EXHIBIT C

ENVIRONMENTAL RESOURCES, INC.

ONE PLAZA EAST, SUITE 500
106 EAST MAIN STREET
SALISBURY, MD 21801-4981

Salisbury 410-548-5320 • FAX (410) 548-3767 • Easton, MD Office (410) 820-7465 • Delaware (302) 226-5232

April 25, 2005

ERI#408B001

Ms Sarah Cooksey, Administrator
Coastal Management Program
Division of Soil & Water Resources
Department of Natural Resources
& Environmental Control
89 Kings Highway
Dover, DE 19901

RE: Request for Coastal Zone Consistency Determination
Swains Wharf Marina
Sussex County, Delaware
Applicant: G. Walter Swain and Peter Russo

Dear Ms Cooksey:

On behalf of Mr. G. Walter Swain and Peter Russo, I am writing your office to request a Consistency Determination with respect to the Delaware Coastal Management Program as part of our application to the US Army Corps of Engineers for a Department of the Army permit. Mr. Swain and Mr. Russo are joint owners of property at the confluence of the Mispillion River and Cedar Creek formerly known as Dot's Docks. The proposed project consists of reconstructing and expanding an existing marina facility that was destroyed by a storm in 1991. The applicants, G. Walter Swain and Peter Russo, have determined the proposed reconstruction and expansion complies with Delaware's approved coastal zone management program and will be conducted in a manner consistent with such program.

The specific project involves the reconstruction and expansion of a former 26 slip commercial marina. Activities will include construction of two docks, 460' x 6' and 185' x 6'; connected to land by three piers, 145' x 8' and 91' x 8' (2); and a boat ramp 100' x 22'. The expanded marina will have 50 wet slips; 38 - 25' long x 12' wide and 12 - 40' long x 15' wide with tapered finger piers having a maximum width of 3 feet.

Shoreline protection will be provided by a combination of riprap and tide marsh planting. The riprap will be located more toward the top of the shoreline slope to keep storm tides from washing over the parking lot and eroding the top of the slope. The riprap will cover 388 linear feet of the shore. The shore below the riprap down to elevation 2.0 will be protected by establishing *Spartina alterniflora.*

The uplands will be prepared by trucking in sandy fill and increasing site elevations near the shore. The site will be graded so any runoff flows towards the road then to the north and south into wet swales established along the edge of the property. The swale bottoms will be 8 feet wide and planted with *Spartina alterniflora* on a 2 foot grid. The south swale will be 265 feet long and the north swale will be 157 feet long. Each swale will have a low stone check dam at the outlet end.

Most of the uplands will be covered with crushed stone for the circular driveway and parking area. Parking will consist of 32- 10' x 20' stalls for cars, 6- 15' x 20' stall for handicap parking and 14 - 20' x 40' stalls for trailers.

The site has been used as a marina since before the 1930's. There was considerable boat activity in the area at that time, including a fish processing factory across Cedar Creek on the south side of the inlet that operated around 1900. The marina site was used by recreational fisherman, commercial fisherman and party boats. It was used continuously as a marina up until the storm in January, 1992 destroyed nearly all of the walkways and left the pilings. Photographs from the summer of 1992 show boats using these remaining walkways and pilings. Only parts of three walkways above the MLW line were left intact. There is currently one pier on the south end of the property which is usable.

The earliest dated permits were obtained by the previous owner, Dot Bennett, who obtained a subaqueous lands lease dated June 19, 1969 for 11 piers and two boat ramps. Each pier was 2' by 20' long extending from the shoreline. This lease was renewed in October, 1979 and November, 1990 (SL-1203/90). All leases were for a 10 year period. The last lease was also for 11 piers, although only 5 finger piers and one pier parallel to shore are present on the DNREC 1979 aerial photography. The 1988 DNREC aerial photography shows 11 piers visible. A color slide taken from the air in October, 1991 by DNREC shows 11 piers with boats present. The property was willed to G. Walter Swain by Ms Bennett. A Letter of Authorization to repair and replace two docks, sixteen piers and two boat ramps was issued to Mr. Swain, on November 6, 1992 (RR0077). At the time of the storm there were 106 mooring pilings and 26 boat slips.

A storm washed out a new opening north of the inlet between 1973 and 1979. Repairs of this breach appeared to be underway in 1988 based on aerial photography taken that year by DNREC. The actual repairs were not finished until early 1994, two years after the storm that destroyed most of the marina structure. The company doing the breach repairs (Edwin A and John O. Crandell, Inc.) used the Swain site as a staging and storage area during reconstruction of the inlet. They tied their barges and boats to the existing pilings and also removed a number of pilings and finger piers to provide truck access to the barges. These structures were to be replaced after the breach work was completed and are the newer looking pilings.

The current owners decided to wait until the inlet repairs were completed before attempting repairs to the marina. Although the current subaqueous lands lease was still valid, they decided to apply for additional slips and construct pier structures that would be more sturdy then those constructed by Ms Bennett. A subaqueous lands permit application was filed with DNREC on July 7, 1997 and a state lease for 38 slips was issued on June 1, 1998 (SI-3807/97). At the time of application, there were three piers and seven existing slips (as listed on a plan dated May 14, 1997 by AKS Associates, Inc., Lincoln, DE). These walkways are now gone except for a pier on the south end of the property. The 1997 lease allowed the construction of 1060 linear feet of armor stone, reconstruction of two boat ramps, two piers 5' by 70', one pier 5' by 108', one dock 120' by 5 feet, one dock 162' by 5', 19 floating catwalks 25' by 4' and 17 mooring piles.

The owners applied to the US Army Corps of Engineers for a Section 10/404 permit after receiving the state permit. However, there were various delays and questions and the state permit (valid for 3 years) expired before a federal permit review was completed.

We have reviewed the DCMP policies and feel the following policies are potentially applicable:

5.A.1 Wetland Management
5.A.3 Coastal Waters Management
5.A.4 Subaqueous Lands
5.B.2. Natural Areas Management - CMP Policies for the Delaware Estuary
5.B.3. Flood Hazard Areas Management
5.C.3 Living Resources

5.A.1 Wetland Management. The site contains tidal wetlands as regulated by 7 Delaware Code Section 66, although much of the tidal wetland areas are not on the state maps. None of the tidal wetlands on the site will be impacted other than by the outflow from the two wet swales for stormwater management. Stormwater flows will be directed to these swales and away from direct flow into tidal waters or existing tidal wetlands. The swales will be established with *Spartina alterniflora* as the swale elevations will be within the elevation of existing *Spartina* stands. Additional *Spartina alterniflora* wetlands will be established along the shoreline as erosion control. All existing wetlands will be separated from construction activities by installation of silt fence and super silt fence prior to the onset of construction.

5.A.3 Coastal Waters Management.

Although the site has been used in the past as a marina, we feel this is good location for a marina as there is good flushing of adjacent waters, the navigation channel is within close proximity, it is close to Delaware Bay so little travel is needed within tidal rivers to reach the boaters destination, the location is somewhat protected by a man-made jetty and no dredging is required.

This project is proposing 50 wet slips within State waters. Wet slips are proposed for several reasons. The site has a history as a wet slip marina. The location is well suited for wet slips being near the mouth of the river and adjacent to the maintained navigation channel. Most of the customers will be fisherman who want easy access to their boats at certain times of day; early in the morning and in the evening. Many boat owners want the advantage of their boats ready to leave the dock with a minimum of time, like after work so they can fish for a few hours. If they trailer their boat, a short time available on the water does not make the effort of launching and retrieving the boat worth while. A boat in the water where the owner drives up and is on their way in a few minutes is a different situation. Dry stack storage requires at least one staff person to be present at the times when boats can launch. Since many fisherman leave or return in the dark, a lift operator would have to be on-site 18+ hours a day during the peak fishing season. A wet slip operation for fisherman would not require the same level of staffing.

