

Colonel Allan B. Carroll
U.S. Army Corps of Engineers
Norfolk District
803 Front Street
Norfolk, Virginia 23510-1096

Attn: Gerry Tracy
Regulatory Branch

Re: Matt Marthinson, Project No. 98-
1663-30, Northampton County,
Virginia

Dear Colonel Carroll:

This document transmits the U.S. Fish and Wildlife Service's biological opinion based on our review of the above referenced proposed shoreline stabilization project located in Northampton County, Virginia and its effects on the northeastern beach tiger beetle (*Cicindela dorsalis dorsalis*) in accordance with section 7 of the Endangered Species Act of 1973, as amended, (16 U.S.C. 1531 et seq.). Your October 14, 1998 request for formal consultation was received on October 30, 1998. This biological opinion is based on information provided in the permit application, telephone conversations, field investigations, and other sources of information. A complete administrative record of this consultation is on file in this office.

I. CONSULTATION HISTORY

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| 10-02-98 | The Service received a request from the U.S. Army Corps of Engineers to review the proposed project for impacts to federally listed species. |
| 10-05-98 | The Service sent a letter to the Corps recommending that a survey be conducted for the northeastern beach tiger beetle at the proposed project site. |
| 10-08-98 | The Service received a revised request from the Corps to review the proposed project for impacts to federally listed species. |
| 10-14-98 | The Service sent the Corps a facsimile indicating that if the Corps/applicant was going to assume the tiger beetle is present, initiation of formal consultation was recommended. |
| 10-29-98 | The Service received a report of the northeastern beach tiger beetle survey conducted at the proposed project site. |

- 10-30-98 The Service received the Corps' requests to initiate formal consultation.
- 11-04-98 The Service sent a letter to the Corps indicating that the request for formal consultation had been received and was complete.

II. BIOLOGICAL OPINION

DESCRIPTION OF PROPOSED ACTION

The proposed project is located along the Chesapeake Bay in the Smith Beach subdivision in Northampton County, Virginia at 16218 Smith Beach Road (Figure 1). The applicant proposes to construct 100 linear feet of bulkhead with backfill and a 10-foot long return wall landward of mean high water (MHW). The bulkhead does not require a Corps permit since it is located landward of MHW. The applicant also proposes to construct one 60-foot long low profile timber groin, which will extend approximately 45 feet channelward of mean low water (MHW) and 10 feet channelward of MLW (Figure 2). The stated purpose is shoreline protection and beach preservation/creation.

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 to be the applicant's property between MLW and the landward edge of the beach.

STATUS OF THE SPECIES RANGEWIDE

This information on the northeastern beach tiger beetle was provided to the Corps in a biological opinion dated April 2, 1998 for permit application 97-1951-30.

ENVIRONMENTAL BASELINE

Status of the Species Within the Action Area - The proposed project is located within the Smith Beach tiger beetle site. Adult tiger beetles were documented at the project site in 1989/1990 (Buhlman and Pague 1992). Knisley (1998) conducted a survey of the proposed project site and the adjacent properties. He determined that this site contained marginal to inappropriate habitat for the tiger beetle because of the narrow beach width and extensive shoreline stabilization at many other properties at Smith Beach including the adjacent lots. Knisley (1998) stated that the back beach consisted of a 15 to 20 foot high bluff that showed signs of recent erosion. Only one larval beetle was found during the survey of the proposed project site; no larvae were found on the two adjacent properties. Smith Beach has not been determined to be necessary for the recovery/survival and delisting of the tiger beetle.

Factors Affecting Species Habitat Within the Action Area - The applicant's property has a high bank behind the beach and is experiencing erosion. There are existing bulkheads, riprap, and groins along

the shoreline at Smith Beach, including properties adjacent to the proposed project site. Along Smith Beach, Corps permits have been issued to David Wilson (now Judith Smith, 98-1174), Kathleen Spachman, *et al.* (96-1763), Tom Smith (97-0684), Geneva Fox (96-1064), Chapman and Boyce (96-0127), R.K. Bull and Cornelia Green (97-1951), and Virginia Deering (96-1613) (Figure 1). There is substantial sand transport along Smith Beach. Evidence of this is the fact that the existing groins do not have the typical build up of sand on one side and erosion on the other side. Additionally, the beach profile is relatively the same in sections of beach with or without groins.

