

SECTION 370
STORMWATER MANAGEMENT

(adopted 3/27/18)

370.01 TITLE

Section 370 of the Tonka Bay City Code shall be known and may be referred to as the "Stormwater Management Ordinance" or the "Stormwater Management Section." When referred to herein it shall be known as "this Section."

370.02 PURPOSE

This Section is established to promote, preserve and enhance natural resources within the City of Tonka Bay and protect them from adverse effects occasioned by poorly sited development or incompatible activities by regulating land disturbing or development activities that would have an adverse and potentially irreversible impact on water quality and unique or fragile environmentally sensitive land. This Section minimizes conflicts and encourages compatibility between land disturbing and development activities and environmentally sensitive lands. By requiring detailed review standards and procedures for land disturbing or development activities proposed for such areas, this Section achieves a balance between urban growth and development and the protection of water and natural resources within the City.

370.03 SCOPE

Subd. 1. Applicability. No building permit, subdivision approval, or permit to allow land disturbing activities shall be issued until approval of the requirements set forth in these Engineering Design Standards. The Erosion and Sediment Control (ESC) Plans and Stormwater Management Plans (SWMP) shall be consistent with NPDES permit requirements, and the filing or approval requirements of other regulatory bodies with jurisdiction.

a. Erosion and Sediment Control. Unless otherwise exempted by these Standards, Applicants are required to follow the Erosion and Sediment Control requirements of this Section and are encouraged to incorporate the Stormwater Management requirements of this Section, for all proposed land disturbing activities within the City that meet any or all of the following:

- 1) Disturbs a total land surface area of 6,000 square feet or more; or
- 2) Involves excavation or filling, or a combination of excavation and filling, in excess of 100 cubic yards of material; or
- 3) Involves the laying, repairing, replacing, or enlarging of an underground utility, pipe or other facility, or the disturbance of road ditch, grass swale or other open channel for a distance of 300 feet or more; or
- 4) Is a land disturbing activity, regardless of size, that the City determines is likely to cause an adverse impact to an environmentally sensitive area or other property, or may violate any other erosion and sediment control standard set forth in this ordinance.
- 5) Any land disturbance activity, regardless of size, that the City determines is likely to cause an adverse impact to an environmentally sensitive area or other property.

b. Stormwater Management. Unless otherwise exempted in these Standards, Applicants are required to develop a Stormwater Management Plan that meets the

requirements of this Section, for all proposed land disturbing activities that meet any or all of the following:

- 1) Any land disturbing activity that may ultimately result in the addition of 1.0 acre or greater of impervious surfaces, including smaller individual sites that are part of a common plan of development that may be constructed at different times; or
- 2) Any land disturbance activity, regardless of size, that the City determines is likely to cause an adverse impact to an environmentally sensitive area or other property.

Subd. 2. Exemptions. The provisions of this Section do not apply to:

- a. Any part of a subdivision if a preliminary plat for the subdivision that has been approved by the City Council on or before the effective date hereof.
- b. Installation of fence, sign, telephone, and electric poles and other kinds of posts or poles.
- c. Excavations or land moving activities involving less than fifty cubic yards of soil.
- d. Emergency work to protect life, limb, or property.

Subd. 3. Waiver. The Public Works/Engineering Department, may waive any of the requirements of this Section upon making a finding that compliance with the requirement will involve an unnecessary hardship and the waiver of such requirement will not adversely affect the water quality and natural resources of the City or adversely impact environmentally sensitive land. The Engineering Department may require as a condition of the waiver that the applicant dedicates easements or construct certain facilities as it deems necessary.

370.04 SEVERABILITY

Every subsection or subdivision of this Section is declared separable from every other section or subdivision. If any section or subdivision is held to be invalid by competent authority, no other section or subdivision shall be invalidated by such action or decision.

370.05 INCORPORATION BY REFERENCE

The following are hereby incorporated into this Section by reference:

- a. The National Pollutant Discharge Elimination System Permit, MN R100001 (NPDES Construction General Permit) issued by the MPCA, August 1, 2013, as amended.
- b. Minnesota's Stormwater Manual, as amended. These standards shall serve as the official guide for principles, methods, and practices for proposed development activities.

