

# MORRIS & RITCHIE ASSOCIATES, INC.

ARCHITECTS, ENGINEERS, PLANNERS, SURVEYORS,  
AND LANDSCAPE ARCHITECTS



June 10, 2009

Mallard Lakes Homeowners Association  
37976 Pelican Lane  
Selbyville, DE 19975

ATTN: Mr. Stacy Selby

RE: Mallard Lakes Homeowners Association  
Drainage Concept Evaluation  
MRA 16402.105

Dear Mr. Selby:

The following is a summary of our discussion pertaining to the installation of a water control structure at the Mallard Lakes Community and recommendations for a approach to the permitting and design process.

Morris Ritchie Associates (MRA) and Environmental Resources, Inc. (ERI), have reviewed the email from James T. Chaconas, project manager at DNREC Wetlands & Subaqueous Lands Branch, which indicated that it may be possible to obtain a permit for a water control structure/floodgate. The email indicated it would be important to demonstrate the need for the floodgate to show that any adverse environmental and public impacts have been minimized.

Mr. Chaconas indicated that any water control structure would need to be designed so as to allow for tidal inundation of wetlands during normal conditions.

MRA and ERI can work jointly in regard to the environmental permitting and final engineering design of a suitable water control structure. The design would likely involve constructing a 35- to 40-foot-long water control structure, proximate to the S.R. 54 right-of-way upon which flow control measures would be installed. In order to have a reasonable chance of obtaining State and Federal permits, the design will need to allow twice daily tidal flushing of existing tidal wetlands on the north side of S.R. 54. When above average tidal flooding events occurred, the structure would minimize the potential for tidal water flooding the Mallard Lakes tidal ponds and adjacent properties. The design might also include a second opening for tide gate which would allow water to be discharged from the site on all occasions. A design relying on mechanical rather than electronic means of operating the water control structure would be preferred.

Existing condition surveys in the area proximate to the tide gate, assessment of local tide ranges, delineation of wetland boundaries in the vicinity of the structure and a conceptual hydrology review will be required in order to prepare a design concept suitable for initial presentation to State and federal resource agencies.

Upon review of a conceptual design with the Mallard Lakes Board, MRA and ERI would schedule a pre-application meeting with DNREC to obtain their comments and recommendations. A second pre-application meeting with the U.S. Army Corps of Engineers would follow.

Based upon the responses received during these meetings, the Board may elect to proceed with applying for the necessary State and federal permits and developing a final design.

404 S. Bedford Street, Suite 5, Georgetown, Delaware 19947 (302) 855-5734 Fax (302) 855-0157 [www.mragta.com](http://www.mragta.com)

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Mr. Stacy Selby  
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MRA and ERI currently estimate that a budget of eight thousand, five hundred dollars (\$8,500.) would be required to prepare a conceptual design, coordinate with the Board and make presentations at State and Federal pre-application meetings.

If the Board elects to proceed with the project, a DNREC Subaqueous Land/Wetland Permit application will need to be filed along with an application for an individual Department of the Army Permit. These applications will require the preparation of detailed permit drawings and discussions regarding hydraulics and environmental impacts of the proposed project. A public notice is required for each of the permits. Coordination with other State and federal resource agencies will be required. It would not be unlikely to expect that a hearing may be required by DNREC.

The cost of final permitting, design and building a water control structure is unknown at this time, however, we believe that the Board should have an expectation of budgeting at least sixty-five thousand dollars (\$65,000.).

Anticipated permitting time for this project once applications are submitted would be 4 to 6 months at best if a DNREC public hearing is not required. In the event a hearing is required, processing time would be up to one year. Upon notice to proceed, MRA and ERI could prepare a conceptual design and schedule pre-application meetings with the resource agencies within 3 months of notice to proceed.

Please let us know if you would like to proceed with a formal proposal for the conceptual planning and design services. We look forward to hearing from you soon.

Sincerely,  
**MORRIS & RITCHIE ASSOCIATES, INC.**



Kenneth M. Usab, P.E.  
Principal

KMU/amf



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

WETLANDS & SUBAQUEOUS  
LANDS SECTION

TELEPHONE (302) 739-4691  
FACSIMILE (302) 739-6304

Subaqueous Lands Permit: SP-316/03  
Date of Issuance: 9/16/04  
Construction Expiration Date: 9/16/07  
Amended Date:  
Tax Map No.: 5-33-20-4

**SUBAQUEOUS LANDS PERMIT  
GRANTED TO THE MALLARD LAKES CONDOMINIUM ASSOCIATION TO  
CONSTRUCT 1,200 LINEAR FEET OF LOW-PROFILE RIP-RAP AND VEGETATIVE  
SHORELINE STABILIZATION IN A TIDAL LAKE CONNECTED TO MONTEGO BAY,  
ASSAWOMAN BAY AT MALLARD LAKES CONDOMINIUMS ALONG  
ROUTE 54, SELBYVILLE, SUSSEX COUNTY, DELAWARE**

Mallard Lakes Condominium Association  
c/o Dan Nelson  
194 Mallard Lakes  
Selbyville, Delaware 19975

Pursuant to the provisions of 7 Del. C., 7203, and the Department's Regulations Governing the Use of Subaqueous Lands, permission is hereby granted on this 16th day of September A.D. 2004, to construct the above referenced project in accordance with plans for this permit (5 sheets), as approved on September 9, 2004 and received by this Division on October 9, 2003 with revisions received on August 2, 2004; and application dated August 6, 2003, and received by this Division on October 9, 2003 with revisions received on August 2, 2004.