EFFECTS OF THE ACTION

Direct Effects - Direct impacts to the tiger beetle will result from the crushing of adult beetles, and subsequent injury or death, during construction from use/placement/stockpiling of equipment and materials on the beach and foot traffic within the construction area. Construction will also result in temporary loss of habitat for adults through disruption of their daily activity patterns (*i.e.*, foraging, mating, basking, egg-laying). Larval tiger beetles will be directly affected through crushing, dislodging, and entombment, resulting in death or injury, during construction by use/placement/stockpiling of equipment and materials on the beach and heavy foot traffic within the construction area. Larval beetles will also be prevented from feeding during that time due to their sensitivity to vibrations, movements, and shadows, resulting in injury and potentially death. Existing habitat, for both larval and adult beetles, will be permanently lost within the footprint of the groin between MLW and the landward edge of the beach.

Interrelated and Interdependent Actions - As defined in 50 CFR § 402.02, interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. The Service is not aware of any interrelated or interdependent actions.

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). The bulkhead will prevent larvae from being able to migrate landward as they mature, resulting in an inability to survive winter storms and erosion. In addition, the bulkhead will eliminate the natural sloughing and erosion of sand from the banks and, subsequently, the upland replenishment of sand to the beach. However, much of the sand supply for this beach is from offshore. Because this shoreline has already been significantly altered, it is not likely that construction of a bulkhead will result in loss of the existing beach. Groins are designed to capture sand from longshore movement. However, because this shoreline already has multiple groins which do not appear to be altering the distribution of sand, the addition of one groin is not likely to have a noticeable effect on the beach profile.

Future maintenance of the proposed shoreline stabilization structures may not require Corps' authorization. These activities may result in injury or death to adult and larval tiger beetles through heavy foot traffic on beach areas, use/stockpiling of heavy equipment, and stockpiling/placement of

materials. Maintenance activities may also result in temporary or permanent habitat loss. These activities may result in further impacts to the tiger beetle population at this site.

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. Construction of shoreline stabilization structures (*e.g.*, riprap) landward of MHW may occur within the action area in the future and such activities would not require Corps authorization. This type of activity would adversely affect tiger beetles directly through death or injury during pre-construction and construction activities and temporary and permanent habitat loss. However, due to the existing beach stabilization structures, long-term impacts are expected to be minor.

CONCLUSION

After reviewing the status of the northeastern beach tiger beetle, 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 shoreline stabilization activities, as proposed, are not likely to jeopardize the continued existence of the northeastern beach tiger beetle. No critical habitat has been designated for this species, therefore, none will be affected.

III. 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 such as 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 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 the applicant, as appropriate, for the

exemption in action 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 the applicant 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 or applicant must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement.

AMOUNT OR EXTENT OF TAKE

The Service anticipates that incidental take of the northeastern beach tiger beetle will be difficult to quantify and detect because the population density of adult beetles within the project area has not been determined, and any beetles (adult or larvae) that are killed during project construction, stockpiling of equipment and materials, and habitat loss will be difficult to observe or locate due to their coloring, small body size, and tendency for larvae to remain beneath the surface. However, the level of take of this species can be anticipated by the areal extent of the potential habitat affected. This incidental take statement anticipates the taking of adult and larval northeastern beach tiger beetles between the landward edge of the beach and MLW on the applicant's property (approximately 6,600 square feet). However, most of the impacts are expected to occur within the 600 square feet along the groin alignment resulting from construction activities, stockpiling of materials and equipment, and temporary and permanent (120 square feet within the footprint of the groin) habitat loss between the landward edge of the beach and MLW within a 10-foot wide construction area for the groin.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of the northeastern beach tiger beetle:

- o Construction activities must be conducted when adult beetles are not present.
- o Human activity, materials, and equipment on the beach must be minimized to reduce the impact to adult and larval tiger beetles.

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 construction, earth-moving, placement of materials or equipment, or maintenance of structures will occur on the beach between June 1 and September 15 of any year.