370.06 DEFINITIONS

For the purpose of this Section, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

Applicant. The owner, their agent, or representative having interest in land where an application for City review of any permit, use or development is required by this Section.

Best Management Practice (BMP). Practices to reduce the volume of runoff, and improve water quality, to prevent pollution of waters of the state. Best Management Practices are designed to reduce stormwater runoff volume, peak flows, and/or nonpoint source pollution through evapotranspiration, infiltration, detention, and filtration, and may include activities, prohibitions of practices, treatment requirements, operating procedures, and other management practices.

Channel. A natural or artificial watercourse with a definite bed and banks that conducts continuously or periodically flowing water.

Construction Activity. Any disturbance to the land that results in a change in the topography, existing soil cover, or the existing soil topography that may result in accelerated stormwater runoff, including clearing, grading, filling, and excavating.

Control Measure. A practice or combination of practices to control erosion and attendant pollution.

Detention Facility. A permanent natural or human-made structure, including wetlands, for the temporary storage of runoff which contains a permanent pool of water.

Flood Fringe. All the land in a flood plain not lying within a delineated flood way. Land within a floodway fringe is subject to inundation by relatively low velocity flows and shallow water depths. The flood fringe includes at a minimum, the areas designated as zone AE on the Flood Insurance Rate Map outside of the floodway, except as modified on the Zoning Overlay Map.

Flood Plain, General. A 100 year flood plain area shown on the Flood Insurance Rate Map where flood way and flood fringe boundaries and/or 100 year flood elevations have not been determined. These areas include areas designated as Zone A on the Flood Insurance Rate Map and zone AE areas where a floodway is not shown.

Floodway. The channel of a natural stream or river and portions of the flood plain adjoining the channel, which are reasonably required to carry and discharge the flood water or flood flow of any natural stream or river. The floodway, at a minimum, includes the floodway areas shown on the Flood Insurance Rate Map and as depicted on the Zoning Overlay Map.

Hydric Soils. Soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part.

Hydrophytic Vegetation. Macrophytic plant life growing in water, soil, or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content.

Impervious Surface. Any surface that prevents absorption of water into the ground. Examples of impervious surfaces include, but are not limited to, cement, asphalt, and paving brick.

Land Disturbing Or Development Activities. Any change of the land surface including removing vegetative cover, excavating, filling, grading, and the construction of any structure.

Maintenance Agreement. A document recorded against the property which provides for long-term maintenance of stormwater treatment practices.

New Development. Any construction activity that is not defined as redevelopment.

New Impervious Surface. Any newly constructed surface area that changes the infiltration rate from a pervious surface to that of an impervious surface.

Permittee(s). The person or persons that signs the application submitted to the City and is responsible for compliance with the terms and conditions of this permit.

Person. Any individual, firm, corporation, partnership, franchisee, and association.

Pervious Surface. Any surface area that allows infiltration of all or the majority of the precipitation that falls on it. Pervious surfaces include turfgrass, rain gardens, planting beds, and other infiltration BMPs.

Plan. A storm water management plan governed by this Section.

Public Waters. Waters of the state as defined in M.S. § 103G.005, Subd. 15, as it may be amended from time to time.

Redevelopment. Any construction activity where, prior to the start of construction, the areas to be disturbed have 15% or more of impervious surface.

Regional Flood. A flood which is representative of large floods known to have occurred generally in Minnesota and reasonably characteristic of what can be expected to occur on an average frequency in the magnitude of the 100 year recurrence interval. Regional flood is synonymous with the term “base flood” used in the Flood Insurance Study.

Retention Facility. A permanent natural or human-made structure that provides for the storage of storm water runoff by means of a permanent pool of water.

Sediment. Solid matter carried by water, sewage, or other liquids.

Stormwater Management. The use of structural or non-structural practices that are design to reduce stormwater runoff pollutant loads, discharge volumes, and/or peak discharge rates.

Stormwater Treatment Practices. Measures, either structural or nonstructural, that are determined to be the most effective and practical means of preventing or reducing point source or nonpoint-source pollution inputs to stormwater runoff and waterbodies.

