

- 9) All erosion and sediment control practices shall be in place prior to any grading or filling operations and installation of proposed structures. They shall remain in place and be maintained until construction is completed and the area is stabilized.
- 10) That immediately following construction all exposed banks and slopes shall be seeded and mulched to prevent erosion.
- 11) All existing sand and gravel excavated during the removal of any structure or located below the footprint of any proposed structure must not be buried, or used as fill, but must be side cast lake ward in no more than 4 feet of water and down drift of the project area as depicted on Sheet 5a of 10, to prevent its removal from the littoral system. Side cast material should not exceed 2 foot above existing surface water level.
- 12) This permit was issued on your certification that the project is consistent with the Ohio Coastal Management Program policies pursuant to Section 1506.03 of the Ohio Revised Code. The Ohio Department of Natural Resources concurs in this certification provided you comply with any special conditions imposed by that agency. Noncompliance with any limitations or conditions stated in the certification may be a basis for suspension, revocation, or modification of this permit.
- 13) The Water Quality Certification issued for this project by the State of Ohio is part of this Department of the Army permit pursuant to Section 401(d) of the Clean Water Act. Noncompliance with any limitations or requirements stated in the certification may be a basis for suspension, revocation or modification of this permit.
- 14) You must install and maintain, at your expense, any safety lights and signals prescribed by the United States Coast Guard (USCG), through regulations or otherwise, at your authorized facilities. The USCG may be reached at the following address: Commander (oan), U.S. Coast Guard, Ninth Coast Guard District, 1240 East Ninth Street, Cleveland, Ohio 44199-2060, by telephone: (216) 902-6074, by FAX: (216) 902-6071, or by email: FRichter@uscg.mil
- 15) A formal shoreline/sand monitoring program is mandated to quantify the impoundment of sand both up drift and within the proposed structures footprint. This will establish and determine the appropriate amount of sand that will require bypassing to comply with the terms and conditions of this permit. The permittee is required to make and submit a detailed survey of the proposed project area PRIOR to any construction below OHW and then immediately after construction is completed. Surveys shall be conducted annually on the same date (or within 7 days) in June starting the year following construction. The survey report shall include:
 - a. Establishment of a survey point on the shoreline at an elevation of 573.4 IGLD that is in line with the center point of the middle breakwater. Establish transects approximately 750 feet up drift (west) and down drift (east) from the center survey point running parallel to the shoreline herein referred to as Up drift Transect and Down drift Transect (See Sheet 5a of 10). Establish additional transects perpendicular to the Up drift and down drift transects at 50-foot intervals and extend offshore out 250 feet to an approximate depth of about 8 – 10 feet of water. Once established, the same up drift and Downs drift transects should be used for each survey report.

- b. The existing lake level shall be determined and noted at the time of the survey.
- c. A table detailing each transect and the depth of the sand/bottom from the OHW taken at each sampling point along the given transect.
- d. The data collected from the survey shall be used to construct a digital elevation model. The model shall be developed by importing the data into a CAD like program to allow the generation of contours and to more accurately compare before and after project surveys. A detailed survey of the completed project area which satisfies the survey parameters detailed above shall be taken annually for years 1-10 after completion of construction. This requirement may be waived for years 6, 8 and 9 if, after the first five years it is determined the bypassing of sand is not necessary. These surveys shall be compared to the initial survey to determine if there has been sand accretion or erosion, and to the extent possible, quantify the cubic yardage of such accretion or erosion. Detailed survey measurements, accompanying analysis, and recommended bypass amounts must be submitted and received no later than annually July 1st to the attention U.S. Army Corps of Engineers, Chantelle Carroll, 33 Grand Valley Ave, Orwell, OH 44076.
- e. Once reports are received, the recommended amount of sand for bypassing will be determined by U.S. Army Corps of Engineers. The permittee shall remove trapped sediment and place it immediately down drift of the proposed project along the shoreline or in the near shore region at a depth of 4 feet or less. The permittee shall maximize the potential for the bypassed sand to remain in the littoral drift zone and minimize loss of sand in deeper water due to cross-shore transport.
- f. Following mandatory report Years 1 to 10 of the monitoring period (unless this requirement is waived for years 6, 8 and 9), if further action is necessary to maintain adequate littoral processes the Corps can order the Permittee to perform one or more of the following type of activities to include but not be limited to:
 - 1. Additional yearly monitoring or bypassing events
 - 2. Additional monitoring beyond 10 years
 - 3. Modification or removal of one or more of the detached offshore breakwaters
 - 4. Additional bypass of sand in order to maintain a distance greater than 15 feet between the toe of the south face of any detached offshore breakwater and the water elevation.
 - 5. Additional sand pre-fill.

16) In addition within the project limits the survey report shall include:

- a. The existing site conditions shall be photographed immediately following the completion of project construction and at the same approximate times in July as the above mentioned surveys for year 1 through 5, year 7, and year 10. Photographs shall be taken, at the same approximate location each year, and shall include but not limited to the following:

Photographs shall be taken near the edge of the top of the bluff facing water ward:

- i. At least one photograph at the west property boundary looking water ward.

- ii. At least one photograph (moving west to east) of each of the detached offshore breakwaters, for three photographs total.
- iii. Panoramic photograph(s) (or similar view as practicable) of the three breakwaters.
- iv. At least one photograph at the east property boundary looking water ward.
- v. At least one photograph from the eastern property line facing east, looking at the near shore area of the down drift properties.

Photographs shall be taken standing at the shoreline:

- i. At least one photograph from the center of the property shoreline looking west.
- ii. At least one photograph from the center of the property shoreline looking east.
- iii. At least one photograph from the eastern property shoreline facing east, looking at the down drift properties.

Photographs shall be taken from the detached offshore breakwaters facing shoreward:

- i. At least one photograph from the center of each detached offshore breakwater facing south toward the shoreline.
 - ii. At least three photographs from the eastern end of the eastern detached offshore breakwater facing south, south/southeast and southeast.
- b. If the distance between the center of the toe of the south face of any detached offshore breakwater and the water line on the day of the survey is less than 15 feet and/or the depth to sand is less than elevation 568 feet IGLD, sand shall be bypassed down-drift in the near shore waters (less than 4 feet deep). Sand bypassing shall be performed with a backhoe, front-end loader, excavator, or hydraulic pump in order to maintain the 15-foot gap. The sand shall be excavated to a depth of 568 IGLD. If a tombolo starts to form or has formed, it will need to be removed and the sand by-passed down drift.
- c. If the distance of open water between the south face of any detached offshore breakwater and shoreline as depicted in Sheets 5 of 10 through Sheet 7 of 10 is greater than the initial 65 feet +/- feet then the placement of additional sand pre-fill shall be performed as required to maintain the authorized 25 feet wide sand pre-fill area.
- 17) That at the request of an authorized representative of the Buffalo District, U.S. Army Corps of Engineers, you shall allow access to the project site to determine compliance with the conditions of this permit.
- 18) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
- 19) The permittee must provide documentation of establishment of a financial assurance mechanism for the survey, monitoring, and possible removal of the project through a

Corps approved method incorporating model language provided by the Corps or other language approved in writing by the Corps to be filed within 6 months of completion of project. The financial assurance mechanism must remain valid throughout the initial ten year monitoring to assure the continued bypassing of sand in the event if the property is sold or transferred or the project is determined to be unsuccessful.