WHEREAS, pursuant to the provisions of 7 Del. C., 7203, the Secretary of the Department of Natural Resources and Environmental Control through his duly authorized representative finds that it is not contrary to the public interest if this project is approved subject to the terms and conditions herein set forth.

This Permit is issued subject to the following conditions:

*Delaware's good nature depends on you!*

### SPECIAL CONDITIONS

1. The conditions contained herein shall be incorporated into any and all construction contracts and other ancillary documents associated with earth disturbance and any other activities directly or indirectly associated with construction which may impact subaqueous lands associated with this project. The permittee and contractor are responsible to ensure that the workers executing the activities authorized by this Permit have full knowledge of, and abide by, the terms and conditions of this Permit.
2. Construction shall be conducted so as not to violate the State of Delaware Department of Natural Resources and Environmental Control, "Surface Water Quality Standards" dated August 11, 1999.
3. All construction debris, excavated material, brush, rocks and refuse incidental to such work shall be placed above the influence of surface waters.
4. Erosion and sediment control measures shall be implemented in accordance with the specifications and criteria in the Delaware Erosion and Sediment Control Handbook (1989) so as to minimize entry and dispersal of sediment and other contaminants in surface waters.
5. The top elevation of the rip-rap shall not exceed the height of the ground surface immediately adjacent to the rip-rap structure as shown on the cross-section sketches in the approved plans.
6. The rip-rap structure shall not preclude normal inundation at high tide during the daily tide cycles of the low and high marsh areas protected by the rip-rap structure.
7. There shall be no excavation channelward of the permitted alignment either before, during or after the installation of the rip-rap.
8. The rip-rap shall follow the contour of the shoreline.
9. The rip-rap shall be constructed so that it connects and aligns with the existing adjacent and rip-rap on each side.
10. Removal of wetlands and/or aquatic vegetation adjacent to the permitted construction by burning, cutting, herbicide treatments or other methods is prohibited. Removal of wetlands and/or aquatic vegetation in the path of construction shall be minimized.
11. This permit does not authorize the placement of any rip-rap or other material in front of the culvert providing the tidal connection to the Assawoman Bay.

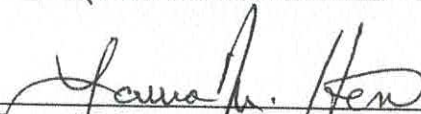
12. A copy of this Permit must be available on-site during all phases of construction activity.
13. The work authorized by this permit shall be for the explicit purpose of shoreline stabilization as stated in the permit application.

#### **GENERAL CONDITIONS**

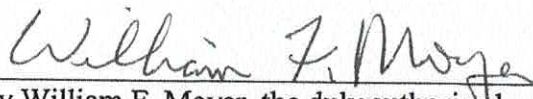
1. The project is to be undertaken in accordance with the plans submitted and attached hereto. Any activities not specifically authorized herein may require a supplemental approval from this office prior to the initiation of construction. A determination on the need for a supplemental approval will be made by this office pursuant to the permittee submitting written notification and revised plans indicating project changes to this office.
2. Representatives of the Department of Natural Resources and Environmental Control may inspect such work during any phase of the construction and may collect any samples or conduct any tests that are deemed necessary.
3. This Permit does not cover the structural stability of the project units.
4. Any actions, operations or installations which are considered by the Department to be contrary to the best interests of the public shall constitute reason for the discontinuance and/or removal of said action, operation or installation.
5. The issuance of this Permit does not imply approval of any other part, phase, or portion of any overall project the permittee may be contemplating.
6. This Permit is subject to the terms and conditions contained in any easement, license or lease that may have been granted by the State or any political subdivision, board, commission or agency of the State in the vicinity of the project.
7. This Permit and authorization are granted for the purposes as stated herein. Any other use without prior approval shall constitute reason for this Permit being revoked.
8. This Permit shall expire if the project has not been completed within three (3) years from the date of issuance.
9. If the permittee considers three (3) years insufficient for completion of the project, the permittee may submit a project time schedule for consideration by the Department. If the time schedule is approved it shall be attached hereto and made a part hereof.

10. The permittee shall notify the Department of Natural Resources and Environmental Control within ten (10) days of the date work will be commenced.
11. This Permit is personal and may not be transferred without the prior written consent of the Department. Prior to the transfer of the adjacent upland property, the permittee shall obtain the written consent of the Department to transfer this Permit to the new upland property owner. Failure to obtain such written consent may result in the revocation of this Permit and the removal of all structures authorized by this Permit at the expense of the permittee.
12. The permittee shall at all times comply with all applicable laws and regulations of the Department of Natural Resources and Environmental Control.
13. The issuance of this Permit does not constitute approval for any of the activities as may be required by any other local, state or federal governmental agency.
14. This Permit may be revoked upon violation of any of the above conditions.

IN WITNESS WHEREOF, I, Laura M. Herr, the duly authorized representative of John A. Hughes, Secretary, Department of Natural Resources and Environmental Control, have hereunto set my hand this 16<sup>th</sup> day of September, 2004.

  
By Laura M. Herr, the duly authorized  
representative of the Secretary of the  
Department of Natural Resources and  
Environmental Control

IN WITNESS WHEREOF, I, William F. Moyer, the duly authorized representative of John A. Hughes, Secretary, Department of Natural Resources and Environmental Control, have hereunto set my hand this 16<sup>th</sup> day of September, 2004.

  
By William F. Moyer, the duly authorized  
representative of the Secretary of the  
Department of Natural Resources and  
Environmental Control