Structure. Anything manufactured, constructed, or erected which is normally attached to or positioned on land, including portable structures, earthen structures, roads, parking lots, and paved storage areas.

Watercourse. A permanent or intermittent stream or other body of water, either natural or fabricated, which gathers or carries surface water.

Watershed. The total drainage area contributing runoff to a single point.

Wetland. Poorly drained, environmentally sensitive lands as designated by M.S. § 103G.221 et seq. known as the Wetland Conservation Act, or any other state or federal agency.

370.07 STORMWATER MANAGEMENT PLAN

Subd. 1. Approval Procedures.

a. Application. A written application for stormwater management plan approval, along with a proposed stormwater management plan and maintenance agreement, shall be filed with the Engineering Division of the Public Works Department. The application shall include a statement indicating the grounds upon which the approval is being requested, that the proposed use is permitted by right or as an exception in the underlying zoning district, and adequate evidence showing that the proposed use will conform to the standards set forth in this Section and the City Code.

b. Required plan submittals.

1) Two sets of clearly legible blue or black lined copies of drawings, electronic copy of drawings, and required information shall be submitted to the Engineering Division of the Public Works Department along with the process and approval fee. The plans shall be drawn at a minimum scale of one inch equals one hundred feet and shall contain the following information:

I. Existing site map. A map of existing conditions showing the site and immediately adjacent areas within two hundred feet of the site, including:

- i. The name and address of the applicant, the section, township and range, north point, date and scale of drawing and number of sheets.
- ii. The location of the property by showing an insert map at a scale sufficient to clearly identify its location and giving such information as the name and numbers of adjoining roads, railroads, utilities, subdivisions, cities, townships and districts or other landmarks.
- iii. The existing topography with a contour interval appropriate to the topography of the land but in no case having a contour interval greater than two feet.
- iv. A delineation of all ponds, infiltration features, streams, rivers, public waters and wetlands located on and immediately adjacent to the site, including the depth of the water, the normal water level (NWL), the 100-year high water level (HWL), the ordinary high water level (OHW), a description of all vegetation which may be found in the water, a statement of general water quality and any classification given to the water body or wetland by the Minnesota Department of Natural Resources (MnDNR), the MPCA or the United States Army Corps of Engineers (USACE).
- v. The location and dimensions of existing stormwater drainage systems and natural drainage patterns on and immediately adjacent to the site delineating in which direction and at what rate stormwater is conveyed from the site, identifying the receiving stream, river, public water, or wetland, and setting

forth those areas of the unaltered site where stormwater collects.

- vi. A description of the soils of the site, including a map indicating soil types of areas to be disturbed as well as a soil report containing information on the suitability of the soils for the type of storm water system proposed and describing any remedial steps to be taken by the applicant to render the soils suitable.
 - vii. The location and description of any vegetative cover and a clear delineation of any vegetation proposed for removal.
 - viii. The location of one hundred year floodplains, flood fringes and floodways.
 - ix. The locations of any existing overhead or underground utilities.
 - x. The locations of property lines and easements.
 - xi. A City approved benchmark listing location and elevation.
- c. Site construction plan. A site construction plan including:
- 1) Locations and dimensions of all proposed land disturbing activities and any phasing of those activities.
 - 2) Total Site Area.
 - 3) Total Area Disturbed.
 - 4) Locations and dimensions of all temporary soil or dirt stockpiles.
 - 5) Locations and dimensions of all construction site erosion control measures necessary to meet the requirements of this Section. A schedule of the anticipated start and completion date of each land disturbing activity including the installation of construction site erosion control measures needed to meet the requirements of this Section.
 - 6) Provisions for maintenance of the construction site erosion control measures during construction.
- d. Plan of final site conditions. A plan of final site conditions on the same scale as the existing site map showing the proposed site changes, including:
- 1) Finished grading shown at contours at the same interval as provided above or as required to clearly indicate the relationship of proposed changes to existing topography and remaining features.
 - 2) A landscape plan, drawn to an appropriate scale, including dimensions and distances and the location, type, size and description of all proposed landscape materials which will be added to the site as part of the development.
 - 3) A drainage plan of the developed site delineating in which direction and at what rate stormwater will be conveyed from the site and setting forth the areas of the site where stormwater will be allowed to collect.
 - 4) The proposed size, alignment and intended use of any structures to be erected on the site.
 - 5) A clear delineation and tabulation of all areas which will be paved or surfaced, including a description of the surfacing material to be used.
 - 6) Any other information pertinent to the particular project which, in the opinion of the applicant or the Engineering Department, is necessary for the review of the project.

