



STATE OF DELAWARE
**DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL**
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Office of the
Secretary

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Secretary's Order No. 2007-W-0009

Re: Application of the Division of Soil and Water Conservation for a Subaqueous Lands Permit and Water Quality Certification to Rehabilitate the Groins at Herring Point in Cape Henlopen State Park, Lewes, Sussex County

Date of Issuance: March 15, 2007

Effective Date: March 15, 2007

Under the authority granted the Secretary of the Department of Natural Resources and Environmental Control ("Department" or "DNREC") under *7 Del. C. §6003*, the following findings, reasons and conclusions are entered as an Order of the Secretary. This Order considers an application for a subaqueous lands permit and water quality certification for the proposed reconstruction of two groins¹ located at Herring Point within the Cape Henlopen State Park near Lewes, Sussex County.

On September 22, 2006, the Department's Division of Soil and Water Conservation ("DSWC") applied for a subaqueous lands permit and water quality certification for the reconstruction of two groins that were built in the mid-1950s by the United States government in order to protect the Herring Point gun battery, which was then part of the Fort Miles military base, from beach erosion. The groins have deteriorated and no longer allow for the accumulation of sand to renourish the beach at Herring Point.

¹ Groins are structures built perpendicular to a shoreline in order to control shoreline erosion.

On January 11, 2007, the Department held a public hearing on the application. The Department's Senior Hearing Officer, Robert P. Haynes, developed a record of decision on the public hearing, and prepared a report of recommendations ("Report"), dated March 5, 2007, a copy of which is appended to this Order and incorporated herein. The Report finds that the subaqueous application meets the Department's regulatory standards, and it recommends approval of the application and the issuance of a subaqueous permit and water quality certification, subject to the reasonable conditions recommended by the Department's technical experts.

The Report considers the public comments, which both opposed and supported the issuance of a permit. The Reports noted the comments in opposition, which were based upon the potential harm from increased erosion to the beach area north of Herring Point as a result of rebuilding the groins. These comments from representatives of the Sierra Club claim that groins do not prevent erosion, and may actually accelerate erosion of a beach by interfering with the natural movement of sand along a beach.

The Report also considered the comments in support of issuance of a permit from Charles Salkin, the Director of the Department's Division of State Parks and Recreation, which operates the Department's Cape Henlopen State Park. Mr. Salkin stressed the need to preserve the historic gun battery site at Herring Point from beach erosion, which in 2005 was listed on the national Historic Register. Mr. Salkin also noted that the beach erosion posed a safety risk to the visitors to the state park. In addition, representatives of several surfing groups and from the Fort Miles Historic Association spoke in support of the need for the groins to be restored in order to preserve the recreational and historic uses of the Herring Point.

The Report finds that the record provides the necessary support for issuing the permit, subject to the Department's ongoing regulation and the reasonable permit conditions. The Report determines that the Department has carefully reviewed the application, and concludes that approval of the proposed reconstruction of the two groins is consistent with the Department's statutory authority and the Department's regulations. I adopt the Hearing Officer's review of the record and recommendations.

My review of the Report and the record finds and concludes that the Department should issue a subaqueous permit to allow DSWC to conduct the regulated activities in the subaqueous lands. The purpose of groins is to control shoreline erosion. The Department determines that the shoreline at Herring Point has severely eroded in recent years, and that this erosion may be attributable to the deterioration of the groins. This deterioration after over fifty years means that the existing groins no longer accumulate sand along their updrift sides. At Herring Point, the restored groins will accumulate an estimated 72,000 cubic yards of sand that otherwise would not accumulate at that location. Thus, restoring the groins will allow them to function as they were intended, namely, to allow the natural forces to deposit sand at Herring Point and thereby create a wider beach at the base of the sand bluff.

The wider beach will protect the sand bluff from erosion, particularly from waves during storms. The protection of the sand bluff is important because of its historic Herring Point gun battery site. The 2005 designation of Fort Miles' former military facilities as a national historic site imposes on the Department a responsibility to preserve the site and protect it from harm, including the harm from natural beach erosion. The reconstruction of the groins will preserve the historic Herring Point for more years from

its greatest threat, which is the total loss due to beach erosion. The Department recognizes that the reconstruction will temporarily deprive the beach area to the north of Herring Point of the 72,000 cubic yards of sand, but this represents approximately six months of the natural movement of the sand along the beach at Herring Point. After six months the beach area to the north of Herring Point should receive the same amount of sand as before the reconstruction. Thus, the Department will have acted to preserve an important historic site and enhanced recreational opportunities and public safety.