Dry-stack storage is questionably feasible for a property of this size and type. Marina industry experts feel the optimum size dry-stack facility to maximize return is 240 racks slips. This provides for boats up to 35 feet in length stacked four boats high. A facility able to handle the larger sized boats would need to be about 130-140 feet wide to allow for the turning radius of the lift. A building of this size needs about one acre of land, required parking of 0.5 slips per boat would increase the amount of land to a total of two acres. An estimated cost for such a facility (building and parking with fork lift) is $1.16 million. Regardless of the cost, Mr. Swain only has about 2.4 acres of uplands on his property. While a smaller facility can be built, the construction cost per dry slip would be more expensive than for wet slips plus there would be higher operating expenses. The necessary rental rates would be much higher than for wet slips in the area. Dry stack is most feasible for a marina that provides a lot of boat services such as fueling, accessory sales, repairs, painting, and amenities. Since the boat is up in the air on a rack, owners tend to have more of the maintenance work and installation of extras done by the boat yard rather than doing it themselves. Thus a dry-stack is usually counted on to drive other revenue streams such as wash and rinse services, owner repair area, trailer storage, gear lockers, etc. Mostly due to site constraints, Mr. Swain is not proposing a full service marina facility, just a docking facility. He is not even proposing fueling facilities. A dry stack facility would also include the construction of a launch area where the lift would place the boat into the water. This would require at least a small area to be dredged into the shore and installation of bulkhead along the shoreline side where the lift would bring and retrieve boats. Even with a dry stack facility, a number of wet slips are needed for temporary tie up until the owners are ready to go or until the lift can retrieve the boat and put it away.

Impacts to coastal waters will be minimized through strict adherence to an approved sediment and erosion control plan (currently being finalized), stormwater management to control water quality and operational practices both of the marina operators and slip holders. Stormwater management is exempt from quantity controls due to the marina's location within the 100-year floodplain. However, quality will be controlled by directing runoff away from the creek to one of two wet swales on either

side of the property. The swales will discharge into existing tidal wetlands for additional filtering prior to the water entering tidal waters.

Vessel maintenance will only be allowed on the uplands and then only if the ground under the boat is completely covered with protective tarpaulins to catch any materials from hull stripping or refinishing. All maintenance activities conducted on the marina property will require the prior approval of the Harbor Master. Owners having boats that need professional repair will be encouraged to remove the boats to other approved locations where such repairs can be made. In water maintenance is restricted to light cleaning, polishing, etc.. There will be no provision for on land storage of detergents, solvents, oils, paints, grease waxes or applicators by slip users. All empty or discarded containers and applicators are to be removed from the marina premises by the boat owner for appropriate disposal off-site. Only "clean" trash may be disposed in the marked containers provided by the marina.

Although no pump-out facilities are planned, sewage will be strictly controlled. Land-based facilities will be portable toilets available in-season placed and maintained under contract. All vessels with in-board Type III sanitation systems, shall be equipped with securable "Y" valves and have holding tanks capable of holding as well as chemically treating all sanitary wastes until they can be properly discharged at approved pump-out stations. All Type III devices with "Y" valves must be capable of having the valve secured in the closed holding tank position while moored in the marina. Such holding tanks will be required to contain a dye tablet that would provide evidence of leakage or discharge while moored in the marina. Any boats with port-a-potty devices will be able to empty such containers into the portable toilets on the uplands. No live-aboard boats will be allowed except for overnight transient boaters. They will be required to abide by all marina rules including those regarding marine sanitation devices.

The marina will not provide any fueling facilities. While boat fuel may be brought into the marina by slip users, they will be responsible for any and all spills they cause. Marina staff will be trained in the handling of emergency clean-up of any fuel, oil or sewage spills.

5.A.4 Subaqueous Lands.

Applications have been made with the Delaware DNREC regarding permits for the reconstruction, expansion and operation of the proposed marina. Similar application has been made with the US Army Corps of Engineers for a Section 10/404 individual permit.

5.B.2. Natural Areas Management - CMP Policies for the Delaware Estuary

As stated above, every effort has been made to minimize and control any form of pollution to Cedar Creek or Mispillion River, tributaries of Delaware Bay.

5.B.3. Flood Hazard Areas Management

All construction will conform to local building and zoning requirements regarding structures or development within the 100-year floodplain.

5.C.3 Living Resources.

The proposed project will not have negative effects on the value of tidal ebb and flow of the adjacent creeks either in impacting production, reducing natural protection, increasing siltation or otherwise having an effect on estuarine waters. There will be a small increase in production and natural protection through the establishment of a fringe marsh of *Spartina alterniflora*. Habitat value for upland species of wildlife using the property will be diminished through the conversion of the vegetated areas to largely gravel parking. Use of the shoreline or existing tidal marsh will not be directly impacted, although a slight reduction in use is likely due to the presence of structures and humans. There will be no known impact to migratory bird or aquatic species. There are no known rare, threatened or endangered or unique species of plants, animals or their habitats on the property or adjoining properties. The project will not impact the production or use of shellfish beds in the area.

There are no known historic or archeological resources on the property.

The proposed project is consistent with local zoning. Adjoining parcels are in residential or commercial use.

In conclusion, it is our opinion this project is in compliance with Delaware's Coastal Management Program, as well as both state and county land planning efforts. I am enclosing copies of the Army Corps of Engineers permit application, the DNREC Subaqueous Lands permit application and appendices, and 24"x36"plan drawings. We are in the process of submitting sediment and erosion control/stormwater management plans to the Sussex Conservation District for review. If required we will provide a copy of those finalized or approved plans. Upon your review of the enclosed, please let me know how I can assist you and your staff in responding to this request.

Sincerely,

ENVIRONMENTAL RESOURCES, INC.

David L. Hardin

David L. Hardin

projects\408b001\swain czm consistency request

Encl.

EXHIBIT D

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENTAL CONTROL
DIVISION OF SOIL AND WATER CONSERVATION
89 KINGS HIGHWAY
DOVER, DELAWARE 19901

DELAWARE COASTAL
MANAGEMENT PROGRAM

TELEPHONE: (302) 739 - 3451
FAX: (302) 739 - 2048

9283

May 25, 2005

David Hardin
Environmental Resources, Inc
One Plaza East, Suite 500
106 East Main Street
Salisbury, Maryland 21801-4981

MAY 27 2005

RE: Additional Information Required for Federal Consistency Determination Swains Wharf Marina (FC 05.083)

Dear Mr. Hardin:

The Delaware Coastal Management Program (DCMP) is in receipt of your Coastal Zone Federal Consistency concurrence request for the reconstruction and expansion of the proposed Swain's Wharf Marina located at the confluence of the Mispillion River and Cedar Creek, Sussex County, Delaware (FC 05.083).

Based upon our review and pursuant to National Oceanic & Atmospheric Administration regulations (15 CFR 930), the data and information provided in your concurrence request is not adequate to assess the likely coastal zone effects of this project and does not take into consideration all relevant policies of the DCMP. As such, your concurrence request is incomplete and our review "time-clock" has not yet begun. In order to complete your application and begin the review time-clock, please further address how the proposed project will be consistent with the following DCMP policies:

5.C.3. CMP Policies for Living Resources: 7 Delaware Code 201 (1) and (2), DNREC Wetlands Regulations Section 7.02 (A) and (B)

7 Delaware Code 201 (1) and (2) states that "it is in the best interest of the State to preserve and enhance the diversity and abundance of nongame fish and wildlife, and to protect the habitat and natural areas harboring rare and vanishing species of fish, wildlife, plants and areas of unusual scientific significance or having unusual importance to the survival of Delaware's native fish, wildlife and plants in the natural environment" and that "rare and endangered species are a public trust in need of active, protective management, and that it is in the broad public interest to preserve and enhance such species."