- 7) Proposed normal water level (NWL), one hundred year high water level (HWL), ordinary high water level (OHW) of any ponds, infiltration facilities, streams, rivers, public waters, or wetlands on or downstream from the site.
 - 8) Building elevations including low floor elevations and low building opening elevations.
 - 9) Overland emergency overflow routes and their elevations.
- e. Stormwater Calculations. Calculations demonstrating the following data shall be provided, according to the method established by the Engineering Department:
- 1) Drainage maps that show the site, land that drains onto the site, and land that the site drains onto for existing and proposed conditions. Delineated drainage areas for ponds, wetlands, or other relevant waters should be indicated on these maps.
 - 2) A stormwater model conforming to Engineering Department standards that includes drainage areas, cover types, pond and wetland sizes, pond and wetland outlets, and natural or piped conveyance systems.
 - 3) Peak runoff rates from the site before and after development demonstrating that the proposed conditions conform to the policies outlined in the City's Surface Water Management Plan and this Section's design criteria.
 - 4) Volume of runoff from the site before and after development.
 - 5) National Urban Runoff Program ("NURP") volume below the normal outlet required and provided in each pond.
 - 6) Infiltration calculations for proposed conditions.
 - 7) A narrative summarizing the calculations and demonstrating that proposed drainage alterations do not unreasonably burden upstream or downstream land.
 - 8) Soil borings, if requested by the Engineering Department.
- f. Maintenance Agreement. The applicant shall enter into a maintenance agreement with the City that documents all responsibilities for operation and maintenance of long-term stormwater treatment practices. Such responsibility shall be documented in a maintenance plan and executed through a maintenance agreement. All maintenance agreements must be approved by the City and recorded at the Hennepin County recorder's office prior to final plan approval. At a minimum, the maintenance agreement shall describe the following inspection and maintenance obligations:
- 1) The responsible party who is permanently responsible for maintenance of the structural and nonstructural measures.
 - 2) Pass responsibilities for such maintenance to successors in title.
 - 3) Allow the City and its representatives the right of entry for the purposes of inspecting all permanent stormwater management systems.
 - 4) Allow the City the right to repair and maintain the facility, if necessary maintenance is not performed after proper and reasonable notice to the responsible party of the permanent stormwater management system.
- g. Include a maintenance plan that contains, but is not limited to the following:
- 1) Identification of all structural permanent stormwater management systems.
 - 2) A schedule for regular inspections, monitoring, and maintenance for each practice. Monitoring shall verify whether the practice is functioning as designed and may include, but is not limited to quality, temperature, and quantity of runoff.

- 3) Identification of the responsible party for conducting the inspection, monitoring and maintenance for each practice.
 - 4) Include a schedule and format for reporting compliance with the maintenance agreement to the City.
- h. The issuance of a permit constitutes a right-of-entry for the City, its contractors, agents, and their authorized representatives to enter upon the construction site. The applicant shall allow the City, its contractors, agents and any their authorized representatives, upon presentation of credentials, to:
- 1) Enter upon the permitted site for the purpose of obtaining information, examination of records, conducting investigations or surveys.
 - 2) Bring such equipment upon the permitted development as is necessary to conduct such surveys and investigations.
 - 3) Examine and copy any books, papers, records, or memoranda pertaining to activities or records required to be kept under the terms and conditions of the permit.
 - 4) Inspect the stormwater pollution control measures.
 - 5) Sample and monitor any items or activities pertaining to stormwater pollution control measures.
 - 6) Correct deficiencies in stormwater and erosion and sediment control measures.

