

# MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY PERMIT

## ISSUED TO:

Harbor Shores Community Redevelopment, Inc.  
900 Fifth Third Center  
111 Lyon Street NW  
Grand Rapids, MI 49503

<b>Permit No.</b>	06-11-0142-P
<b>Issued</b>	May 9, 2007
<b>Extended</b>	
<b>Revised</b>	
<b>Expires</b>	May 9, 2012

This permit is being issued by the Michigan Department of Environmental Quality (MDEQ) under the provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) and specifically:

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|---|--|
| <input checked="" type="checkbox"/> Part 301 Inland Lakes and Streams             | <input type="checkbox"/> Part 315 Dam Safety                           |
| <input type="checkbox"/> Part 325 Great Lakes Submerged Lands                     | <input type="checkbox"/> Part 323 Shorelands Protection and Management |
| <input checked="" type="checkbox"/> Part 303 Wetlands Protection                  | <input type="checkbox"/> Part 353 Sand Dune Protection and Management  |
| <input checked="" type="checkbox"/> Part 31 Floodplain/Water Resources Protection |  |

Permission is hereby granted, based on permittee assurance of adherence to State requirements and permit conditions to:

### Permitted Activity:

#### Wetlands:

Place approximately 35,500 cubic yards of fill, within a maximum of 3.82 acres of regulated wetland. In three separate areas, excavate as necessary from upland, to restore 7.84 acres of wetlands, as wetland mitigation. Construct six permanent, open pile boardwalks over regulated wetlands, measuring a total of approximately 2,000 linear feet, with a maximum width of 12 feet.

#### Floodplains:

Place 54,780 cubic yards of fill within the 100-year floodplain and provide 59,600 cubic yards of compensating floodplain cut to offset the proposed loss of flood-storage.

#### Rivers and Streams:

- Stream enclosure and culverts:** Enclose a maximum of 1,060 linear feet of stream, portions of which are North Shore County Drain, in concrete reinforced culvert. Mitigation is required for this entire enclosure. Place two additional culverts in North Shore County Drain, each measuring 48 inches diameter and a maximum of 14 feet long. Place riprap at all culverts.
- Bridges:** Construct three cart/pedestrian bridges across the Paw Paw River, each measuring 14 feet wide, with a 9-foot rise, and at lengths specified on attached plans. Place approximately 10 cubic yards of riprap at each bridge abutment, for scour protection. Construct three cart bridges across other small streams, as shown on the attached plans and specifications.
- Boat launch:** Excavate approximately 300 cubic yards of material below the Ordinary High Water Mark of the Paw Paw River; replace approximately 50 cubic yards of base material; and place concrete planks measuring 40 feet wide, by 66 feet long. Install a skid pier measuring a maximum of 45 feet long by 5 feet wide.

The purpose of this project is to construct a golf course, cart paths, roads, a public boat launch, and relocate utilities, as part of an economic revitalization project. All work shall be performed in accordance with the attached modified plans, specifications, and other documents referenced in the below conditions.

**Regulated Resources:** Paw Paw River; streams (North Shore County Drain; unnamed tributaries); wetlands; floodplains

**Location:** Berrien County; City of Benton Harbor, City of St. Joseph, Benton Charter Township

**Town/Range** 4S, 18W **Section** 18

**Town/Range** 4S, 19W **Sections** 12, 13, 14

Authority granted by this permit is subject to the following limitations:

- A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
- B. The permittee in exercising the authority granted by this permit shall not cause unlawful pollution as defined by Part 31, Floodplain/Water Resources Protection of the NREPA.
- C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
- D. All work shall be completed in accordance with the plans and the specifications submitted with the application and/or plans and specifications attached hereto.
- E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved herein.
- F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with Act 53 of the Public Act of 1974 and comply with each of the requirements of that act.
- G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits or complying with other state statutes.
- H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
- I. Permittee shall notify the MDEQ within one week after the completion of the activity authorized by this permit, by completing and forwarding the attached, preaddressed post card to the office addressed thereon.
- J. This permit shall not be assigned or transferred without the written approval of the MDEQ.
- K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific State Act, Federal Act and/or Rule under which this permit is granted.
- L. Work to be done under authority of this permit is further subject to the following special instructions and specifications.