The wider beach at Herring Point will also provide recreational benefits, particularly for those using the beach at Herring Point and surfers who ride the waves formed by the groins. The restored groins also provide a public safety benefit because they should stabilize the beach and the sand bluff. The Department's public safety concerns were highlighted by the Department's decision to close portions of Herring Point after the collapse of approximately fifteen feet along the face of the sand bluff, which was caused by beach erosion.

The Department recognizes that natural forces that cause beach erosion at Herring Point will continue with or without the groins. Nevertheless, the reconstruction will act to reverse the loss of sand at Herring Point. It will allow natural forces to deposit sand where it is needed to protect the sand bluff from erosion. The issuance of the permit will include certain reasonable conditions that the Department imposes to protect the environment and public health from the potential risk of harm. These conditions include provisions that will protect the water quality and the beach during the construction. The Department will continue to monitor the groins and the reconstruction to ensure compliance with the permit. In addition, the Department may decide that other steps are

necessary to protect the historic Fort Miles site at Herring Point, but for now the reconstruction of the groins will allow the beach to be renourished by the natural movement of sand and its accumulation along the southern side of each groins, which should provide a wider beach and protect Herring Point from erosion than if the Department did nothing.

In sum, as more fully described in the reasons and findings above and in the Report, I adopt and direct the following as a final order of the Department:

1. The Department has jurisdiction under its statutory authority to make a determination in this proceeding;
2. The Department provided adequate public notice of the permit application and the public hearing, and held the public hearing in a manner required by the law and its regulations;
3. The Department considered all timely and relevant public comments in making its determination;
4. The record supports the issuance of a subaqueous permit and water certification consistent with the applicable law and regulations;
5. The record supports the issuance of a subaqueous lands permit and water quality certification to reconstruct the existing groins as set forth in the application, subject to the reasonable and appropriate conditions that the Department shall impose to protect the environment and public health;
6. The duly authorized Department officials shall prepare and issue the permit consistent with this Order; and

7. The Department shall provide notice of this Order to the persons affected by this Order, as determined by the Department, including those persons who participated in the hearing process.

s/John A. Hughes

John A. Hughes
Secretary

HEARING OFFICER'S REPORT

TO: The Honorable John A. Hughes
Secretary, Department of Natural Resources and Environmental Control

FROM: Robert P. Haynes, Esquire
Senior Hearing Officer, Office of the Secretary
Department of Natural Resources and Environmental Control

RE: Application of the Division of Soil and Water Conservation for a Subaqueous Lands Permit and Water Quality Certification to Rehabilitate the Groins at Herring Point in Cape Henlopen State Park, Lewes, Sussex County

DATE: March 5, 2007

I. BACKGROUND AND PROCEDURAL HISTORY

On January 11, 2007, the Department of Natural Resources and Environmental Control (“DNREC” or “Department”) held a public hearing in order to consider public comments on the Division of Soil and Water Conservation’s (“DSWC”) September 22, 2006, application for a subaqueous lands permit pursuant to *7 Del. C. Chap. 72* and the Department’s *Regulations Governing the Use of Subaqueous Land* (“*Regulations*”). The application requested that the Department’s Division of Water Resources (“DWR”), Wetlands and Subaqueous Lands Section (“WSLS”) permit¹ the rehabilitation of two existing groins² (“Proposed Project”) and associated water quality certification during the reconstruction. The groins are located at Herring Point within the Department’s Cape Henlopen State Park (“CHSP”), near Lewes, Sussex County.

The groins were built in the mid 1950s by the United States government as part of its Fort Miles Military Reservation, which was an important military base to defend the entrance to the Delaware Bay. The groins are timber and rock, and extend 250 feet from the mean high water line and are situated approximately 800 feet apart. The groins were constructed to control the beach erosion of the sand bluff on which the Herring Point gun battery is located.

