

CROCKERY TOWNSHIP

OUTDOOR PONDS

DESIGN AND CONSTRUCTION STANDARDS

OCTOBER 2008
As amended
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TABLE OF CONTENTS

INTRODUCTION	1
INTENT AND PURPOSE	2
OUTDOOR PONDS	2-5
STORM WATER PONDS	5

INTRODUCTION

TO ALL DEVELOPERS, CONSULTING ENGINEERS AND CONTRACTORS:

The Crockery Township Design and Construction Requirements are intended to ensure the use of uniform, adequate, and acceptable construction methods and materials. The Township strives at all times to stay up to date regarding construction engineering developments.

This 2008 Edition is considered the standard requirements that are to apply to work and materials bid or contracted on or after January 1, 2009.

Crockery Township also has ordinances to administer, regulate, and provide additional requirements and regulations related to public and private improvements. Owners, consulting engineers, contractors, and plumbers are encouraged to review the document ordinances for requirements pertaining to private water services, fire lines, and sanitary sewers, private streets and ponds.

Leon Stille, Supervisor
Erika Harrison, Clerk
Judith VanBemmelen, Treasurer
Scott Constantine
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CROCKERY TOWNSHIP
OUTDOOR PONDS
DESIGN AND CONSTRUCTION STANDARDS

INTENT AND PURPOSE

The purpose of this Section is to provide reasonable regulations to direct the location, design, and use of outdoor ponds to minimize undesirable effects. The standards set forth in this document shall be the minimum standards for all outdoor ponds occurring in Crockery Township. All outdoor ponds shall be built to Crockery Township Design and Construction Standards and Specifications. Specifically, this Section is intended to promote the public health, safety, and general welfare of Crockery Township by:

- Maintaining safe environment by minimizing both potential hazards and nuisances.
- Promoting ponds that protect the safety of adjacent properties.
- Allowing ponds that are not intrusive or a nuisance to nearby residents and property owners.

1. Outdoor Ponds

A. Design plans for a pond shall include:

- i. The name of the person who is or will be the owner of the pond
- ii. The location of the proposed or existing pond
- iii. The safety precautions to be taken to protect those using the pond or who might be endangered by it
- iv. The size, depth, and water capacity of the pond
- v. The purpose(s) of the pond
- vi. The method of filtration and treatment of the water, if required
- vii. The location where excavated material from the pond will be placed on site along with proposed grading showing where excavated material will be placed
- viii. A cross section of the pond showing depth and elevations with anticipated wet weather water levels and dry period water levels.

- ix. Plans for the duration of activities relative to the offsite removal of excess material, such as sand and gravel, if any
 - x. A site plan of the land on which the pond is to be located. The site plan must be drawn to a scale of 1" = 100' or larger and include:
 - a. Lot Lines
 - b. Location of pond
 - c. Location of any wall, fence, or enclosure around the pond
 - d. Location of gates or doors in the fence, wall, or enclosure
 - e. Location of all existing or proposed buildings on the premises
 - i. A description and sketch of the construction of the pond and of the wall, fence, or enclosure. The wall, fence, or other enclosure shall:
 - a. Be not less than four feet above the grade line
 - b. Be designed so that a child cannot pass through, or under, or climb over the fence, wall, or other enclosure except through a gate or doorway
- B.** The pond or lagoon shall be constructed according to the following specifications:
- i. Ponds shall be planned, designed, and constructed to comply with all federal, state, and local laws and regulations.
 - ii. The applicant for the proposed pond shall be responsible for obtaining all necessary permits. A permit from the Michigan Department of Environmental Quality, U.S. Army Corps of Engineers, a soil erosion and sedimentation control permit from the Ottawa County Drain Commissioner's office may be required. The conditions of all permits shall be followed.
 - iii. The location and construction of the proposed pond shall minimize the impacts to existing fish and wildlife habitat.
 - iv. The discharge pipe from any pond without a direct outlet to an established drain shall not exceed six inches in diameter and shall be constructed with PVC or such other standard and durable material as may be approved by the Township Engineer.
 - v. No pond shall be emptied wholly or partially in a manner that will cause water to flow upon the land of another, and no pond shall be emptied wholly or partially upon any land if a storm drain is readily accessible to the premises on which the pond is located. Discharge into the public sanitary sewer is prohibited.

- vi. No public water shall be used in connection with the filling or operation of a pond when limitations on the consumption and use of public water are in effect.
 - vii. The slopes of the banks or sides of the pond shall be constructed so that for each one foot of rise there shall be a minimum of three feet of run. This minimum slope angle must be maintained and extended into the pond water to a depth of five feet.
 - viii. The Township may elect to consult with the Ottawa County Soil and Water Conservation District and the Township Engineer on the proposed pond.
- C.** No pond shall be constructed, installed, or maintained which either causes or contributes to the erosion of any adjacent, abutting, or nearby lands.
- D.** Ponds shall be located so that there is no runoff from barnyards, septic tanks or other possible pollution sources.
- E.** All of the disturbed areas around the pond should be seeded to minimize erosion. An outlet level control may be necessary to maintain a level of the pond to allow the area to be restored.
- F.** Recommended sizes and depth include:
- i. Fish Ponds: 0.25 acres or larger with a depth of 10 feet in 15% of the pond.
 - ii. Wildlife Ponds: 3 1/2 feet deep or less, over 25% to 50% of the area. A maximum depth of 6 feet.
- G.** In the case of farm manure lagoons, a special use permit is required. The farm manure lagoon shall meet all requirements of the Michigan Department of Agriculture and the Michigan Department of Environmental Quality. Construction design and management guidelines for manure storage and treatment facilities shall be followed as found in the NRCS-FOTG. Design considerations shall include seepage control for earthen basins to protect groundwater from possible contamination. All manure storage structures shall maintain a minimum freeboard of twelve inches (six inches for fabricated structures) plus the additional storage volume necessary to contain the precipitation and runoff from a 25-year, 24-hour storm event. Manure storage structure integrity shall require periodic inspections.
- H.** In making its decision whether to grant the special use permit, the Planning Commission may require the submission of soil borings, runoff quantities, and other relevant data to ensure that the proposed pond is capable of being maintained and supported with adequate water volumes. A water depth of six feet is recommended for a permanent supply of

water with normal seepage and evaporation losses. Shallower depths may be approved for wildlife ponds.

Standards for Storm Water Ponds

Storm water retention and detention ponds shall conform to the requirements of the Ottawa County Drain Commissioners office standard specifications. New developments requiring site plan review shall include review and approval by the Ottawa County Drain Commissioner's office. All applications and fees required shall be the responsibility of the property owner.