The Mispillion Harbor hosts the highest concentration of spawning horseshoe crabs on the Delaware Bay. The spawning activity at this location results in horseshoe crab egg densities of up to five times

Fish wastes are categorized as solid waste and are therefore a pollutant as defined by 7 Delaware Code Chapter 60. Improperly managed and disposed fish wastes can degrade water quality and cause adverse environmental impacts. The location of fish cleaning stations on the docks and piers may promote the dumping of fish waste directly into the waters of the marina basin and risk placing the facility in violation of State regulation.

Please provide justification as to how your fish cleaning stations will comply with State Surface Water Quality Standards taking into consideration alternate locations for the cleaning stations and educating patrons on proper disposal of fish waste or other practices that reduce the improper disposal of fish waste at the marina.

Additional Information

In addition, further information is required to expedite the review of this project. Please provide the following:

1) The State of Delaware Marina regulations require 0.5 parking spaces per boat slip plus additional slips required by local code (i.e. handicap spaces). The proposed plan includes 20 additional spaces above that which is required. A reduction on the total number of parking spaces would allow for additional management measure implementation for the protection of surface waters from runoff. Provide justification for the need of the additional parking.
2) The project proposes to construct a new boat ramp at the marina. This action does not necessitate the use of publicly held lands as a feasible alternative is available. The DNREC's Division of Fish and Wildlife's Cedar Creek Boat Landing is located within 0.5 from the proposed location and may be used free of charge to launch vessels. This is further justified as the applicant indicated the marina would not have full services and was to be used "as a mooring facility". Please provide justification for the construction of this boat ramp.

If you have any questions please do not hesitate to contact me at (302) 739-3451.

Bonnie Willis

Sincerely,

Sarah W. Cooksey, Administrator
Delaware Coastal Management Program

SWC/bmw

cc: File 05.083
Kevin Faust -- USACE
Jim Chaconas – DWR

EXHIBIT E

David Hardin

From: Willis Bonnie M. (DNREC) [Bonnie.Willis@state.de.us]

Sent: Tuesday, August 02, 2005 3:26 PM

To: dhardin@restorationes.com

Cc: Cooksey Sarah W. (DNREC); Kalasz Kevin (DNREC)

Subject: swain marina concerns/comments

Dave –
As per our phone conversation this morning, these are the following concerns, a brief description of applicable DCMP policies, and proffered options regarding the proposed Swains Marina Project:

1) Disturbance to habitat critical to migratory and nesting shorebirds in the area and other species of concern
   a. DCMP Nongame/Endangered Species Policy #2 (it is in the best interest of the State to preserve and enhance nongame fish and wildlife and protect the habitat and natural areas harboring rare and vanishing species and areas of unusual scientific significance or importance)
   b. DCMP Subaqueous Lands and Coastal Strip Policy #24e (consideration will be given regarding the degree to which the project might adversely affect finfish activity) relating to the fourspine stickleback
   c. DCMP Marina Policy #9 (construction of marinas shall not be permitted at sites recognized as critical habitat)
   - Option: reduce the number of boat slips thereby reducing the amount of disturbance (boating activity, noise, wake, boat related pollution, bottom disturbance) resulting from the increased activity of a marina
   - Option: phase in boat slips beginning with a reduced number to allow for continued research on the effects of the increased activity and, if the scientific data does not indicate an adverse affect of additional marina activity, more slips may potentially be added later

2) Navigational hazards to boaters
   a. DCMP Subaqueous Lands and Coastal Strip Policy #22c and #24a (public interest will be considered on activities affecting subaqueous lands including effects on navigation and the degree to which the project represents an encroachment or interferes with waterways)
   - Option: consider a redesign of the slips to take into consideration the proximity to the navigational channel and the current and wind conditions of the waterway

3) Water Quality (fish cleaning stations/pumpout)
   a. DCMP Coastal Water Management #26 (no person shall permit solid waste to be discarded into any waters)
   b. DCMP Marina Policy #1 (marinas are to provide convenient access to pumpout facilities for the removal of sewage from vessels)
   - As per our conversation, you indicated that the fish cleaning stations would be moved upland (near the office) and that the applicant is considering a portable pumpout or possibly an agreement with a nearby marina to use their equipment, the latter option being the less desirable of the two. You expressed the potential lack of management on the site and the potential for the pumpout to be damaged or not to be used at all. Therefore, further consideration needs to be given to the operation and maintenance of this facility.

4) Use of public subaqueous lands for boat ramp
   a. DCMP Subaqueous Lands and Coastal Strip Policy #22 e, f (public interest will be considered on activities affecting subaqueous lands including the extent to which the objectives can be avoided or realized by alternatives)
   - Option: have patrons use the Cedar Creek Boat Ramp for launching vessels
   - You indicated that the applicant was concerned about heavy machinery (e.g. US Army Corps) having access to the waterway due to the condition of the public boat ramp. As stated in the project proposal the intent of the project is to moor vessels, not provide an access location for the type of equipment used by the USACE and other groups. The Cedar Creek Boat Ramp functions

to the capacity necessary to launch size of vessels that are to use the proposed marina.

5) Surface water degradation from storm water runoff
   a. DCMP Coastal Water Management #4 (waters of the State are to be maintained for the propagation and protection of fish and wildlife and other beneficial uses of the water)
   b. DCMP Coastal Water Management #6 (water quality degradation shall be prohibited)
   - Options: a reduction in the number of parking spaces or a redesign of the parking lot to allow for a vegetative buffer strip between the parking lot and the waterway which would reduce the amount of particulates and other pollutants from entering the waterway.

As only brief descriptions of the DCMP polices are provided herein, please refer to the DCMP policy document for the detailed policy information. This document can be found at http://www.dnrec.state.de.us/dnrec2000/Divisions/Soil/dcmp/2004%20Policy%20Document.pdf. Further options, if consistent with the DCMP policies, will be taken into consideration during the review of this proposal.

Also, you stated that you were waiting for some additional data prior to addressing concerns and additional information requests from this and other offices. The official review of this project will begin upon receipt of the necessary information needed to access the overall impacts of this project, including any changes in the initial project proposal.

If you have any questions please feel free to contact me by phone or email.

Bonnie

Bonnie M. Willis
Environmental Scientist II
Delaware Coastal Programs
Delaware Department of Natural Resources and Environmental Control
89 Kings Highway
Dover, Delaware 19901
(302) 739-9283 (WAVE) voice
(302) 730-9173 direct
(302) 739-2048 fax

EXHIBIT F

Restoration Ecological Services

311 N. Aurora St.
Easton, MD 21601
Phone/Fax 410-820-7465

January 12, 2006

RES#0014-0001

Ms Sarah Cooksey
DNREC-Coastal Management Program
89 Kings Highway
Dover, DE 19901

RE: Swains Wharf Marina (FC 05.083)
Response to May 27, 2005 letter and August 2, 2005 email

Dear MS Willis:

I am responding to your letter of May 27, 2005 the email from Bonnie Willis of August 2, 2005 following my phone conversation with her of the same day. I appreciate her putting her comments in writing so I could easily remember each and not overlook any issue that needs to be addressed. Since her email items cover all the topics of the letter and are more detailed, I have prepared the response point by point to that.

There is one item of information I feel needs to be kept in mind in regards to all of the below concerns and responses. The previous owner, Dot Bennett operated a marina facility at this location that originated prior to the passage of the Subaqueous Lands Act in 1968. Subaqueous lands leases were issued to her and renewed every ten years through her tenure as owner. After the structures were largely destroyed by a storm in 1992, she willed the property to the current owner, Mr. Swain, with the understanding he would reopen the facility. DNREC issued Mr. Swain a Subaqueous Lands permit in 1997 to construct a 38 slip marina. The state permit expired before a Corps permit was obtained, which has led to the current state and federal application to construct what is not a brand new marina.