¹ The Secretary delegated to DWR the authority to issue subaqueous permits pursuant to 7 Del. C. Chapter .

² A groin is an artificial structure that extends perpendicular to a shoreline in order to trap and retain sand.

In the mid 1950s the United States government transferred portions of Fort Miles's land to the State of Delaware, which created CHSP. The Department's Division of State Parks and Recreation ("DSPR") now operates CHSP, which is a major recreational attraction for out-of-state tourists and Delaware residents. In 1983, the United States government transferred the land around Herring Point, including the former Herring Point gun battery facilities, to the Department on the condition that that it be used for public purposes. The Department included the land into CHSP, and Herring Point is a major attraction at the CHSP's visitors based upon its recreational uses of the beach, and as a historic site.

In 2005, the Department, working with the Fort Miles Historical Association and other state agencies, obtained from the United State Department of Interior the historical designation for the remaining Fort Miles military facilities, including those at Herring Point. This designation and placement on the National Historical Register places certain obligations on the Department to preserve the Herring Point gun battery historic site. The Department has identified the greatest threat to the site as from beach erosion at the Herring Point beach area.

The beach area at Herring Point also is used for a variety of recreation purposes, including swimming, surfing, and fishing by Cape Henlopen State Park's visitors. After the collapse in the fall of 2006 of portions of the sand bluff at Herring Point, the DSPR closed portions of the remaining bluff to public access because of concerns with the public's safety from a further collapse. The Proposed Project is intended to improve the condition and safety of the Herring Point sand bluff and beach area below it.

The Proposed Project entails removal of the existing timber portions of the groins and the placement of armor stone over the existing rock to a height of 7 feet above North America Vertical Datum³ ("NAVD"). The Proposed Project would extend the groins landward from the

³ This is a standard measurement of height.

existing groins to the base of Herring Point's sand bluff. The construction would increase the groins 100 feet for the north groin and 75 feet for the south groin from the mean high water line.

The Department provided public notice of the application and received requests for a public hearing from the Sierra Club, Robert Martin, and a petition submitted by the Surfriders Club.

A duly noticed hearing was held January 11, 2007, at the Lewes Public Library in Lewes, Sussex County. Numerous persons attended and provided written and oral comments.

II. SUMMARY OF THE PUBLIC HEARING RECORD

The public hearing record contains a verbatim transcript of the public hearing and documents introduced as exhibits. At the public hearing, Michael Powell, an environmental scientist with DSWC, introduced into the hearing record the application, related correspondence, the public notices, and the written public comments. Mr. Powell presented a slide show of photographs that showed the erosion at Herring Point. Douglas Mann, an engineer with Coastal Planning and Engineering, DSWC's consulting engineering firm, made a presentation on the Proposed Project, which he described as re-building the existing groins. Charles Salkin, Director of the DSPR, spoke in favor of the Proposed Project as necessary to protect the historic sites, and the park's visitors, even though the Proposed Project represented a change in DSPR's policy. He explained the reasons for the change in policy were the threat to the historic site from erosion and the public safety risk from further collapse of the sand bluff.

Robert Young spoke on behalf of the Sierra Club and indicated that he was a coastal engineer. He opposed the Proposed Project and stated that the groins would not prevent erosion and that the environment would be better without any artificial structures to control the movement of sand along the beach. He recommended relocating the historical structures that were threatened by beach erosion.

Robert Martin presented oral and written comments that raised issues with the Proposed Project. He suggested the use of marine mattresses, or “T” shaped groins to better dampen the wave action. His comments oppose the application because he views the groins as causing more beach erosion than otherwise would occur naturally. He also questioned the cost.

Mark Carter spoke in favor of the application on behalf of the Delaware Chapter of the Surf Rider Foundation and presented a petition signed by 295 persons. The comments supported the Proposed Project as a way to preserve the surfing at Herring Point because the groins create waves suitable for surfing conditions. Similar support was voiced by the Ocean City, Maryland Chapter, the Capital Chapter and the Annapolis, Maryland Chapter.

A representative of the Fort Miles Historical Association indicated that the organization fully supported the application as the best way to preserve the historic structures.