AUTHORITY GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING ADDITIONAL CONDITIONS AND LIMITATIONS:

**M. AUTHORIZATIONS REQUIRED BY OTHER AGENCIES:**

Permittee is advised of the potential need to obtain additional authorization from other federal, state, and local agencies as follows:

1. **The majority of activities authorized by this permit also require authorization from the U.S. Army Corps of Engineers (USACE). Authority granted by this permit does not waive any USACE jurisdiction or the need for federal permits.**
2. This permit does not obviate the need for authorization from the Berrien County Drain Commissioner, for the work proposed for North Shore County Drain, Sawyer County Drain, and any other resources regulated by that office.
3. Authority granted by this permit does not waive permit requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA, or the need to acquire applicable permits. Prior to construction of the golf course, a soil erosion and sedimentation control plan must be developed, and approved by the Berrien County Drain Commissioner.
4. A storm water discharge permit may be required under the Federal Clean Water Act for construction activities that disturb one or more acres of land and discharge to surface waters. For sites over five (5) acres, the permit coverage may be obtained by a Part 91, Soil Erosion and Sedimentation Control (SESC), permit and filing a "Notice of Coverage" form to the MDEQ's Water Bureau. For sites with disturbance from one acre up to five acres, storm water coverage is automatic once the SESC permit is obtained. These one to five acre sites are not required to apply for coverage, but are required to comply with storm water discharge permit requirements. Information on the storm water discharge permit is available from the Water Bureau's Storm Water Permit Program by calling 517-373-8088, or Water Bureau staff at the Kalamazoo District office.
5. The permittee is hereby cautioned that any discharge of sediment into waters of the state is a violation of Part 31, Water Resources Protection, of the NREPA. Any sedimentation caused by the construction activities subjects the permittee to provisions of Part 31.
6. All work shall comply with other appropriate Parts of NREPA, including, but not limited to: Part 365, Endangered Species Protection (see below); Part 201, Environmental Remediation; and Part 115, Solid Waste Management.
7. This permit does not authorize the additional regulated activities that are currently under consideration, as part of the parkland mitigation requirements of the Michigan Natural Resources Trust Fund Board,

for conversion of parklands in Jean Klock Park. The Land and Water Management Division has reviewed conceptual plans for Jean Klock Park parkland mitigation, and will consider those activities under a separate application.

**N. PROPERTY OWNERSHIP/PERMISSION:**

The permittee has not submitted written permission from Donald Boerma (Property ID 11-54-0013-0030-11-6, or also referred to as property #18), for construction of approximately 325 feet of at-grade cart path, and one of the Paw Paw River bridges. **Before commencing any regulated activities on this property**, the permittee shall provide either written permission from the owner, or documentation that Harbor Shores has secured easement or ownership of the necessary property.

**O. STATE AND/OR FEDERALLY PROTECTED SPECIES:**

1. Issuance of this permit does not obviate the need to obtain approval under Part 365, Endangered Species, of the NREPA, from the Michigan Department of Natural Resources (DNR) prior to commencement of construction activity.

2. The following special plants and animals are known to occur within the overall project area

Plants

Rose-pink	<i>Sabatia angularis</i>	state threatened
Wild sweet potato	<i>Ipomoea pandurata</i>	state threatened
Prairie trillium	<i>Trillium recurvatum</i>	state threatened
Swamp rose mallow	<i>Hibiscus moscheutos</i>	state special concern

Animals

Eastern box turtle	<i>Terrapene carolina carolina</i>	state special concern
Blandings turtle	<i>Emydoidea blaningii</i>	state special concern

If these or other turtles are observed during construction activities, they should be carefully set aside to avoid harm.

3. In addition, the Indiana bat (*Myotis sodalists*), a federally endangered animal, is potentially present. To prevent a "take" of Indiana bat, there shall be no tree clearing during the period of **April 1 through September 30**, in any permit year. If the permittee determines that tree clearing is necessary during this period, the permittee shall: 1) submit a report and request to the MDEQ, with copies to the US Fish and Wildlife Service (USFWS) and the US Environmental Protection Agency (USEPA); 2) proceed with tree clearing **ONLY** after receiving clearance from USFWS/USEPA, that a take will not occur.

4. Under Part 365 of the NREPA, Endangered Species Protection, all threatened or endangered species, including those listed above, are protected from a "take". Areas where these species exist should be avoided and protected from harm from all activities associated with this project and in perpetuity from future activities. The permittee shall not undertake an activity that will result in a take of a protected plant or animal. The Michigan Department of Natural Resources (DNR), Wildlife Division, administers Part 365. An endangered species permit is required from the DNR if activities will harm threatened or endangered species, including transplanting them to a new location.

5. In areas where threatened species are known to occur, the permittee shall implement all necessary measures to avoid a take. Precautionary steps must be taken in design, construction, and post-construction. The permittee shall comply with all requirements and conditions of the attached March 21, 2007 letter from Todd C. Hogrefe of the Michigan DNR, to Harbor Shores' agent, Joseph R. von Wahldt of JFNew.

6. Be advised, the DNR Fisheries Division is assessing the project area for several other special aquatic animals such as lake sturgeon, snuffbox, elktoe, slippershell mussel, and round pigtoe.