Responses to your specific concerns follow below.
1) Disturbance to habitat critical to migratory and nesting shorebirds in the area and other species of concern.

a. DCMP Nongame/Endangered Species Policy #2
c. DCMP Marina Policy #9 - construction of marinas shall not be permitted at sites recognized as critical habitat.

The concern of potential impact by Swains Wharf Marina on migrating shorebirds centers around the assumption the marina will increase the level of disturbance of birds within the harbor, and two possible habitat functions of the site; use of the property for roosting and use of the property for feeding. Feeding is directly related to use of the shoreline by nesting horseshoe crabs whose eggs provide a food source during spring migration. The other factor is whether

there would be added disturbance of birds on this property or other beaches by people and boats using the marina.

Horseshoe crab nesting begins slightly before the normal first arrival of migrating shorebirds and continues past the last of the birds leaving. The crabs appear to prefer low-energy, sandy beaches (Andres 2003a) for nesting. A study of Delaware and Florida beaches (Penn and Brockman 1994) concluded that while actual nest location in Delaware ranges from the lower beach at just about the upper limit of extremely saturated sediments to about midway between mean high tide level and extreme high tide level, most female horseshoe crabs nest just above the mean high tide line where the development of their eggs is maximized. Beach sediments lower on the beach contain inadequate interstitial oxygen concentrations (and probably high hydrogen sulfide), whereas sediments higher on the beach are too dry for egg development. Sediments high in peat, such as marsh edges, appear to be avoided since they are typically anoxic and impair egg development (Botton et al. 1988). At high tide females bury themselves in the sediments near the water's edge and lay a series of discrete egg clusters, each containing thousands of eggs (Brockman 1990). In Delaware crabs largely spawn one hour after the maximum high tide (Penn and Brockman 1994). The eggs develop in sediments 5 to 20 cm below the surface (Brockman 1990). Although most female crabs deposit their eggs 10 to 20 cm beneath the surface of the sand (Botton et al. 1992), wave action and burrowing by other horseshoe crabs reworks beach sediments, forcing many eggs to the surface (Botton et al. 1994) where they are available to the short-billed shorebirds or washed away. Botton et al. (1994) reported many of these eggs suspended in the water column are trapped and thus concentrated at shoreline discontinuities such as jetties or sand spits. Shorebirds and gulls are attracted to these areas where eggs are easy to find.

The Swain property is not preferred horseshoe crab nesting habitat based on the studies mentioned above. Nesting in the harbor was observed on June 25, 2005 while conducting a boat use survey over a 5 hour period. The shoreline along the Swain property can be divided into three segments as to its suitability for horseshoe crab nesting. The northern part of the shoreline along Cedar Creek is very coarse material, mostly either stone and concrete blocks or oyster shells. Crabs were observed approaching this part of the shore and turning away. No nest depressions were found in this part of the shore. This area extends from the existing north utility pole (about the location of the proposed north pier extending out to the docks for the marina section along Cedar Creek) north to the tide marsh around the point on the Mispillion River. The second shoreline segment would include the tide marsh at the southern end of the property and the end of the property west of the oyster shells. These tide marsh areas have peat soils from about mid-tide elevation and up. Based on the literature referenced above, crabs would not be expected to use these areas of shore, and no crabs were observed attempting to nest in these areas. The third segment of shoreline type would be the remainder of the shoreline along Cedar Creek between the shells to the north and the tide marsh to the south. This segment of shoreline contains a mix of sand and large gravel and stones (attached photos - IMG 0287) and extends about 210 feet in length. The exposed shore in this area ranges from 8-12 feet wide at mid-tide, while there is no beach exposed at high tide. Sediments below mid-tide elevation are much finer

with more silts and organic material. The water stains on the concrete blocks in IMG 0265 indicate the beach is low and is quickly and completely covered once the tide reaches a certain height. This entire section of shore was covered with water (IMG 0277) about 1.5 hours before predicted high tide occurs or 1.5 hours after IMG 0265 was taken. None of this portion of the shore began to be exposed again until 2 hours after high tide. It would appear none of this beach is preferred nesting habitat based on the referenced studies. The coarse material of the beach, high soil moisture and the frequent waves from boat wakes make crab nesting difficult. Few nest depressions (about 5-6) were observed within this portion of the shoreline and were the only nests observed on the Swain property. In contrast, Botton et al. (1994) recorded 30-45 nests per 50 feet of shoreline at beaches with high shorebird use. The equivalent number at the Swain property would be 0.7 nests per 50 feet of shoreline.

Boat wakes remove many of the eggs within the top few inches of soil and wash them into the river. This project will reduce the boat wake since boaters will operate both further from shore, at a slower speed, and the moored boats will attenuate waves.

For the above reasons there are relatively few horseshoe crab eggs available at the Swain property. As such it is unlikely the shorebirds are attracted to the property for feeding. Migrating shorebirds arrive in Delaware Bay in early May and are normally gone by the second week in June. During that time they feed heavily to replenish their fat reserves before they start the last leg of their migration north. The birds need to obtain large numbers of eggs with relatively little expenditure of energy in order to achieve the fat levels that will allow them to survive the remaining migration flight and initial time in the breeding grounds. Energetic considerations indicate that horseshoe crab eggs are only profitable to shorebirds if they occur in high surface densities (Andres 2003b). Such high densities can only occur if the beach traps large quantities of floating eggs from the longshore drift or there are high numbers of nesting female crabs. Even with high nesting densities most eggs are laid deeper in the sand than the short-billed birds can probe. These have to be brought to the surface where they are available to birds, either through wave action or the digging activity of other nesting crabs. The Shorebird Technical Committee Peer Review Panel (Andres 2003b) indicated the excavation and transport of eggs to the beach surface might only occur when a very high density of spawning females use a beach. There would appear to be a threshold female crab density at which a sufficient number of eggs become available on the surface. Thus, a suitable feeding beach would appear to require either large numbers of spawning crabs, or structural characteristics that concentrate floating eggs onto the beach, coupled with relatively little disturbance. The Swain property currently does not provide either high numbers of eggs or low disturbance.

As already shown above, the shoreline is not high or even medium quality horseshoe crab nesting habitat, nor does it contain structure that traps longshore drift and floating eggs. The beach is relatively narrow and at high tide there is little area for birds to roost except on the shell covered area or the concrete blocks. The other factor is the level of existing and potential disturbance. There is already a high level of disturbance occurring at the site from boat activity

going on adjacent to the Swain property. The Mispillion River is one of the main boat access routes to Delaware Bay for fishermen and other recreational boaters. The state boat ramp further south on Cedar Creek is probably one of the heaviest used in Delaware. Of the many times I have visited the property, no matter what season, there has always been some recreational boat traffic passing by the Swain property and little observed use of the property by any species of shorebirds. In addition to the recreational boats, there are numerous daily trips made by the much larger boats operated by the Delaware Bay Launch Service, Inc.. Fishing activity begins to increase in April before the arrival of the shorebirds and continues to increase throughout May with probably the peak spring use over Memorial Day weekend. May boat use could be lower than historic levels due to the decrease in weakfish numbers in recent years. Their arrival in May was the big start of the Delaware Bay fishing season.