Subd. 2. Stormwater Management Plan Review Procedure.

- a. Process. Stormwater management plans and maintenance agreements meeting the requirements of this Section shall be submitted to the City for review and approval.
- b. Duration. Approval of a stormwater management plan submitted under the provisions of this Section shall expire two years after the date of approval by the City Council unless construction has commenced in accordance with the plan. However, if prior to the expiration of the approval, the applicant makes a written request to the Engineering Department for an extension of time to commence construction setting forth the reasons for the requested extension, the City Council may grant one extension of not greater than one single year.
- c. Revisions. A stormwater management plan and maintenance agreement may be revised. All revised plans must contain all information required by this Section and must be reviewed and approved by the City.
- d. Conditions. A stormwater management plan and maintenance agreement may be approved by the City Council subject to compliance with conditions that are necessary to ensure that the requirements contained in this Section are met. Such conditions may, among other matters, limit the size, kind, or character of the proposed development; require the construction of structures, drainage facilities, storage basins and other facilities; require replacement of vegetation; establish required monitoring procedures; require that the work be staged over time; require alteration of the site's design to ensure buffering; or require the conveyance to the City or other public entity of certain lands or interests therein.
- e. Agreement. Upon approval of the stormwater management plan and maintenance agreement by the City Council, the applicant shall enter into an agreement with the City to ensure that any required improvements are constructed, any required easements are granted or dedicated and that there is compliance with any conditions imposed by the City Council. The agreement shall guarantee completion

and compliance with the conditions within a specific time, which time may be extended by the City Council. The agreement shall be in a form acceptable to the City.

- f. Financial guarantee. Upon approval of the stormwater management plan and maintenance agreement by the City Council, the applicant shall submit a letter of credit, or cash escrow, to cover total maximum risk of the established cost of complying with the stormwater management plan. This financial guarantee shall be in a form acceptable to the City and may be incorporated into the financial guarantee provided for grading activities and / or the financial guarantee provided for street and utility activities.
- g. Fees. All applications for stormwater management plan and maintenance agreement approval shall be accompanied by a processing and approval fee as set by the most recent edition of the City's Adopted Fee Schedule.

Subd. 3. Stormwater Management Plan Approval and Implementation Standards.

- a. Compliance with standards. No stormwater management plan which fails to meet the standards contained in this Section shall be approved by the City Council.
- b. All stormwater management plans must be submitted to the City Engineer prior to the start of construction activity. At a minimum all applicants shall meet the criteria set forth below and observe the standards established in NPDES Construction General Permit requirements, as amended.
- c. The City adopts the MPCA's Minnesota Stormwater Manual as its stormwater runoff design standards.
- d. All stormwater management plans must address erosion and sediment control requirements of this Section.
- e. Stormwater management requirements for permanent facilities.
 - 1) An applicant shall install or construct, on or for the proposed land disturbing or development activity, all stormwater management facilities necessary to meet the criteria of the NPDES Construction General Permit. No private stormwater facilities will be approved by the City unless a maintenance agreement and maintenance plan are provided that defines who will conduct the maintenance, the type of maintenance and intervals of the maintenance to be performed. In the alternative, or in partial fulfillment of this requirement and upon approval of the Engineering Department, an applicant may make an in-kind or monetary contribution to the development and maintenance of regional stormwater management facilities designed to serve multiple land disturbing and development activities undertaken by one or more persons, including the applicant.
 - 2) Proposed Stormwater Management Plans shall incorporate volume control, water quality control, and rate control as the basis for stormwater management in the proposed development plan on sites without restrictions. All proposed projects shall be in conformance with the most current requirements of the MPCA's Municipal Separate Storm Sewer Systems (MS4) Permit and the Minnehaha Creek Watershed District, as applicable.
 - I. Volume Control.
 - i. The applicant shall provide a detailed plan and/or narrative describing the BMPs that will be incorporated in the development to reduce runoff volume and improve water quality.