**P. STREAM ENCLOSURE AND MITIGATION:**

1. **Stream Enclosure**

- a. **Regulated activities shall not begin** until a comprehensive stream mitigation plan has been approved by the DEQ and USEPA. This includes an appropriately-valued financial assurance mechanism, approved by the DEQ, and fully implemented.
- b. Construction of the stream enclosure, including stabilization of the steep fill slopes, shall not result in an unlawful discharge of soil/sediment into the stream and the Paw Paw River. The permittee is encouraged to work closely with both the Berrien County Drain Commissioner, and with MDEQ-Water Bureau construction site stormwater staff, to develop an acceptable soil erosion/sedimentation control plan.
- c. All enclosure culverts shall be installed with partial open joints, to allow for infiltration of groundwater, to maintain cold base flows.
- d. Baffles depicted in the proposed pre-cast concrete outlet structure are required at the outlet structure, to disburse discharge energy.
- e. The enclosure of the stream shall not remove Part 301 authority over that stretch of stream (i.e., the enclosed portion of the stream shall still be regulated under Part 301). Further, any wetland area within 500 feet of the enclosure shall be contiguous, and regulated under Part 303.
- f. No work shall be done in the stream during periods of above-normal flows except as necessary to prevent erosion.
- g. Side slopes shall not be steeper than 1-on-2 (1 vertical to 2 horizontal) except where headwalls of reinforced concrete, mortar masonry, dry masonry, or other acceptable methods are used.
- h. Side slope fill terminating in the stream and any raw streambanks resulting from this construction shall be riprapped to three feet above the ordinary high water mark.

## 2. **Stream Mitigation**

The permittee shall develop a comprehensive stream mitigation plan, for review and approval by the DEQ and the USEPA. Appropriate state and federal agencies shall be provided the opportunity to review the proposed mitigation sites. The mitigation plan shall be modeled after the MDEQ's requirements for wetland mitigation (e.g., shall include such things as monitoring, and performance standards). The mitigation ratio shall range from 1:1 to 4:1, depending on the final project design. Permanent protection of the stream mitigation area, in the form of a conservation easement or other similar tool, will be required. A required element of the mitigation plan is a financial assurance mechanism (e.g., bond; letter of credit). The mitigation plan must include a detailed estimate of the entire costs of mitigation, including acquisition/easements, design, construction, planting, monitoring, etc.

## Q. **FLOODPLAINS:**

1. The design flood or 100-year floodplain elevation at this location on the Paw Paw River is 585.0 feet NGVD29 from the downstream project limits up to cross-section 123 in the HEC-RAS model submitted on March 19, 2007 (approximately 1,500 feet upstream of the Klock Road bridge crossing). The 100-year floodplain varies from 585.0 feet NGVD29 at cross-section 123 to 587.0 feet NGVD29 at cross-section 175 (approximately 30 feet downstream of the Paw Paw Avenue bridge crossing).
2. This permit does NOT authorize the construction of any buildings within the 100-year floodplain.
3. The compensating cut (excavations) for floodplain fill, as required by this permit, shall be completed prior to, or concurrently with, the placement of the fill. The compensating cut and fill areas shall be properly stabilized to prevent soil erosion and off site sedimentation.
4. The proposed fill is located in a mapped portion of an MDEQ-approved flood delineation report as identified by administrative rule R 323.1314. A final Letter of Map Revision based on fill (LOMR-F) must

be obtained from the Federal Emergency Management Agency (FEMA) before this permit expires. The requirements found in Section 65.5(a) of the FEMA's 44 CFR Part 65 must be followed. Under this revision process, the local community must determine that the land and any existing or proposed structures are "reasonably safe from flooding." The professional engineer shall utilize the FEMA's Technical Bulletin 10-01 to ensure that structures built on fill in the 100-year floodplain are reasonably safe from flooding. This bulletin can be obtained at [www.fema.gov/mit/techbul.htm](http://www.fema.gov/mit/techbul.htm). The community must keep a record of all analyses and documentation used to make that determination. The community may require that the property owner's professional engineer provide this determination.

5. This permit does not authorize the portion of the proposed Graham Ave extension that runs north-south. Incomplete information/data was provided by the applicant to authorize this portion of the proposed road. A new application, or permit revision, must be submitted for the portion of proposed Graham Avenue between the boat launch and Whitwam Drive.

R. **WETLAND MITIGATION AND IMPACT REDUCTION:**

1. **Wetland Mitigation**

The permittee shall, as a primary condition of this permit, mitigate the loss of 3.82 acres of wetland, consisting of approximately 0.40 acres of forested, 0.74 acres of shrub-scrub, 2.54 acres of emergent, and 0.14 acres of aquatic bed/open water wetland. The authorization granted by this permit is contingent upon the completion of wetland mitigation as follows:

- a. Three new wetland areas, totaling 7.84 acres and consisting of a minimum of 0.80 acres of forested wetland and an additional 7.04 acres of emergent and/or shrub-scrub wetland, shall be created in accordance with mitigation plans pending approval by the MDEQ. If the permit conditions modify the mitigation plan, the permit conditions shall take precedence over the mitigation plan.
- b. The mitigation grading, planting, and introduction of hydrology shall be constructed prior to or concurrent with other permitted activities. A status report shall be submitted to the DEQ every 6 months from the date of final permit issuance, if mitigation construction is not complete.
- c. The permittee shall provide a bond or letter of credit to the MDEQ in a form identical to the financial assurance models on the MDEQ's website at [www.michigan.gov/deqwetlands](http://www.michigan.gov/deqwetlands) in the amount of \$300,000.00, to ensure that the replacement wetlands are constructed, the conservation easements are recorded, monitoring is completed, and corrective actions are performed as required to comply with the mitigation requirements and conditions of this permit. **The financial assurance document must be provided and accepted by the MDEQ, prior to signature of this permit by the MDEQ.**

Prior to the transfer of this permit to another person, the new person must obtain and provide a financial instrument acceptable to the MDEQ in the name of the new person and in the amount required by this permit.