Boat activity was observed on June 25, 2005 from 9:45 AM until 2:45 PM with counts made over consecutive 15 minute periods (**Table 1.**). The boat counts ranged from 0.2 boats per minute over a 15 minute period to 1.0 boats per minute, or one boat every 7.5 minutes to one boat per minute. The average over the 5 hour survey was 0.5 boats per minute or one boat every two minutes. Boats traveling within Cedar Creek generally traveled slowly, although few were completely at no wake speed. Outgoing boats maintained a slow speed until well into the Mispillion River before increasing to planing speed. Boats returning from the bay maintained plane almost until they entered the mouth of Cedar Creek before dropping speed. All boats, except the bay launch and the Marine Police, passed the property within 50 feet of the existing pilings unless two boats were passing. The bay launch and Marina Police stayed further out into the channel. Since the existing pilings range from 90-110 feet from the top of the shoreline (high tide line), most boats were passing with 140-160 feet of the high tide line and 120-140 feet from where birds would be if the water level is at mid-tide. Most boats produced a wake that rolled into and along the shoreline of the site. This was not observed to be as pronounced at other beaches across Cedar Creek probably due to the greater distance the boat traveled from the shore and morphology of the beach. Since shorebirds appear to feed primarily along the waters edge following the tide line (Penn and Brockman 1994) it would seem they would be temporarily disturbed by the wake of most boats passing the site.

The frequency and proximity of disturbance to the Swain property would have birds almost constantly on an alert status. Even if they did not flush, there is greater energy used when constantly alert than when just feeding or roosting. If they do flush it would seem they would barely land and start feeding before they would be disturbed again. One study suggests that numerous small disturbances are more damaging than fewer, larger disturbances (West *et al.* 2002). Rogers and Smith (1997) reported mean flushing distances of 24-39 meters (about 79-129 feet) for shorebirds from ATV disturbances and less for people walking. Rogers and Schwikert (2002) reported mean flushing distances of 19.5 meters (64 feet) to 57.9 meters (190 feet) for different species of waterbird exposed to disturbances from outboard-powered boats and personal watercraft. Both studies suggested a buffer distance of 100 meters (about 330 feet) to avoid causing disturbances. Boats are currently passing the Swain property near or within the

mean flushing distances of many of the species studied, including sanderling (*Calidris alba*) and ruddy turnstone (*Arenaria interpres*).

The current level of boating activity near the Swain property by itself precludes the properties use by shorebirds for feeding. A review of the 2002, 2004 and 2005 annual reports, and the daily notes referenced in these reports, at Delaware Shorebird Monitoring Project website (http://shorebirds.skalizar.net/) indicate shorebird use is largely on beaches along the north shore of the Mispillion River and the beaches south of the river near the mouth. There are only a few mentions of sightings, doing surveys of, or trapping efforts on, beaches in Cedar Creek. The same daily logs only mention boat disturbance a few times; one commenting that "lots of boat activity in the Harbor caused no disturbance to the birds" (May 22, 2005), and the other commenting on the amount of disturbance by boats on Memorial Day in both 2004 and 2005.

Most of the recreational boat activity off the Swain property originates at locations further south on Cedar Creek from existing marinas or the state boat ramp. The state ramp frequently has long lines of trailered boats waiting to launch, especially on weekends. Most of the users of Swain's Wharf Marina will be individuals who are already using the marina facilities on Cedar Creek or at the state boat ramp on Cedar Creek. Their boats will continue to pass by the Swain property if the marina is not rebuilt. Therefore, the marina will contribute relatively little additional boat traffic to the Mispillion Harbor than already exists, especially during the time of year when the birds are present. The shoreline beach at the Swain property has the greatest level of existing disturbance and least suitable habitat for most species of all the beaches in the Mispillion Harbor. Reducing the number of boat slips would not result in a reduction of impacts. Similarly, phasing in the slips would only add to the overall cost of construction and not make a real environmental difference.

b. DCMP Subaqueous Lands and Coastal Strip Policy #24e.

The concern is what impact, if any, the marina may have on finfish, particularly the fourspine stickleback. The Chesapeake Bay Program fact sheet (www.chesapeakebay.net/stickleback.htm) states it is abundant throughout the Chesapeake Bay, living in estuarine grass flats during the summer and deeper water during the winter. Delaware Bay does not have any grass flats so I would assume the stickleback utilizes the salt marsh edge and adjacent shallow waters. Since the marina will not cause the loss of any tidal marsh edge or shallow water habitat other than bottom habitat for the boat ramp, but will add marsh edge from the shoreline planting and structure from the marina pilings, it is anticipated there could only be positive impacts on the fourspine stickleback.

2) Navigational hazards to boaters- DCMP Subaqueous Lands and Coastal Strip Policies # 22c and #24a.

We obtained the location of the federal navigation channel from the Army Corps of Engineers as a CAD file and have included its location on the marina plans. The CAD file included results of a bathymetry survey conducted in March, 2005. This information has also been added to the drawing, along with the location of the existing pilings. As can be seen, the proposed docks and

boats are all outside the navigation channel and the deeper water is toward the center of the channel. If boaters are currently staying close to the existing pilings it is not out of necessity. The proposed dock location is the minimum distance from shore that provides adequate depth under most boats at low tide.

The alternative would be to dredge the inshore area so the docks and boats could be located closed to shore. DNREC - Wetlands and Subaqueous Lands Section and the Corps of Engineers have both recommended against this due to the increased information required and the lack of uplands available as a disposal area for future maintenance dredging.

3) Water quality

a. DCMP Coastal Water Management #26 - regarding fish cleaning stations

The fish cleaning stations have been moved from the docks to an upland location next to the office and near the trash dumpster.

b. DCMP Marina Policy #1 - access to pumpout facilities

The applicant is arranging for the Swain's Wharf Marina users to have access to the pump-out facilities at Cedar Creek Marina. Most boats using the marina with be small enough, or of an open design, that they will not contain marine sanitation devices (MSD). These boats typically use camper style porta-potties where the waste in contained within a plastic bag, which can then be emptied into the portable toilets that will be located near the office. Larger boats that do have a MSD would have to travel to Cedar Creek Marina to be pumped out. Also, in compliance with the Swain's Wharf Marina O&M manual and their rental agreement, they would have to have their valves locked closed and add dye tablets to their waste tanks while in the marina.

4) Use of public subaqueous lands for boat ramp

a. DCMP Subaqueous Lands and Coastal Strip Policy #22e,f

The stated purpose of the activity on both the Delaware and Corps applications is "to rebuild and expand a previously permitted and existing/former marina destroyed by storm." This does not limit the use to mooring vessels only. The applicant has not included many of the additional services marinas often provide such as fueling, repairs, general boat maintenance or storage. In that sense, the purpose of the marina is for only access to the water. The applicant has proposed a boat ramp at the marina for several reasons. The previous facility had two boat ramps. The state ramp at Cedar Creek ramp receives heavy use, and is not adequately constructed to launch or remove large boats or heavy equipment needed for maintaining the channel or the jetties. It is our understanding from discussions the applicant has had with Pat Emory that the Division of Fish and Wildlife has a policy against such commercial use of state boat ramps. Also, a limited number of day users would be able to launch from the Swain's Wharf ramp and the ramp would be available for emergency use, for example, by the Coast Guard.

5) Surface water degradation from stormwater runoff

a. DCMP Coastal Water Management #4 and #6

The plan has been modified to include increased grassed buffer strips between the parking lot and the wet swales. The regrading of the land with the highest levels at the edge of the river will direct runoff away from the river towards the road and to the end of the wet swales. Grass buffers have been added adjacent to the swales to increase filtration of runoff, but are not needed where the grading directs the flow away from the river.

