larval NBTB habitat to access the northernmost breakwater site. As a result, an additional 6,250 ft² of larval NBTB habitat will be impacted from placement of materials, use of equipment, and construction-related foot traffic, resulting in larvae injury or death. Larvae not killed outright may be prevented from feeding due to their sensitivity to vibrations, movements, and shadows, possibly resulting in injury or death.

If all 4 breakwaters are constructed, the total amount of larval NBTB habitat impacted will be 28,250 ft².

Indirect Effects – Indirect effects are defined as those that are caused by the proposed action and are later in time, but still are reasonably certain to occur (50 CFR 402.02). Changes in sand movement and beach profile may occur following breakwater construction as the beach equilibrates. Since the action area will be contoured during beach nourishment, the severity of change that may occur will be reduced and the effects are expected to be minor and temporary. Although changes in sand movement and beach profile will affect the location, amount, and suitability of adult NBTB habitat, the Service anticipates that any affects to adult NBTBs will be insignificant and discountable given that the changes will occur outside the time of year restrictions put in place to protect adult NBTBs. There will be a shift in the areas available for use by larval NBTBs, but any affects to larval NBTBs not directly impacted by the construction activities will be insignificant and discountable as construction of the breakwaters will provide future protection of larval habitat and result in an increase in the amount of larval habitat available.

Interrelated and Interdependent Actions - An interrelated activity is an activity that is part of the

proposed action and depends on the proposed action for its justification. An interdependent activity is an activity that has no independent utility apart from the action under consultation. The Service is not aware of activities interrelated to or interdependent with the proposed action at this time.

Beneficial Actions – Construction of the breakwaters with beach nourishment will improve the stability of the beach and increase the extent of suitable NBTB habitat. Currently within the action area there is 50,000 ft² of adult NBTB habitat. When completed, the proposed three breakwaters with beach augmentation will increase adult NBTB habitat by 10,000 ft², resulting in a total of 60,000 ft² of adult NBTB habitat. If the fourth breakwater with beach augmentation is constructed, the amount of adult NBTB habitat will increase by an additional 1,250 ft², resulting in a total of 61,250 ft² of adult NBTB habitat.

Currently within the action area there is 25,000 ft² of larval habitat. Constructing three breakwaters with beach augmentation will provide an increase of 17,904 ft² of larval NBTB habitat, resulting in a total of 42,904 ft² of larval habitat. If the fourth breakwater is constructed, an additional 1,250 ft² of larval NBTB habitat will be created, resulting in a total 44,154 ft² larval NBTB habitat.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA. The Service is not aware of any future State, tribal, local, or private actions within the action area at this time.

CONCLUSION

While some loss of larval NBTB habitat will occur during project construction, the overall magnitude and severity of effects to NBTBs from the proposed action are anticipated to be minor since the majority of effects are short-term and temporary and the area affected by the project represents a small fraction of NBTB's entire range. The project will result in an increase in adult and larval NBTB habitat. Sand placement will speed the formation of tombolos between the shoreline and the breakwaters, and will result in the creation of a greater length of sandy shoreline than is present naturally. The sand grain quality for the project is within the parameters of sand grain size required by NBTBs, so repopulation of the nourished area by adults is expected to occur the first year after construction. The beaches just to the north and south of the action area will serve as the source population for recolonization of the action area.

After reviewing the current status of NBTB, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the issuance of a Corps permit, as proposed, is not likely to jeopardize the continued existence of the NBTB. No critical habitat has been designated for this species; therefore, none will be affected.

INCIDENTAL TAKE STATEMENT

Sections 9 of the ESA and Federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns, which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are nondiscretionary, and must be undertaken by the Corps so that they become binding conditions of any grant or permit issued to Peacock Holdings, LLC, as appropriate, for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps (1) fails to assume and implement the terms and conditions or (2) fails to require Peacock Holdings, LLC to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the Corps must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR 402.14(i)(3)].