2. Materials will be transported to the beach only on an as-needed basis.
3. No ground disturbance or use of vehicles or heavy equipment will occur on the beach outside of the applicant's property boundaries.
4. No refueling of equipment or vehicles will occur on the beach.
5. Care must be taken in handling any dead specimens of proposed or listed species that are found in the project area 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 at the address provided.
6. The applicant is required to notify the Service before initiation of construction and upon completion of the project at the address given below. All additional information to be sent to the Service should be sent to the following address:

Virginia Field Office
U.S. Fish and Wildlife Service
P.O. Box 99
6669 Short Lane
Gloucester, VA 23061
Phone (804) 693-6694
Fax (804) 693-9032

IV. 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 further minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

Due to the amount of shoreline stabilization/alteration taking place along the shoreline of the Chesapeake Bay, the Service recommends that mitigation for adverse impacts to and loss of northeastern beach tiger beetle habitat be undertaken. As the Corps continues to issue permits for shoreline alteration, the amount of habitat available for the continued existence of this species is

decreasing. For recovery and delisting of the tiger beetle within the Chesapeake Bay of Maryland and Virginia, at least 26 populations must be permanently protected at extant sites (U.S. Fish and Wildlife Service 1994). In Virginia, 4 large (>500 adults) populations and 4 other populations must be protected on the Eastern Shore; 3 large populations and 3 others must be protected on the western shore of the Chesapeake Bay north of the Rappahannock River; and 3 large populations and 3 others must be protected on the western shore of the Bay south of the Rappahannock River. Presently, there are 6 large and 6 other (100 to 499 adults) populations on the Eastern Shore; 7 large and 2 others on the western shore north of the Rappahannock; and 4 large and 5 others on the western shore south of the Rappahannock.

The Service is concerned that in the near future, projects proposed in areas critical to the continued existence of the tiger beetle will result in jeopardy to the species. Therefore, the Service recommends that the Corps require mitigation for this project. Alteration of tiger beetle sites necessary for recovery/survival and delisting that support more than 500 adult beetles should be mitigated at a ratio of 3:1. Areas necessary for recovery/survival and delisting that support less than 500 adult beetles should be mitigated at a ratio of 2:1. Areas not necessary for recovery/survival and delisting, should be mitigated at a ratio of 1:1. As the Service receives additional information on the location and status of tiger beetles, the relative importance of a given tiger beetle site may change.

Because the proposed project is located in an area not deemed necessary for recovery by the Service, compensation of 1:1 is recommended. That is, 110 linear feet of shoreline with an appropriate upland buffer should be permanently protected via a permanent conservation easement. The Service will be glad to work with the Corps and the applicant to locate and preserve such an area.

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.

V. 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 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.

The Service appreciates this opportunity to work with the Corps in fulfilling our mutual responsibilities

Colonel Allan B. Carroll

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under the ESA. Please contact Cindy Schulz of this office at (804) 693-6694, extension 127, if you require additional information.

Sincerely,

Karen L. Mayne
Supervisor
Virginia Field Office

Enclosures

LITERATURE CITED

- Buhlmann, K.A. and C.A. Pague. 1992. Natural heritage inventory of *Cicindela dorsalis dorsalis* (northeastern beach tiger beetle). Natural Heritage Technical Report #92-16. Department of Conservation and Recreation, Division of Natural Heritage. Richmond, VA. 41 pp.
- Knisley, C.B. 1998. Habitat assessment and larval survey for the northeastern beach tiger beetle at Smith Beach, Northampton County, Virginia. Report to U.S. Fish and Wildlife Service, Gloucester, VA.
- U.S. Fish and Wildlife Service. 1994. Northeastern beach tiger beetle (*Cicindela dorsalis dorsalis* Say) Recovery Plan. Hadley, MA.

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bcc: GARD-South, Region 5
ARD-ES, Region 5
Endangered Species Coordinator, Region 5
Endangered Species Biologist, CBFO
Law Enforcement, Yorktown
Law Enforcement, Richmond
(Attn: Senior Resident Agent)
DNH, Richmond
(Attn: Tom Smith)
VDACS, Richmond
(Attn: John Tate)