The Sierra Club’s Delaware Chapter also provided extensive written comments that opposed the application. The opposition was based upon the effect of any groins in changing the natural movement of sand along the beach. The Sierra Club claims that groins create a scalloping effect to a beach, which is caused by the accumulation of sand updrift of groins and the deprivation of sand and increased erosion downdrift of the groins. These comments also stated that groins also exacerbate erosion at their landward ends because storm waves run farther inland along the groins and harm the sand bluff more than otherwise. The comments also raise the removal of sand during storms. This removal is caused by the force of receding water “jetting” offshore by the groins, as opposed to being transported along the beach. The Sierra Club also requested public access to certain documents.⁴

The Department has considered all the comments in making its decision. The comments generally either support the Proposed Project in order to protect the historic sites and preserve

⁴ The Department’s public records are accessible either informally or formally through a Freedom of Information Act request. The hearing process is separate from these information gathering procedures.

the recreational uses or oppose it on the ground that the groins should not be repaired and even removed, which would allow a more natural shoreline and unimpeded movement of sand along the beach.

III. DISCUSSION AND REASONS

The Proposed Project entails the reconstruction of existing groins, which were built prior to Delaware's ownership of the land. The federal government built the groins in order to stabilize the beach area at Herring Point from the adverse consequences of erosion. The initial beach stabilization of Herring Point was to protect the Herring Point gun battery. The Proposed Project also is to stabilize and widen the beach at Herring Point, although the military defense purpose for the gun battery has been replaced by preserving them as historic artifacts. The Department is not faced with a decision to build new groins where none have previously been built.

The two groins at Herring Point are similar to other groins along Delaware's Atlantic Ocean shoreline, which also were designed and built to control the natural movement of sand along the shoreline by allowing sand to accumulate on the updrift side of a groin. These groins normally are built as part of a groin "field," which means that they are not built as a single groin. The Department recognizes that the construction of a groins is controversial based upon competing theories on what method is best to protect a shoreline from erosion. Alternatives to groins include beach nourishment through the physical placement of sand, or different construction methods, locations or shapes. The Department also could do nothing and let the groins continue to deteriorate.

I find that the Department should be proactive and take action to best protect Herring Point. The option of doing nothing is not consistent with the duty to preserve the historic structures at Herring Point. The DSPR's policy previously had been to allow natural beach

erosion to occur, but this policy needs to be revised in light of the 2005 designation of Fort Miles as a historic site. In addition, DSPR also raised valid public safety concerns, which caused DSPR to close portions of Herring Point to the public and to support the Proposed Project as the best method to control the shoreline erosion.

Faced with the options to preserve Herring Point, the DSWC noted that the prevailing conditions at Herring Point caused beach sand to move south to north along the beach, which means that the moving sand will accumulate south of each groin. The existing locations of the groins did what they were intended for over fifty years. They accumulated sand from its natural south to north movement at the location most needed to preserve Herring Point, namely, at the base of the sand bluff. DSWC's application indicates that the two existing groins have deteriorated and no longer effectively impede the movement of sand. This deterioration has caused there to be less sand in the area that protects Herring Point from erosion, the area south of each groin. This area is below the sand bluff and the sand bluff needs to be protected in order to preserve the historic Herring Point gun battery. The Department estimates that since 2001 approximately 100 feet of shoreline has eroded at Herring Point. In the year prior to the application, the Department indicates that approximately 15 feet of the bluff eroded, and that now portions of the bluff are no longer accessible to the public because of safety concerns.

The environmental impact of groins in general and the Herring Point groins in particular was debated during the hearing. Proponents of the Proposed Project advocated that the groins were needed to restore the beach conditions at Herring Point, and that the restored beach would protect the historic gun battery and the scenic bluff from the adverse consequences of erosion. The recreational users of Herring Point supported the Proposed Project for its impact on surfing conditions. The Proposed Project's opponents argued that the groins, as artificial barriers, cause more environmental harm through increased beach erosion than if sand was allowed to move

along the beach without any artificial structures. Both sides were in agreement that the beach at Herring Point was eroding and would continue to erode with or without the groins. The only real questions are whether the groins would work to shape the beach to allow sand to accumulate and thereby widen the beach at Herring Point, and, if the groins worked as proposed, would they cause environmental harm to the downdrift beach area.