- ii. There shall be no net increase from pre-project conditions (on an annual average basis) of:
 - A. Stormwater discharge volume, unless precluded by the stormwater management limitations as defined by the MPCA's MS4 Permit.
 - B. Stormwater discharges of Total Suspended Solids (TSS).
 - C. Stormwater discharges of Total Phosphorus (TP).
 - iii. New Development. For new, nonlinear developments, stormwater runoff volumes will be controlled and the post-construction runoff volume shall be retained on site for 1.0 inches of runoff from all impervious surfaces on the site that result in a net increase of impervious of one (1) acre or greater.
 - iv. Redevelopment. For redevelopment projects, stormwater runoff volumes will be controlled and the post-construction runoff volume shall be retained on site for 1.0 inches of runoff from the new impervious surfaces created by the project. There shall be a net reduction from pre-project conditions (on an annual average basis) of:
 - A. Stormwater discharge volume, unless precluded by the stormwater management limitations as defined by the MPCA's MS4 Permit.
 - B. Stormwater discharges of TSS.
 - C. Stormwater discharges of TP.
 - II. Water Quality Control.
 - i. New Development. Water quality treatment is required to meet NURP guidelines and to result in no net increase from pre-project conditions (on an annual average basis) of stormwater discharges of TSS and TP for projects that result in a net increase of impervious of one (1) acre or greater.
 - ii. Redevelopment. Water quality treatment is required to meet NURP guidelines and to result in a net reduction in pre-project conditions (on an annual average basis) of stormwater discharges of TSS and TP for projects that have construction activity that is one (1) acre or greater in size.
 - III. Rate control.
 - i. Rate control measures are required on new development and redevelopment projects to meet this Section's design criteria, the Minnesota Stormwater Manual and Minnehaha Creek Watershed District.
- 3) The applicant shall reduce the need for stormwater treatment practices by incorporating the use of natural topography and land cover such as wetlands, ponds, natural swales and depressions as they exist before development to the degree that they can accommodate the additional flow of water without compromising the integrity or quality of the wetland or pond.
- 4) The following stormwater management practices shall be investigated by the applicant in developing a stormwater management plan in the following descending order of preference, and the results of that investigation shall be provided to the City in written form as a part of the application:

- I. Natural infiltration of precipitation on-site.
 - II. Flow attenuation by use of open vegetated swales and natural depressions.
 - III. Green infrastructure by use of rain gardens, bioswales, constructed wetlands, and other constructed infiltration practices.
 - IV. Stormwater retention facilities.
 - V. Stormwater detention facilities.
- 5) A combination of stormwater treatment practices may be used to achieve the applicable minimum control requirements specified in the subsection above. Justification shall be provided by the applicant for the method selected.
- 6) Pond design standards. Stormwater detention facilities constructed in the City shall be designed according to standards established by the Engineering Division of the Public Works Department, and shall contain, at a minimum, the following design factors:
- I. A permanent pool (“dead storage”) volume below the principal spillway (normal outlet) which shall be greater than or equal to the runoff from a 2.5 inch, 24-hour storm over the entire contributing drainage area assuming full development.
 - II. A permanent pool average depth (basin volume/basin area) of four to ten feet.
 - III. An emergency overflow (emergency outlet) adequate to control the 100-year frequency critical duration rainfall event.
 - IV. Basin side slopes below the one hundred year high water level should be no steeper than 4:1, and preferably flatter. A basin shelf with a minimum width of ten feet and one foot deep below the normal water level is recommended to enhance wildlife habitat, reduce potential safety hazards, and improve access for long-term maintenance.
 - V. To prevent short-circuiting, the distance between major inlets and the normal outlet shall be maximized.
 - VI. A flood pool (“live storage”) volume above the principal outlet spillway shall be adequate so that the peak discharge rate from the 1-, 10- and 100-year frequency critical duration storm is not greater than the peak discharge for a similar storm and predevelopment watershed conditions.
 - VII. Effective energy dissipation devices which reduce outlet velocities to four feet per second or less shall consist of riprap, stilling pools or other such measures to prevent erosion at all storm water outfalls into the basin and at the detention basin outlet.
 - VIII. Consideration for aesthetics and wildlife habitat should be included in the design of the pond.
 - IX. A skimming device must be provided to deter floatable pollutants from discharging out of pond.
 - X. Pond NWL elevations shall be established above the OHW of adjacent MnDNR water bodies, except where topography of the site, floodplain mitigation activities, or other design considerations are determined to be unfavorable for these conditions to occur. This determination shall be performed by an engineer, provided by the applicant, and approved by the Engineering Division of the Public Works Department.