AMOUNT OR EXTENT OF TAKE ANTICIPATED

The Service anticipates incidental take of NBTB will be difficult to detect for the following reasons: coloring and small body size, tendency of larvae to remain in burrows beneath the surface of the sand, and finding a dead or impaired specimen is unlikely. However, the following level of take of this species can be anticipated by the areal extent of larval habitat affected.

During installation of the first three breakwaters, the Service anticipates incidental take of all larval NBTBs within the 22,000 ft² of larval habitat present from excavation, placement of materials and/or equipment, and construction-related foot traffic. This take will be in the form of harm, harassment, or kill.

During installation of the fourth breakwater, the Service anticipates incidental take of all larval NBTBs within 6,250 ft² of larval habitat from excavation, placement of materials and/or equipment, and construction-related foot traffic. This take will be in the form of harm, harassment, or kill.

EFFECT OF THE TAKE

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of NBTB:

- Ensure construction is conducted in a manner that minimizes disturbance to NBTBs.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the ESA, the Corps must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are nondiscretionary.

1. No ground disturbance caused by construction-related foot traffic, equipment, or materials on the beach outside of the action area.
2. Analyze every 1,000 cubic yards of sand to ensure the material is 0.4-0.7 millimeters mean sand grain size.
3. Notify the Service before initiation and upon completion of construction of the fourth breakwater with beach augmentation.
4. Prior to initiating construction of fourth breakwater, coordinate with the Service to establish and mark a work corridor. The 30 ft wide work corridor will be established just below the dune line. All equipment, materials, and personnel will remain within this work corridor.
5. Fuel, oil, and hydraulic fluids for equipment used will not be stored within 100 ft of any waterbody or wetland. Refueling of mobile equipment/vehicles will not occur within 100 ft of any waterbody or wetland (includes the beach area which is classified as a non-vegetated wetlands). On-site personnel will select appropriate sites for these activities and subsequently use best management practices, secondary containment measures, or other standard spill prevention and countermeasures to manage the activity to prevent these fluids from entering the Chesapeake Bay.
6. Any small gasoline powered equipment, such as pumps and generators, and fuel tanks must be entirely enclosed or placed within a secondary containment structure that is large enough to completely contain all materials should a spill, leak, or overflow occur. Any

spills of motor oil, hydraulic fluid, coolant, or similar fluids, not contained before entry into the action area, must be reported to this office at the contact number/email provided below and to the National Response Center (800-424-8802) immediately.

7. Care must be taken in handling any dead specimens of proposed or listed species to preserve biological material in the best possible state. In conjunction with the preservation of any dead specimens, the finder has the responsibility to ensure that evidence intrinsic to determining the cause of death of the specimen is not unnecessarily disturbed. The finding of dead specimens does not imply enforcement proceedings pursuant to the ESA. The reporting of dead specimens is required to enable the Service to determine if take is reached or exceeded and to ensure that the terms and conditions are appropriate and effective. Upon locating a dead specimen, notify the Service's Virginia Law Enforcement Office at 804-771-2883 and the Service's Virginia Field Office at 804-693-6694.

The Service believes that no more than 28,250 ft² of larval NBTB habitat will be incidentally taken as a result of the proposed action. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

- We recommend the Corps require the applicant to construct all four breakwaters at the same time to decrease the amount of larval NBTB incidental take anticipated by equipment, materials, and personnel traversing the beach a second time for construction of the fourth breakwater.
- We recommend the Corps establish a process to mitigate for habitat loss to shoreline projects. This could include a means to establish conservation easements for the protection of the NBTB and its habitat, restoration of beach habitat in areas where habitat has been altered significantly, or other appropriate measures. This would contribute to recovery efforts for the NBTB by formally protecting sites through conservation easements or natural areas.

For the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation

of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the action(s) outlined in the request. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions, please contact Mike Drummond of this office at (804) 693-6694, extension 122, or via email at Mike_Drummond@fws.gov.

Sincerely,

Cindy Schulz
Field Supervisor
Virginia Ecological Services

cc: VDACS, Richmond, VA (Attn: Keith Tignor)
VDCR, DNH, Richmond, VA (Attn: René Hypes)

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