DSWC prepared a memorandum at my request in order to answer certain questions raised by the public comments, which is attached hereto and incorporated herein. WSLs submitted a draft permit that reflects its recommended conditions if a permit is issued and I have consulted with the Department's experts for technical assistance. Based upon such consultations and relying on the technical expertise of the Department's personnel, I recommend that the Proposed Project should be permitted; however, the permit will include reasonable conditions that will ensure that the environment and the public are adequately protected from harm. These conditions include monitoring the groins for a reasonable period of time, protecting the water quality from not meeting water quality standards, protecting the beach from harm from construction vehicle access during construction, and a provision that will prevent any harm to endangered species.

The debate over the pros and cons of groins in general is one in which reasonable minds and experts may differ and the theoretical concepts are not subject to precise prediction on how the Proposed Project will impact the beach at Herring Point. Nevertheless, I find, based upon the Department's experts support for the Proposed Project, that it should increase the size of the beach area at Herring Point. The increase in size should occur from the natural accumulation of sand updrift of the two groins. I further find that the Proposed Project should dampen the force of wave action, which erodes the beach. The groins should act as a buffer to protect Herring Point from the adverse impacts of beach erosion caused by wave action, particularly during storms. The claim that the extension of the groins to the base of the sand bluff will harm the

sand bluff more than an unprotected beach during storms is not consistent with the Department's technical experts' conclusion. I find, based upon reasonable expert engineering estimates, that the Proposed Project temporarily will interrupt the natural south to north transport of sand along the Herring Point beach. I find that after approximately six months the downdrift area south of each groin will reach their maximum capacity to hold sand. Once this occurs, the sand will resume its northerly movement around the groins. The phased construction of the reconstruction of the groins, with the north groin reconstructed first, should allow the beach area between the groins to be naturally renourished first, which will provide the best protection for the sand bluff. This construction schedule also will reduce the time the beach is not available during the peak summer recreational season.

The comments in support focused on preserving Herring Point's recreational and historical uses. The recreational uses are surfing, sightseeing, hiking, fishing and swimming. The historic use was the Herring Point gun battery military installation on Herring Point. DSWC provided visual evidence of the considerable beach erosion that has occurred, particularly in 2006. The impact of beach erosion on the recreational uses is not as predictable as the loss of the historic structures, but DSWC indicates that the groins have created wave conditions that improve the surfing conditions. A bigger beach area at Herring Point will allow more recreational use.

In sum, I agree that the record shows that without some form of artificial intervention that the beach erosion at Herring Point will continue unabated and will eventually result in the loss of the sand bluff and the historic Herring Point gun battery facilities. The Proposed Project is a reasonable and adequately supported solution based upon reconstructing the existing groins using the latest construction and engineering methods. The reconstruction is cost effective and

will return the conditions to when the groins were first built over fifty years ago. In effect the groins have become a part of the long-term environment, albeit one artificially created.

The Proposed Project entails one solution based upon repairing and rehabilitating the existed groins. The Department recognizes that the groins, as artificial structures, do interfere with the natural movement of sand along a beach and the Department applies rigorous regulatory review to the Proposed Project. The Proposed Project is consistent with the applicable Department's *Regulations*, which set forth in Section 3 a demanding level of regulatory review. Section 3.01 sets forth evaluation considerations. I find that the Proposed Project satisfies these considerations. There will be a temporary public use impact under subsection 3.01.A, which will occur during the time necessary for the reconstruction. There also will be a long-term curtailment of vehicular access along the beach at Herring Point, but this will benefit the environment from reducing erosion caused by such access. The overall purpose of the Proposed Project is consistent with public use because it will maintain and enhance the Herring Point public beach and the public's safety. It will also preserve for the public's benefit a national historic site.