Upon request of the permittee and with the submittal of adequate proofs, the MDEQ may release portions of the financial instrument in accordance with the following guidelines:

- 50% of the financial instrument may be release after the MDEQ concurs that the mitigation grading, planting, and proper hydrology, have been established.
  - The remaining 50% of the financial instrument will be released upon all of the following:
    - 1) Submittal of all the required monitoring reports,
    - 2) Substantial compliance with the performance standards as outlined in this permit, and
    - 3) Final approval by the MDEQ.
- d. The permittee shall execute conservation easements over the mitigation sites as shown on the final mitigation plans, in a form identical to the conservation easement model on the MDEQ's website at [www.michigan.gov/deqwetlands](http://www.michigan.gov/deqwetlands). The original executed conservation easements and associated

exhibits must be sent to the MDEQ for review and recording **within 60 days of the final issuance** of this permit. Send to: Conservation Easement Coordinator, MDEQ, Land and Water Management Division, P.O. Box 30458, Lansing, Michigan, 48909, with a copy of the executed easement mailed to the District Office address above.

The conservation easement boundary shall be demarcated by the placement of signage along the perimeter. The signage shall be placed at an adequate frequency, visibility, and height for viewing, made of a suitable material to withstand climatic conditions, and should be replaced as needed. The signage shall include the following language:

WETLAND CONSERVATION EASEMENT  
NO CONSTRUCTION OR PLACEMENT OF STRUCTURES ALLOWED.  
NO MOWING, CUTTING, FILLING, DREDGING OR  
APPLICATION OF CHEMICALS ALLOWED.  
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

Except as otherwise provided by this permit or approved in writing by the MDEQ, the following activities are prohibited in perpetuity within the mitigation areas: alteration of topography, creation of paths, trails, or roads; placement of fill, dredging, or excavation; drainage of surface or groundwater; construction or placement of any structure; plowing, tilling, or cultivating the soils or vegetation; cutting, removal, or alteration of vegetation; including the planting of non-native plant species; construction of unauthorized utility or petroleum lines; storage or disposal of garbage, trash, debris, abandoned equipment; accumulation of machinery or other waste materials; use or storage of off-road vehicles; placement of billboards or signage; or the use of the wetland for the discharge of storm water.

- e. The mitigation sites shall not be fine graded, but shall be left in a rough grade state (allowing for the establishment of micro-topography). Any planting or seeding of the mitigation sites must consist of native Michigan plant materials.
- f. The permittee shall notify the MDEQ's District Office, in writing and within 20 days of completion, of each of the following items:
  - 1) Final grading;
  - 2) Seeding and plant installation.
- g. In the event the permitted activity is begun but not completed, the permittee or owner of record shall remain responsible for completion of the mitigation wetlands and associated conditions, as determined by the MDEQ. Such determinations shall be based upon the extent of the disturbance to the existing wetlands.
- h. Should the mitigation wetlands fail to become established after two complete growing seasons, or fail to progress satisfactorily towards a self-sustaining wetland system as required by this permit, the permittee shall:
  - 1) Assess the problem and its probable causes;
  - 2) Develop reasonable and necessary corrective measures as a revision to original plans;
  - 3) Submit proposed corrective measures to the MDEQ for confirmation and approval within 60 days of identification of the problem; and
  - 4) Upon MDEQ approval, implement corrective measures.

Additional mitigation monitoring may be required to evaluate the success of the corrective measures.

## 2. **Wetland Mitigation Performance Standards**

The following performance standards will be used to evaluate the mitigation wetlands:

- a. Construction has been completed in accordance with the MDEQ's approved plans and specifications included in the mitigation plan.