There was also a concern regarding the number of parking spaces proposed. A review of marina parking requirements revealed a wide range of requirements from 0.3 parking spaces per slip at Saratoga Springs, NY (freshwater lake) and Gulf Shores, Alabama to 1.5 spaces per slip at Orange Beach, California and Burlington, Vermont. A marina is a service business. Therefore, the real number of spaces required is what is needed for a marina to adequately and efficiently serve their target clientele. A marina in downtown Annapolis that has a large and consistent percentage of transient boaters will need fewer parking spaces than a rural marina such as Swains Wharf which will have almost all seasonal rentals occupied primarily by avid fishermen. Therefore, it is anticipated Swain's Wharf will have a higher percentage of active marina users than is average. The users will also frequently have guests on an outing resulting in more than one car per party. Provision of the minimum required number of parking spaces would not adequately serve the type of patron that will use this marina.

The project will meet or exceed all stormwater management standards required for this type of site location. The applicant is currently completing the stormwater management plan through a separate contractor for submittal to the Sussex County Conservation District. A copy of the approved sediment and erosion/stormwater management plan will be provided when received.

If you have any questions, please do not hesitate to call.

Sincerely,

David L. Hardin

David L. Hardin

projects\0014-0001\CMP response

Attachments

cc G. Walter Swain
John Hughes
Kevin Donnelly
Laura Herr
James Chaconas

LITERATURE CITED

Andres, B. A. [compiler]. 2003. Delaware Bay shorebird-horseshoe crab assessment report. USFWS Shorebird Technical Committee. 85 pp.

Andres, B. A. [coordinator]. 2003b. Conclusions and recommendations to the horseshoe crab management board of the Atlantic States Marine Fisheries Commission. USFWS, Shorebird Technical Committee Peer Review Panel. 12pp.

Botton, M. L., R.E. Loveland and T.R. Jacobson. 1988. Beach erosion and geochemical factors: influence on spawning success of horseshoe crabs (*Limulus polyphemus*) in Delaware Bay, USA. *Mar. Biol.* **99**: 325-332.

Botton, M. L., R.E. Loveland and T.R. Jacobson. 1992. Overwintering by trilobite larvae of the horseshoe crab *Limulus polyphemus* on a sandy beach of Delaware Bay (New Jersey, USA). *Mar. Ecol. Progr. Ser.* **88**: 289-292.

Botton, M. L., R.E. Loveland and T.R. Jacobson. 1994. Site selection by migrotory shorebirds in Delaware Bay, and its relationship to beach characteristics and abundance of horseshoe crab (*Limulus polyphemus*) eggs. *Auk* **111**: 605-616

Brockman, H.J. 1990. Mating behavior of horseshoe crabs, *Limulus polyphermus*. *Behaviour* **114**: 206-220.

Penn, D. And H. J. Brockman. 1994. Nest-site selection in the Horseshoe Crab, *Limulus polyphemus*. *Biol. Bull.* **187**: 373-384.

Rogers, J.A. Jr. and H.T. Smith. 1997. Buffer zone distances to protect foraging and loafing waterbirds from human disturbance in Florida. *Wildl. Soc. Bull.* **25**: 139-146.

Rogers, J. A. Jr. and S. T. Schwikert. 2002. Buffer-zone distances to protect foraging and loafing waterbirds from disturbance by personal watercraft and ouboard-powered boats. *Conserv. Biol.* **16**: 216-224

West, A. D., J. D. Goss-Custard, R. A. Stillman, R. W. G. Cladow, S. E. A.le V. Dit Durell and S. McGrorty. 2002. Predicting the impacts of disturbance on shorebird mortality using a behavior-based model. *Biol. Conserv.* **106**: *319-328.*

Table 1. BOAT ACTIVITY IN MISPILLION HARBOR, JUNE 25, 2005.

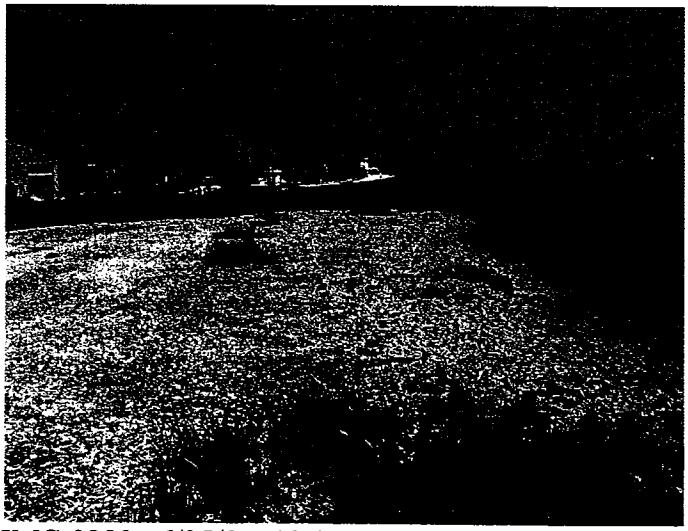
TIME PERIOD	NUMBER BOATS	AVERAGE PER MINUTE	ONE BOAT PER X MINUTES	COMMENTS
9:45 - 10:00	8	0.5	1.9	Includes one bay launch
10:00 - 10:15	10	0.7	1.5	
10:15 - 10:30	6	0.4	2.5	
10:30 - 10:45	3	0.2	5.0	Includes one personal watercraft
10:45 - 11:00	2	0.1	7.5	
11:00 - 11:15	4	0.3	3.8	
11:15 - 11:30	4	0.3	3.8	
11:30 - 11:45	5	0.3	3.0	
11:45 - 12:00	9	0.6	1.7	
12:00 - 12:15	7	0.5	2.1	
12:15 - 12:30	5	0.3	3.0	
12:30 - 12:45	10	0.7	1.5	
12:45 - 1:00	6	0.4	2.5	
1:00 - 1:15	15	1.0	1.0	Includes one bay launch
1:15 - 1:30	8	0.5	1.9	
1:30 - 1:45	9	0.6	1.7	
1:45 - 2:00	11	0.7	1.4	
2:00 - 2:15	4	0.3	3.8	
2:15 - 2:30	13	0.9	1.2	Includes one bay launch
2:30 - 2:45	11	0.7	1.4	
TOTAL/AVERAGE	150	0.5	2.0	

NOTES:

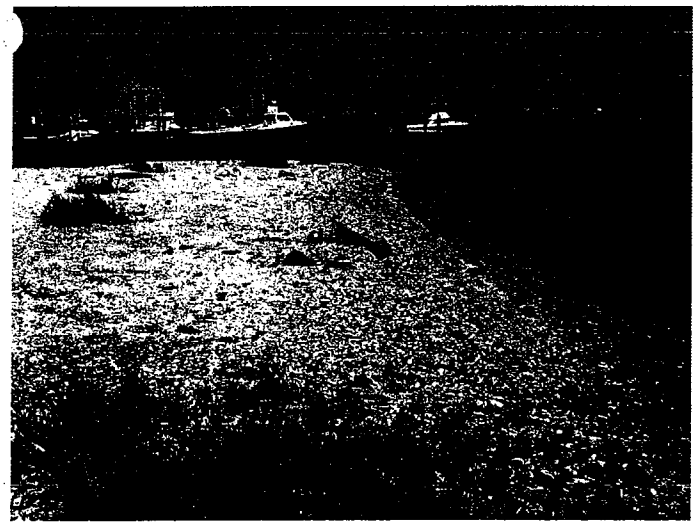
All included boats passed the property via Cedar Creek

Outgoing boats maintained slow speed out into past the mouth of Cedar Creek, while incoming boats waited until almost into Cedar Creek before reducing speed, producing more wave impact on shoreline of property.