Subsection 3.01.B. requires evaluation of environmental considerations, and the Department's experts have reviewed these and report that the Proposed Project will not cause any permanent environmental harm, and that the proposed conditions to the permit will protect the environment from harm. Again, the overall impact of the Proposed Project is to protect the existing environment from the harm from natural forces on beach erosion. Subsection 3.01.C. requires consideration of other issues. Again, the Department's experts indicate that the Proposed Project satisfies Subsection 3.01.C. because it is designed with sound engineering principles, is consistent with public use, and the permit conditions will protect the water quality, shellfish and finfish from harm. Indeed, the Proposed Project's removal of the creosote treated timber in the existing groins will remove a source of water quality pollution. No treated wood

will be used in the Proposed Project. The Proposed Project was reviewed as a structure under Subsection 3.02 and found to comply with its requirements.

The Proposed Project also is subject to specific regulation as a shoreline erosion control measure in Subsection 3.04. First, Herring Point qualifies under Subsection 3.04.A.1. for a structural measure for erosion control because of the significant erosion that has occurred. Second, the Proposed Project is consistent with Subsection 3.04.A.2 because the groins are “shoreline erosion control methods that best provide for the conservation of aquatic nearshore habitat, maintain water quality, and avoid other adverse environmental consequences.” Third, the groins will be low profile stone structures and the reconstruction will use generally accepted engineering principles consistent with Subsection 3.04.A.3 and Subsection 3.04.A. 5. Finally, the proposed project is consistent and will be subject to ongoing regulation by Subsection 3.04.A.6, and Subsection 3.04.B, which together impose a duty to avoid or minimize increased erosion of adjacent or downdrift shorelines, to protect the naturally occurring littoral drift and flow, and is designed to the extent possible to minimize adverse environmental impacts.

If the Department determines that the granting of the permit will result in loss to the public of a substantial resource, then the Department may be take measures which will offset or mitigate the loss. These provisions allow the Department to approve the Proposed Project and monitor its impact in order to evaluate if future steps may be appropriate. The Department operates CHSP and obviously is interested in preserving the beach area and the historic sites for public use. The reconstruction is designed to delay the impacts of beach erosion at Herring Point in order to preserve the historic site and protect the public from harm. The Department recognizes that overall the beach at Herring Point is subject to littoral forces that will erode and accede the beach. The groins will attempt to use the natural littoral transport of sand to renourish the beach and protect historic structures.

The Department recognizes that the beach area to the north of the groins, which is also used for recreational purposes, will experience more beach erosion than otherwise would occur during the temporary period when the groins will impede the movement of sand until the area between the groins accumulates sand to capacity. The Department intends to monitor the beach area and may take other action if appropriate to mitigate any undue adverse impact on the environment. The impact of groins on shaping beaches was shown by the aerial photographs of similar groins. The fact that the Proposed Project entails the rehabilitation of the groins is an important factor because the groins have been present for approximately fifty years. In effect, the groins have become part of the environment and will continue to influence the area even if the Proposed Project is not undertaken.

I find that overall the Proposed Project will improve the environment at Herring Point and preserve valuable historic sites from erosion. The area to the north of the groins will experience some temporary impacts, but the beach conditions should soon return to normal after the reconstruction, albeit still subject to erosion from natural forces. DSWC indicated that the groins would trap approximately 72,000 cubic yards of sand, which would enhance the Herring Point beach area, and aid in the preservation of Herring Point's bluff and its historic sites. DSWC's engineer estimates that annually 150,000 cubic yards of sand move along the beach at Herring Point caused by the natural northerly littoral transport. The rehabilitation of the two groins will impede the sand's movement until the groin's southerly areas have filled in with the 72,000 cubic yards of sand, or after approximately six months. Thus, in theory the beach area to the north of the groins will receive the full amount of the northern movement of sand after six months. The long-term impact on the area to the north of the groins will not be any different than if the groins were removed, except the beach will continue to change in response to natural events. Indeed, the same impact on the beach could be created by natural rock conditions. The

rehabilitation of the two groins will not harm the beach area to the north anymore than it currently is being “harmed” by natural forces. I find that the groins will protect and preserve Herring Point and that such a purpose is consistent with the Department’s mandate to protect the environment and public health.

DSWC also addressed the issues of alternatives to the proposed rehabilitation, namely, the marine mattress and T shaped groin. I agree that these alternatives are not appropriate under the circumstances and will only add to the cost with little or no benefit over the proposed filter and cloth bedding stone design. The Department also will continue to monitor the impact from the groins. The Department may determine to take additional action in the future in response to the eventual changes caused by natural forces on the beach. At this time, the Department determines that rebuilding the two groins over two years represents the best and most prudent method to protect Herring Point and its recreational and historical resources from further harm caused by beach erosion.