- b. The mitigation wetlands are characterized by the presence of water at a frequency and duration sufficient to support a predominance of wetland vegetation and the wetland types specified at the end of the monitoring period.
- c. A layer of high-quality topsoil, from the A horizon of an organic or loamy surface texture soil, is placed (or exists) over the entire wetland mitigation area at a minimum thickness of six inches.
- d. The mitigation wetlands shall be free of oil, grease, debris, and all other contaminants.
- e. A minimum of six (6) habitat structures, consisting of at least three (3) types, have been placed per acre of mitigation wetland. At least 50 percent of each structure shall extend above the normal water level. The types of acceptable wildlife habitat structures are:
  - 1) Tree stumps laid horizontally within the wetland area. Acceptable stumps shall be a minimum of 6 feet long (log and root ball combined) and 12 inches in diameter.
  - 2) Logs laid horizontally within the wetland area. Acceptable logs shall be a minimum of 10 feet long and 6 inches in diameter.
  - 3) Whole trees laid horizontally within the wetland area. Acceptable whole trees shall have all of their fine structure left intact (i.e., not trimmed down to major branches for installation), be a minimum of 20 feet long (tree and root ball), and a minimum of 12 inches in diameter at breast height (DBH).
  - 4) Snags which include whole trees left standing that are dead or dying, or live trees that will be flooded and die, or whole trees installed upright into the wetland. A variety of tree species should be used for the creation of snag habitat. Acceptable snags shall be a minimum of 20 feet tall (above the ground surface) and a minimum of 12 inches DBH. Snags should be grouped together so as to provide mutual functional support as nesting, feeding, and perching sites.
  - 5) Sand mounds at least 18 inches in depth and placed so that they are surrounded by a minimum of 30 feet of water measuring at least 18 inches in depth. The sand mound shall have at least a 200 square foot area that is 18 inches above the projected high water level and oriented to receive maximum sunlight.
- f. Mean percent cover of native wetland species in the herbaceous layer at the end of the monitoring period is not less than:
  - 80 percent for forested wetland.
  - 80 percent for scrub-shrub wetland.
  - 60 percent for emergent wetland.
  - 80 percent for wet meadow wetland.

Extensive open water and submergent vegetation areas having no emergent and/or floating vegetation shall not exceed 20 percent of the mitigation wetland area. Extensive areas of bare soil shall not exceed five percent of the mitigation wetland area. For the purposes of these performance standards, extensive refers to areas greater than 0.01 acre (436 square feet) in size.

The total percent cover of wetland species in each plot shall be averaged for plots taken in the same wetland type to obtain a mean percent cover value for each wetland type. Plots within identified extensive open water and submergent areas, bare soil areas, and areas without a predominance of wetland vegetation shall not be included in this average. Wetland species refers to species listed as facultative and wetter (FAC, FAC+, FACW-, FACW, FACW+, OBL) on the U.S. Fish and Wildlife Service's "National List of Plant Species That Occur in Wetlands" for Region 3.

- g. The mitigation wetlands support a predominance of wetland vegetation (as defined in the "MDEQ Wetland Identification Manual") in each vegetative layer, represented by a minimum number of native wetland species, at the end of the monitoring period. The minimum number of native wetland species per wetland type shall not be less than:
  - 15 species within the forested wetland.

- 15 species within the scrub-shrub wetland.
- 15 species within the emergent wetland.
- 20 species within the wet meadow wetland.

The total number of native wetland plant species shall be determined by a sum of all species identified in sample plots of the same wetland type.

h. At the end of the monitoring period, the mitigation wetlands support a minimum of:

Three hundred (300) individual surviving, established, and free-to-grow trees per acre in the forested wetland that are classified as native wetland species and consisting of at least three different plant species. Three hundred (300) individual surviving, established, and free-to-grow shrubs per acre in the scrub-shrub wetland that are classified as native wetland species and consisting of at least four different plant species. Eight (8) native wetland species of grasses, sedges, or rushes in the wet meadow wetland.

i. The mean percent cover of invasive species including, but not limited to, *Phragmites australis* (Common Reed), *Lythrum salicaria* (Purple Loosestrife), and *Phalaris arundinacea* (Reed Canary Grass) shall in combination be limited to no more than ten (10) percent within each wetland type. Invasive species shall not dominate the vegetation in any extensive area of the mitigation wetland.

If the mean percent cover of invasive species is more than ten (10) percent within any wetland type or if there are extensive areas of the mitigation wetland in which an invasive species is one of the dominant plant species, the permittee shall submit an evaluation of the problem to the MDEQ. If the permittee determines that it is infeasible to reduce the cover of invasive species to meet the above performance standard, the permittee must submit an assessment of the problem, a control plan, and the projected percent cover that can be achieved for review by the MDEQ. Based on this information, the MDEQ may approve an alternative invasive species standard. Any alternative invasive species standard must be approved in writing by the MDEQ.

If the mitigation wetland does not satisfactorily meet these standards by the end of the monitoring period, or is not satisfactorily progressing during the monitoring period, the permittee will be required to take corrective actions.