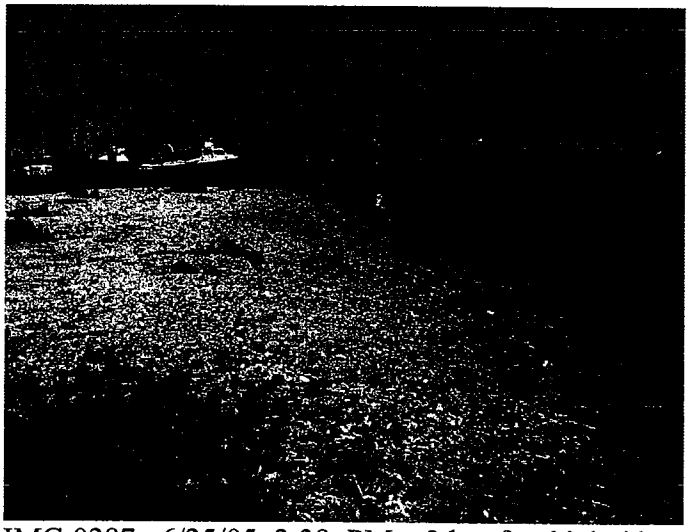
IMG 0268: 6/25/05 9:48 AM 3 hr before high tide



IMG 0280: 6/25/05 12:27 PM High Tide

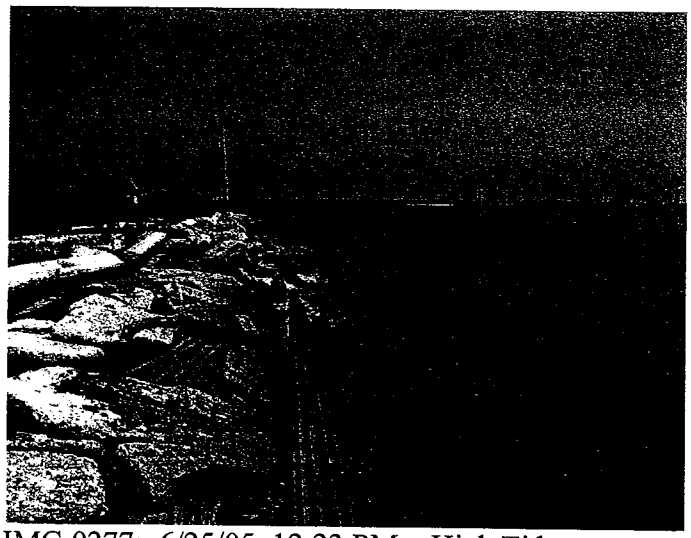


IMG 0282: 6/25/05 1:48 PM 1 hr after high tide

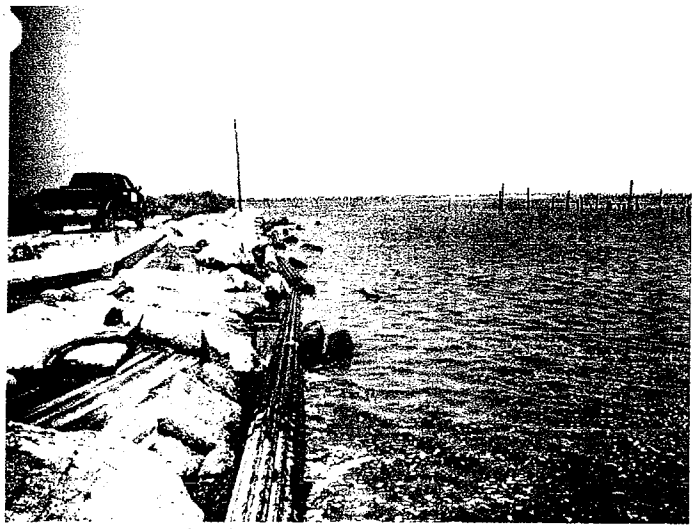


IMG 0287: 6/25/05 2:38 PM 2 hr after high tide

IMG 0265: 6/25/05 9:44 AM 3 hr before high tide



IMG 0277: 6/25/05 12:23 PM High Tide



IMG 0281: 6/25/05 1:46 PM 1 hr after high tide

IMG 0285: 6/25/05 2:36 PM 2 hr after high tide

IMG 0267: 6/25/05 9:45 AM

EXHIBIT G

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENTAL CONTROL
DIVISION OF SOIL AND WATER CONSERVATION
89 KINGS HIGHWAY
DOVER, DELAWARE 19901

DELAWARE COASTAL
MANAGEMENT PROGRAM

TELEPHONE: (302) 739-9283
FAX: (302) 739-2048

January 31, 2006

David Hardin
Environmental Resources, Inc
One Plaza East, Suite 500
106 East Main Street
Salisbury, Maryland 21801-4981

RE: Delaware Coastal Management Federal Consistency Review
Swains Wharf Marina (FC 05.083)

FEB - 4 2006

Dear Mr. Hardin:

The Delaware Coastal Management Program (DCMP) has received the additional information required to begin the review of your consistency determination for the above referenced project. Based upon our review and pursuant to National Oceanic & Atmospheric Administration regulations (15 CFR 930), the project will be placed on public notice for 30 days and the DCMP has 90 days to complete its review of the reconstruction/expansion of the Pepper Creek Marina. Our deadline for reviewing this project is April 17, 2006.

If you have any questions or concerns please contact me or Bonnie Willis of my staff at (302) 739-9283.

Sincerely,

Sarah W. Cooksey, Administrator
Delaware Coastal Programs

SWC/bmw

Cc: File 05.083
James Chaconas – DNREC/DWR
Kevin Faust – USACE Dover Office

EXHIBIT H

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENTAL CONTROL
DIVISION OF SOIL AND WATER CONSERVATION
89 KINGS HIGHWAY
DOVER, DELAWARE 19901

DELAWARE COASTAL
MANAGEMENT PROGRAM

TELEPHONE: (302) 739-9283
FAX: (302) 739-2048

March 23, 2006

David Hardin
Environmental Resources, Inc
One Plaza East, Suite 500
106 East Main Street
Salisbury, Maryland 21801-4981

RE: Additional Information Required for Federal Consistency Determination
Swains Wharf Marina (FC 05.083)

Dear Mr. Hardin:

The Delaware Coastal Management Program (DCMP) is in receipt of your Coastal Zone Federal Consistency concurrence request for the reconstruction and expansion of the proposed Swain's Wharf Marina located at the confluence of the Mispillion River and Cedar Creek, Sussex County, Delaware (FC 05.083).

Based upon our review and pursuant to *15 CFR part 930* of the National Oceanic and Atmospheric Administration regulation, we are notifying you that our review period will be extended for an additional ninety days. This will provide you time to collect and submit to the DCMP the additional information required (described below). DCMP will not be able to continue our review until this information is submitted. Our new deadline is for this project is July 17, 2006. Timely submittal of complete information is necessary to meet this deadline.

Regarding your letter dated January 12, 2006, addressing DCMP Policies for Nongame and Endangered Species and Policies for Marinas, a site visit was conducted by you from which you present data related to horseshoe crab spawning and its effect on shorebird activity. The date you conducted this survey (June 25, 2005) is very late in the horseshoe crab spawning season and does not accurately reflect spawning horseshoe crab activity and cannot be used to discern the likely activities of the foraging migratory shorebirds utilizing this area. Further, while the US Fish and Wildlife Service is continuing its review to list the Red Knot (*Calidris canutus*) as either threatened or endangered, the State of Delaware includes the Red Knot on the State's

Tier 1 Endanger Species list (State of Delaware Wildlife Action Plan) which indicates that conservation action is needed in order to sustain or restore its population. Further assessment is necessary to justifying the impacts of the marina to this species of concern. Surveys of shorebirds use of area at high and low tides for 2 weeks in May, the number of horseshoe crab divots after full and new moons and practices the marina can implement to minimize the disturbance to the area wildlife should be included.

CMP Polices Specific for Subaqueous Lands and Coastal Strip Management (#20) [State of Delaware Regulations Governing the Use of Subaqueous Lands Section 1.03(c)]

State of Delaware Regulations Governing the Use of Subaqueous Lands Section 1.03(c) lists numerous activities, including dredging, that require a permit from DNREC.