- XI. All constructed ponds shall have a maintenance access bench sufficient to provide access to all inlets and outlets. The maintenance bench shall be located within a designated outlot or within a permanent easement. The maintenance bench shall extend from the outlet elevation to one foot above the outlet elevation and its cross slope shall be no steeper than 10:1. The maintenance bench shall connect to the maintenance access.
 - XII. All constructed ponds shall be provided a maintenance access from an adjacent roadway. The maintenance access shall be provided in the form of an easement no narrower than 20 feet. The maintenance access shall have a longitudinal slope no steeper than 6:1 and minimal cross slope. Maintenance access routes, due to their extra width, also serve well as emergency overflow (EOF) routes.
- 7) Infiltration Requirements. BMPs will be required to the maximum extent practical as determined by the Engineering Division of the Public Works Department or its designee.
- I. Maximum extent practical shall be the infiltration of runoff from the 100-year, 24-hour rainfall event within 48 hours. The maximum extent practical may be less than this if the Engineering Division of the Public Works Department determines that one or more of the following conditions apply:
 - i. Infiltration characteristics of soils on site are not favorable for infiltration of stormwater.
 - ii. The site's drainage course is to regional infiltration or detention facilities controlled by the City that reduce runoff volumes.
 - iii. When the site's impervious areas are not increased due to development.
 - iv. Other site conditions that make infiltration of stormwater impractical on the site as determined by the Engineering Division of the Public Works Department.
 - v. If one or more of these conditions apply, the Engineering Division of the Public Works Department shall quantify infiltration that will be deemed as the maximum extent practical for the site.
 - II. Infiltration will be prohibited where the infiltration BMP will be constructed in any of the following areas:
 - i. Where documented past, present, or anticipated future land uses have resulted in or may result in contamination coming in contact with stormwater runoff.
 - ii. With less than three (3) feet of separation distance from the bottom of the infiltration system to the elevation of the seasonally saturated soils or the top of bedrock.
 - iii. Where vehicle fueling and maintenance occur.
 - iv. Where industrial facilities are not authorized to infiltrate industrial stormwater under and NPDES/SDS Industrial Stormwater Permit issued by the MPCA.
 - III. Infiltration will be restricted and subject to additional City review where the infiltration BMP will be constructed in any of the following areas:
 - i. Within 1,000 feet up-gradient, or 100 feet down-gradient of active karst features.

- ii. Where Drinking Water Supply Management Areas are present, as defined by Minn. R. 4720.51000, subp.13, unless precluded by a local unit of government with an MS4 permit.
 - iii. Soils are predominately Hydrologic Soil Group D (clay) soils.
 - iv. Soil infiltration rates are more than 8.3 inches per hour unless soils are amended to slow the infiltration rate below 8.3 inches per hour.
 - IV. Stormwater runoff shall be treated in a stormwater pond or by other means prior to entering an infiltration facility.
 - V. The minimum infiltration requirements for any region of the City will be the requirements of the Minnehaha Creek Watershed District's policies that govern that region. Minnehaha Creek Watershed District's standards may be met through the use of regional or downstream systems prior to discharge of runoff to waters of the State.
 - VI. Infiltration systems must not be excavated to final grade until the contributing drainage area has been constructed and fully stabilized. When the infiltration feature is excavated to final grade, rigorous erosion prevention and sediment control BMPs must be implemented to keep sediment and runoff completely away from the infiltration area.
 - VII. To prevent clogging of the infiltration system, a pretreatment device must be used to settle particles before the stormwater discharges into the infiltrations system.
 - VIII. Per the stormwater management requirements for permanent facilities section of this Section, the infiltration system must provide a water quality volume (calculated as an instantaneous volume) of one (1) inch of runoff (or one (1) inch minus the volume of stormwater treated by another system on the site) from the new impervious surfaces created by the project.
 - IX. The applicant must ensure filtration systems with less than three (3) feet of separation from seasonally saturated soils or from bedrock are constructed with an impermeable liner.
 - X. A minimum maintenance access of twelve (12) feet is required.
- 8) Mitigation.
- I. Where construction projects cannot meet the TSS and/or TP reduction requirements for new or development projects on the site of original construction, all methods must be exhausted prior to considering alternative locations where TSS and TP treatment standards can be achieved. If the City has determined that all methods have been exhausted, the permittee will be required to identify alternative locations where TSS and TP treatment standards can be achieved. Mitigation projects will be chosen in the following order of preference:
 - i. Locations that yield benefits to the same receiving water that receives runoff from the original construction activity.
 - ii. Locations within the same MnDNR catchment area as the original construction activity.
 - iii. Locations in the next adjacent MnDNR catchment area up-stream.