### 3. **Wetland Mitigation Monitoring**

a. The permittee shall monitor the wetland mitigation for a minimum of five (5) years following mitigation grading, planting, and introduction of hydrology. A monitoring report, which compiles and summarizes all data collected during the monitoring period, shall be submitted annually by the permittee. Monitoring reports shall cover the period of January 1 through December 31 and be submitted to the MDEQ prior to January 31 of the following year. The permittee shall conduct the following activities and provide the information collected in the monitoring reports:

- 1) Measure inundation and saturation at all staff gauges, monitoring wells, and other stationary points shown in the mitigation three times per year during the growing season. Hydrology data shall be measured and provided at sufficient sample points to accurately depict the water regime of each wetland type.
- 2) Sample vegetation in plots located along transects shown in the mitigation plan once between July 15 and August 31. The number of sample plots necessary within each wetland type shall be determined by use of a species-area curve or other approach approved by the MDEQ. The minimum number of sample plots for each wetland type shall be no fewer than five (5). Sample plots shall be located on the sample transect at evenly spaced intervals or by another approach acceptable to the MDEQ. If additional or alternative sample transects are needed to sufficiently evaluate each wetland type, they must be approved in advance in writing by the MDEQ.

The herbaceous layer (all non-woody plants and woody plants less than 3.2 feet in height) shall be sampled using a one square meter sample plot. The shrub and tree layer shall be sampled

using a 30-foot radius sample plot. The data recorded for each herbaceous layer sample plot shall include a list of all living plant species, and an estimate of percent cover in five (5) percent intervals for each species recorded, bare soil areas, and open water relative to the total area of the plot. The number and species of surviving, established, and free-to-grow trees and surviving, established, and free-to-grow shrubs shall be recorded for each 30-foot radius plot.

Provide plot data and a list of all the plant species identified in the plots and otherwise observed during monitoring. Data for each plant species must include common name, scientific name, wetland indicator category from the U.S. Fish and Wildlife Service's "National List of Plant Species That Occur in Wetlands" for Region 3, and whether the species is considered native according to the Michigan Floristic Quality Assessment (Michigan Department of Natural Resources, 2001). Nomenclature shall follow Voss (1972, 1985, and 1996) or Gleason and Cronquist (1991).

The locations of sample transects and plots shall be identified in the monitoring report on a plan view showing the location of wetland types. Sample transects shall be permanently staked at a frequency sufficient to locate the transects in the field.

- 3) Delineate any extensive (greater than 0.01 acre in size) open water areas, bare soil areas, areas dominated by invasive species, and areas without a predominance of wetland vegetation, and provide their location on a plan view.
  - 4) Document any sightings or evidence of wading birds, songbirds, waterfowl, amphibians, reptiles, and other animal use (lodges, nests, tracks, scat, etc.) within the wetland noted during monitoring. Note the number, type, date, and hour of the sightings and evidence.
  - 5) Inspect the site, during all monitoring visits and inspections, for oil, grease, man-made debris, and all other contaminants and report findings. Rate (e.g., poor, fair, good, excellent) and describe the water clarity in the mitigation wetland.
  - 6) Provide annual photographic documentation of the development of the mitigation wetland during vegetation sampling from permanent photo stations located within the mitigation wetland. At a minimum, photo stations shall be located at both ends of each transect. Photos must be labeled with the location, date photographed, and direction.
  - 7) Provide one-time photographic documentation during construction of the placement of at least six (6) inches of high quality soil, from the A horizon of an organic or loamy surface texture soil, across the site.
  - 8) Provide the number and type of habitat structures placed and representative photographs of each structure type.
  - 9) Provide a written summary of data from previous monitoring periods and a discussion of changes or trends based on all monitoring results. This summary shall include a calculation of the acres of each wetland type established, a plan view drawing depicting each ecological type, and identification of all performance standards and whether each standard has been met.
  - 10) Provide a written summary of all the problem areas that have been identified and potential corrective measures to address them.
- b. A qualified individual able to identify vegetation to genus and species must conduct the wetland monitoring. The MDEQ reserves the right to reject reports with substandard monitoring data.
- c. The MDEQ will determine if the performance standards have been met. If the performance standards have not been met, the MDEQ may require subsequent annual monitoring until final approval from the MDEQ can be granted.
- d. Prior to final written approval of the mitigation by the MDEQ, the permittee shall submit the following:
- 1) A written statement that the mitigation is complete and request for final approval of the mitigation.
  - 2) A copy of the permit.

- 3) "As-built" plans and specifications signed and sealed by a registered surveyor or licensed engineer.
- 4) A surveyed boundary of the established wetland within the mitigation area, including the total acreage of the mitigation wetland and the acreage of each type of wetland created.
- 5) Complete all monitoring requirements including the submittal of all required monitoring reports.

4. **Additional Measures To Reduce Wetland Impacts**

- a. To protect mitigation wetlands from encroachment (e.g., dumping; cutting of vegetation; application of herbicides), the permittee shall effectively identify all boundaries of the conservation easement, upon completion of mitigation area construction.
- b. Wetland areas where fill is not permitted will be left natural. Where possible, buffer areas of native grasses/forbs will be maintained between the fairways and wetland areas.
- c. A minimum of 25 feet of native vegetation buffer shall be maintained between manicured fairways and wetland mitigation areas.
- d. The following areas shall be considered out of bounds for golf play:
  - 1) All areas where threatened/endangered species are known to occur.
  - 2) All mitigation wetlands (adjacent to holes 4, 5, 15, 16, 18).
  - 3) Remaining wetlands within or adjacent to golf holes 2, 6, 7, 9, 10, 11, 12, 14, 15, 16, and 18.
- e. Boardwalks shall be of open construction without fill, maintaining free water movement and circulation.
- f. In the three locations where boardwalks/cart bridges cross small streams, structures shall fully span the stream. No posts or other structures are permitted below the Ordinary High Water Mark of the streams.