The latest information you submitted to the DCMP included water depths from a US Army Corps of Engineers survey conducted March 5, 2005. According to those figures portions of the proposed project would not have sufficient depths to operate adequately. Specifically, (5) 15' x 40' slips and the boat ramp are at depths that are not conducive to mooring or launching vessels. Based on this information, you can either submit the required dredging plan or redesign the facility so that these features are in water deep enough to support their functions.

CMP Policies Specific for Fish and Wildlife (#1) [7 Delaware Code 102(a)] and Policies Specific to Marinas (#5) [State of Delaware Marina Regulations Section II D(4)(a-e)]

7 Delaware Code 102(a)] states that "DNREC shall protect, manage, and conserve all forms of protected wildlife, and enforce by proper actions and proceedings the law relating thereto" and State Marina Regulations state that "the DNREC will consider the following impacts of proposed marina facilities on shellfish resources,

a) impacts the organisms themselves, including their ability to survive, grow and propagate, without regard to potential use by humans; and
b) impacts that may cause a violation of the Delaware Surface Water Quality Standards".

During a site visit conducted March 10, 2006, viable oyster beds were observed in the area of the proposed boat ramp. Oyster beds were once abundant along the East Coast, but have been greatly reduced in number as a result of anthropogenic impacts (Kennedy and Sanford, 1995). Oyster beds also serve as essential fish habitat (EFH) for a number of fish species (Coen, L. D.. M. W. Luckenbach, D. L. Breitburg. 1999) and are critical for the different life stages of fish species. Water and sediment contamination, including low dissolved oxygen, metals, and petroleum, have a historic association with marinas and marina operations. Benthic habitat is also at risk due to marina construction and improper boat operation which can destroy habitat and resuspend bottom sediment,

which often reintroduce toxic substances into the water column. As resuspended sediments settle, they can bury benthic organism, effectively suffocating them. Provide an assessment of the potentially negative impacts surrounding this project that may impact these shellfish or the organisms that they support and mitigation measures if these impacts cannot be avoided.

If you have any questions please do not hesitate to contact me at (302) 739-9283.

Sincerely,

Sarah W. Cooksey, Administrator
Delaware Coastal Management Program

SWC/bmw

cc: File 05.083
Kevin Faust -- USACE
Jim Chaconas – DWR
Roy Miller - DFW

References:

Coen, L.D., M.W. Luckenbach, and D.L. Breitburg, 1999. The role of oyster reefs as essential fish habitat: a review of current knowledge and some new perspectives. Pages 438--454 in L. R. Benaka, editor. Fish habitat: essential fish habitat and rehabilitation. American Fisheries Society, Symposium 22, Bethesda, Maryland.

Kennedy, V. S., and L. P. Sanford. 1995. Characteristics of Relatively Unexploited Beds of the Eastern Oyster, *Crassostrea virginica* , and Early Restoration Programs. Chapter 2. *In*, M. W. Luckenbach, R. Mann, and J. A. Wesson, Eds., Oyster Reef Habitat Restoration: A Synopsis and Synthesis of Approaches. Pp. 25-46.

EXHIBIT I

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENTAL CONTROL
DIVISION OF SOIL AND WATER CONSERVATION
89 KINGS HIGHWAY
DOVER, DELAWARE 19901

DELAWARE COASTAL
MANAGEMENT PROGRAM

TELEPHONE: (302) 739-9283
FAX: (302) 739-2048

June 30, 2006

David Hardin
Environmental Resources, Inc
One Plaza East, Suite 500
106 East Main Street
Salisbury, Maryland 21801-4981

RE: Additional Information Required for Federal Consistency Determination
Swains Wharf Marina (FC 05.083)

Dear Ms. Schwartz:

In a letter dated March 23, 2006, the Delaware Coastal Management Program (DCMP) notified you that we requested additional information and stated that we would be using the full 180 day time period to complete our review of the consistency certification for the reconstruction and expansion of the proposed Swain's Wharf Marina located at the confluence of the Mispillion River and Cedar Creek, Sussex County, Delaware (FC 05.083).

It is our understanding that the project is currently undergoing project revisions with DNREC's Wetlands and Subaqueous Lands Section and will not be completed in time to adequately review the project within the 180-day time period allotted to the DCMP through 15 CFR Part 930 Subpart D. Upon completion of these revisions, a copy must be sent to the DCMP in order to complete the review. Along with the plan revisions, please include the following:

DCMP Policies for Marinas – Policy #1

As per the State of Delaware's Marina Regulations and DCMP policies specific to marinas, this facility is required to have a pumpout unit for the removal of sewage from vessels. Include details on the type of pumpout unit to be utilized by this facility and the type pf sewage disposal system that will be used under DNREC's approval.

DCMP Policies for Onsite Wastewater Treatment and Disposal Systems

The proposed site is located in a flood zone with velocity hazard zone. Due to its locality and the increased risk to the environment that could result from the spillage of sewage from the proposed portable toilets, it is our understanding that the DNREC's Division of Water Resources, the regulatory body for control of wastewater for the State, is requiring alternative means to meeting the wastewater facility requirements for this project. Please provide in detail plans to meet the wastewater facility requirements including a copy of the permit application required by DNREC. These plans must address wastewater generated by marina employees as well as marina users.

Also, due to the flood zone rating, the structures associated with the project will have to be in compliance with the Federal Emergency Management Agency (FEMA) and the Sussex County flood zone regulations, i.e. elevating the structures to an appropriate height to prevent flood damage. Plans to comply with these regulations should be included in the revised plans.

Due to the statutes of your certification, the DCMP would like to have your agreement to place the project on hold and to agree to the terms outlined below. Failure to consent to this hold request will result in the objection of the project based on insufficient information (15 CFR §930.64(d)). The terms of this agreement are as follows:

1) The applicant will submit the above referenced information and project modifications to the DCMP within 90 days of the date of this letter. If the applicant requires longer than 90 days to provide the additional information, the applicant will be required to provide written notification to the DCMP which will include justification for the additional time and a date upon which the applicant will be able to provide the information. The DCMP will agree to any reasonable requests for extended time periods.

2) If the applicant fails to submit the information within the agreed upon time frame, the DCMP will be forced to object to the project based on insufficient information (15 CFR §930.64(d)). If at some future date the information is completed, then the applicant will be required to submit the information along with a *new* consistency certification to our office.

3) The project will then be subject to the full 180-day time period allotted to the DCMP through 15 CFR Part 930 Subpart D for review.

4) If the requested information is received within the time frame outlined above, the DCMP will defer a decision on the federal consistency

certification until the DNREC Division of Water Resources issues or denies their permit for this project.

5) Federal Consistency concurrence will not be presumed on July 17, 2006.

If you and/or your client, the G. Walter Swain, agree to the above outlined terms for placing this project on hold, please sign both copies of this letter and return one (1) copy to our office on or before July 17, 2006. If you have questions or require further clarification, please contact either myself or Bonnie Willis of my staff at (302) 739-9283.

Sincerely,

Sarah W. Cooksey, Administrator
Delaware Coastal Management Program

I, Dave Hardin, as agent for G. Walter Swain, hereby agree to the terms set forth in this letter to place on hold the review for Federal Consistency Certification for the reconstruction and expansion of the proposed Swain's Wharf Marina located at the confluence of the Mispillion River and Cedar Creek, Sussex County, Delaware (FC 05.083).

David L. Hardin — 7/13/06
David L. Hardin — Date
~~Environmental Resources, Inc~~
RESTORATION ECOLOGICAL SERVICES, INC.

SWC/bmw

cc: File 05.038
Kevin Faust - USACE
Jim Chaconas – DNREC/DWR