WSLS applied its expertise to the regulatory findings required by the Department’s *Regulations Governing the Use of Subaqueous Lands*. These include assessing the public use, environmental impact, and other considerations. The draft permit highlights specific and standard permit conditions that the Department’s technical experts recommend imposing if the Secretary determines that the subaqueous permit should be issued. I find that the record supports approval of the subaqueous permit, subject to WSLS’s reasonable permit conditions, which are appropriate to protect the environment and public health.

In conclusion, the Department is entrusted with various statutory responsibilities and the Proposed Project encompasses many of the Department’s responsibilities. DSWC’s responsibility is to manage Delaware’s beaches and shoreline. DWR’s responsibility is to protect the water and subaqueous lands from environmental harm. DSPR also is responsible for

protecting the recreational areas within its jurisdiction, including the Cape Henlopen State Park. The Proposed Project is consistent with the Department's multiple responsibilities and duties as a careful balancing of the environmental and public safety considerations.

IV. RECOMMENDED FINDINGS AND CONCLUSIONS

Based on the record developed, I find and conclude that the record supports approval of the permit for the reconstruction of the two groins and the water quality certification. I recommend the Secretary adopt the following findings and conclusions:

1. The Department has jurisdiction under its statutory authority to make a determination in this proceeding;
2. The Department provided adequate public notice of the proceeding and the public hearing in a manner required by the law and regulations;
3. The Department held a public hearing in a manner required by the law and regulations;
4. The Department considered all timely and relevant public comments in making its determination, and followed the applicable laws and regulations in making its decision;
5. The Department should issue DSWC a permit for the activities in subaqueous lands, and water quality certification, as set forth in detail in the draft permit and the application; and
6. The Department shall serve a copy of this Order on each person who participated in the public hearing process or the Department otherwise determines may be affected by this Order.

s/Robert P. Haynes

Robert P. Haynes, Esquire
Senior Hearing Officer

To: Robert Haynes
CC: Tony Pratt
From: Michael S. Powell, Flood Mitigation Program Manager
Date: 3/21/2007
Re: Response to February 14, 2007 Memo - Herring Point Permit Hearing

My answers correspond to your questions on the attached February 14 memo. I have also included Andrew Whitman's questions to me, and my responses, from last month since there is some overlap.

- 1) Based on aerial photography, the south groin appears to have been built in the late 1950's and the north groin in the early 1960's. They were built by the U.S. government and did not become state property until this area was turned over to the state in the mid 1980's. They appear to have been upgraded from timber-only initially to timber plus rock later, before DNREC involvement. Our engineer estimates that the temporary effects of repairing the groins will last approximately six months. This is based on an estimate that the groin repairs will trap approximately 72,000 cubic yards of sand as compared to an average annual northerly littoral transport of approximately 150,000 cubic yards of sand. After that, northerly transport (bypass) will resume.
- 2) Marine mattress and filter cloth/bedding stone are alternate designs for supporting the groins from the bottom. Our engineer believes that either design is appropriate and can work at this location. After consultation with marine construction experts, and our engineer, we think the filter/cloth bedding stone design may be more economical and can be built more quickly, reducing the time that recreational uses are disrupted.
- 3) T-groins are among the alternatives that are not being pursued by us at this time. This is because the effects of that design are less consistent with some of the primary recreational uses of Herring Point (i.e. swimming, and surfing). In addition, T-groins are far more costly.
- 4) The proposed construction schedule is intended to provide protection to Herring Point as quickly as possible by beginning repairs on the north groin as soon as possible. It is important to repair the north groin first, allow sand to build the beach, then repair the south groin later to build the beach in the south portion of Herring Point. The proposed construction schedule is also intended to avoid disrupting park visitor during the peak months of June – August.
- 5) The Division intends to monitor the effects of the groins at Herring Point on beach erosion through regular land and hydrographic surveys, as we have been doing for many years. We will continue to assess beach changes and erosion and the need to place additional sand onto the beach. We will consider adding sand to the beach if needed.