S. **SOIL EROSION/SEDIMENTATION CONTROL DURING CONSTRUCTION:**

1. All appropriate erosion and sediment control Best Management Practices (BMPs) shall be utilized during construction and operations of the golf course.
2. Prior to the initiation of any permitted construction activity, a silt fence shall be installed along the entire route of disturbed wetland areas and maintained in good working order until permanent stabilization and revegetation of all disturbed areas has occurred. Silt fence shall be removed after re-vegetation.
3. Clearing of steep slopes shall be limited to only areas necessary for construction, fill, and golf play.
4. All raw areas resulting from the permitted construction activities shall be promptly and effectively stabilized in a sufficient quantity and manner so as to prevent erosion and any potential sedimentation to surface waters or wetlands.
5. If the project, or any portion of the project, is stopped and lies uncompleted for any length of time (other than that encountered in a normal work week) every precaution shall be taken to protect the uncompleted work from erosion.
6. All raw earth within 100 feet of a river, stream, or wetland that is not brought to final stabilization by the end of the active growing season (roughly October 10<sup>th</sup>), shall be temporarily stabilized with mulch blankets or other effective technology.

T. **POLLUTION PREVENTION, WATER QUALITY PROTECTION, AND HABITAT ENHANCEMENT:**

1. The project activities, during both construction and operation, shall not result in violation of water quality standards, waterbody designated uses, or otherwise unlawfully impair waters of the state.

2. The golf course and associated projects shall be designed in a manner that will not unlawfully contribute nonpoint source pollution to waters of the state. The objective is to avoid direct discharges of stormwater to waterbodies and wetlands. At a minimum, stormwater shall be detained to treat the "first flush" (first ½ inch of runoff from a site) for a minimum of 24 hours, before discharging into streams or wetlands.
3. **Within 60 days of final permit issuance**, the permittee shall develop for DEQ review and approval, a comprehensive pollution prevention plan for management of the golf course. At a minimum, this plan must address, stormwater management, fertilizer management, pesticide management, source of irrigation water, water use and conservation, management of the natural vegetative buffers, pollution prevention at maintenance facilities, etc. This plan must be developed by a qualified firm, in consultation with local entities such as the City of Benton Harbor, the Berrien County Drain Commissioner. The permittee has furthermore committed to work with the Paw Paw River Watershed Project, Audubon International, and Michigan State University's Turfgrass Environmental Stewardship Program, during development of the plan.
4. The DEQ has reviewed the conceptual stormwater management plan submitted by Abonmarche Consultants, Inc., dated March, 2007. Prior to construction of stormwater management facilities, the permittee shall complete this plan and submit it to the DEQ for review and approval. Proposed detention swales shall not be constructed in wetland areas.
5. Permittee is advised to work closely with the City of Benton Harbor, the City of St. Joseph, and Benton Township to ensure all aspects of the project will comply with local stormwater management requirements.

**U. ADDITIONAL CONDITIONS AND ADVISEMENTS:**

1. **Prior to initiation of construction**, a preconstruction meeting shall be held with the permittee, appropriate agents and contractors, and representatives of the MDEQ. To arrange the required meeting, contact the Land and Water Management Division, Kalamazoo District office.
2. The permittee is required to provide copies of this permit to the contractors for their review.
3. The permittee, contractors, and any agent involved in obtaining or exercising this permit, are held responsible to ensure the project is constructed in accordance with all drawings and specifications contained in this permit.
4. **Identification of Non-Work Areas:** Prior to the start of construction, all non-work wetland areas shall be bounded by properly trenched filter fabric fence and construction fencing to prevent sediment from entering wetlands and to prohibit construction personnel from entering or performing work in these areas. Fence shall be maintained daily throughout the construction process.
5. Dredging in the Paw Paw River, streams and wetlands is not authorized, except as explicitly authorized for placement of permitted structures such as bridge abutments, culverts, boat launch, and Hole 7 tees.
6. All fill shall consist of clean inert material which will not cause siltation nor contain soluble chemicals, organic matter, pollutants, or contaminants. All fill shall be contained in such a manner so as not to erode into any surface water, floodplain, or wetland.
7. Riprap shall consist of clean stone or rock (free of paint, soil or other fines, asphalt, soluble chemicals, or organic material). The riprap shall be of appropriate weight and dimension necessary to achieve the intended shore protection.
8. Unless specifically stated under the "Permitted Activity" of this permit, construction pads, haul roads, temporary structures, or other structural appurtenances to be placed in a wetland or on bottomland of waterbodies are not authorized and shall not be constructed unless authorized by a permit revision.

9. This permit is limited to authorizing the construction as specified above and carries with it no assurances or implications that associated wetland or floodplain areas can be developed and serviced by the structures authorized by this permit.
10. This permit makes no finding regarding the legality of use and conversion of approximately 22 acres within Jean Klock Park. The permittee and the City of Benton Harbor are solely responsible for ensuring compliance with requirements of the U.S. Department of Interior, the Michigan Natural Resources Trust Fund/Board, the Michigan State Historic Preservation Office, past consent judgments/judicial decisions, and any other requirements.
11. The provisions of this permit do not preclude the permittee from disposal of excavated materials in accordance with Part 115, Solid Waste Management, at a properly licensed Type II solid waste disposal facility. Inert excavated soils and materials may be placed on upland, and shall be stabilized with sod and/or seed and mulch in such a manner so as to prevent and ensure against erosion of any material into any waterbody, wetland, or floodplain. Waste debris, trash, and other materials regulated by Part 115 shall be properly disposed at a properly licensed facility. Use or placement of the excavated materials shall be done in such a manner to prevent nuisance conditions and control the release of fugitive dust or visible emissions as required by Part 55, Air Pollution Control, of the NREPA.
12. This permit does not remove the permittee's liability or responsibility regarding any damage to adjacent properties, groundwater levels, or water wells in the vicinity of the project. Projects which include the pumping or discharge of water may require a National Pollution Discharge Elimination System (NPDES) permit under Part 31, Water Resources Protection, of the NREPA. Also, removal or pumping of groundwater that interferes with drinking water wells in the area are subject to dispute resolution as outlined in Part 317 Aquifer Protection and Dispute Resolution, of the NREPA. Also, water shall not be withdrawn from a lake, wetland, or stream in such quantity and/or duration so as to adversely impact or degrade water quality standards aquatic life, riparian rights or uses. In addition, large quantity water withdrawal may require a permit be obtained from or an annual report be submitted to the MDEQ's Water Bureau under the authority of Part 327, Great Lakes Preservation, of the NREPA.
13. Historic artifacts could occur on or near this project area, and may be impacted by your activities. If during the course of construction artifacts are encountered, immediately contact the Michigan Department of History, Arts and Libraries, Office of the State Archaeologist, Mr. John Halsey, State Archaeologist, at 517-373-6358 or e-mail [halseyj@michigan.gov](mailto:halseyj@michigan.gov).
14. The permittee is cautioned that grade changes resulting in increased runoff onto adjacent property is subject to civil damage litigation.
15. In issuing this permit, the MDEQ has relied on the information and data, which the permittee has provided in connection with the permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete or inaccurate, the MDEQ may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.
16. If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity and/or mitigation plans from the MDEQ. Such revision requests shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by the MDEQ prior to being implemented.
17. A permit may be extended for cause. To request an extension of a permit a written request must be submitted to the MDEQ before the expiration date of the permit. The request must indicate the reasons for the extension. The MDEQ will review the request, and if approved, will provide written notification to the permittee.
18. The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents and representatives for any and all claims or causes of action arising from acts or omissions of the permittee, or employees, agents, or representatives of the permittee,

undertaken in connection with this permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the permittee or any other person.

This permit shall become effective on the date of the MDEQ representative's signature. Upon signing by the permittee named herein, this permit must be returned to the MDEQ for final execution.

**Permittee hereby accepts and agrees to comply with the terms and conditions of this permit.**

X

\_\_\_\_\_  
Permittee Date

X

\_\_\_\_\_  
Printed Name and Title of Permittee

Steven E. Chester, Director  
Department of Environmental Quality

By \_\_\_\_\_ Date \_\_\_\_\_  
Stanley F. Pruss  
Deputy Director  
Department of Environmental Quality

- cc: City of Benton Harbor
- City of St. Joseph
- Benton Charter Township
- Mr. Roger Zilke, Berrien County Drain Commissioner
- Southwest Michigan Planning Commission/Paw Paw River Watershed Project
- Mr. Robert McFeeter, Evergreen
- Mr. Jeffery Noel, Whirlpool Corporation
- Mr. Joseph von Wahlde, JFNew
- Mr. Mark Walker, Abonmarche Consulting
- Mr. Donald Boerma
- Mr. Tom Allenson, USACE, Detroit
- Ms. Sue Elston, USEPA, Chicago
- Ms. Barbara Hosler, USFWS, East Lansing
- Mr. Todd Hogrefe, MDNR, Wildlife, Lansing
- Mr. Jay Wesley, MDNR, Fisheries, Plainwell
- Ms. Sarah Schaefer, MDNR, Wildlife, Plainwell
- Ms. Maureen Houghton, MDNR, Grants Management, Lansing
- Ms. Lorraine Thomas, RRD, Kalamazoo
- Mr. Kameron Jordan, LWMD, Kalamazoo