- iv. Locations anywhere within the City of Tonka Bay that the City deems necessary for stormwater mitigation.
- II. In addition, mitigation projects must also meet the following criteria:
 - i. Mitigation projects shall involve the establishment new structural stormwater BMPs or the retrofit of existing structural stormwater BMPs, or the use of a properly designed regional structural stormwater BMP.
 - ii. Previously required routine maintenance of structural stormwater BMPs cannot be considered mitigation.
 - iii. Mitigation projects must be finished within 24 months after the original construction activity begins.
 - iv. A maintenance agreement specifying the responsible party for long-term maintenance shall be identified.
- 9) Stormwater and infiltration facilities must be located at least fifty feet away from the top of bluff.
- 10) Watershed management plans/groundwater management plans. Stormwater management plans shall be consistent with the Minnehaha Creek Watershed District requirements and groundwater management plans prepared in accordance with Minnesota Board of Water and Soil Resources in accordance with state law.
- 11) Easement. If the stormwater management plan involves direction of some or all runoff off of the site, it shall be the responsibility of the Applicant to obtain from adjacent property owners any necessary easements or other property interests to permit the flow of water across the property.
- 12) Low floor / building opening elevations.
 - I. Any new development or redevelopment shall maintain a minimum building opening elevation of at least three feet above the anticipated one hundred year high water elevation as a standard practice. However, if the applicant demonstrates that this requirement would be a hardship, the standard may be reduced to two feet if all of the following can be demonstrated:
 - i. That, within the two foot freeboard area, storm water storage is available which is equal to or exceeds fifty percent of the storm water storage currently available in the basin below the one hundred year elevation.
 - ii. That a twenty-five percent obstruction of the basin outlet over a twenty-four hour period would not result in more than one foot of additional bounce in the basin.
 - iii. That an adequate overflow route from the basin is available that will provide one foot of freeboard for the proposed low building opening.
 - II. Basement floor elevations must be set to an elevation that meets all of the following criteria:
 - i. The lowest floor elevation must be at least four feet above the currently observed groundwater elevations in the area.
 - ii. The lowest floor elevation must be at least two feet above the elevation of any known historic high groundwater elevations for the area. Information on historic high groundwater elevations can be derived from any reasonable sources including

piezometer data, soil boring data, percolation testing logs, etc.

- iii. The lowest floor elevation must be at least two feet above the one hundred year high surface water elevation for the area unless it can be demonstrated that this standard creates a hardship. If the two foot standard is determined by the City Council to constitute a hardship, the standard shall be at least one foot above the highest anticipated groundwater elevation resulting from a one hundred year critical duration rainfall event. The impact of high surface water elevations on groundwater elevations in the vicinity of the structure should take into consideration the site's distance from the floodplain area, the soils, the normal water elevation of surface depressions in the area, the static groundwater table and historic water elevations in the area. This information shall be provided by a registered engineer or soil scientist.

- 13) Impervious surface coverage of each lot must not exceed the impervious surface coverage allowed under the Zoning Ordinance.
- 14) Storm sewers shall be designed to accommodate discharge rates associated with a ten year, twenty-four hour rainfall event.

370.08 EROSION AND SEDIMENT CONTROL

Subd. 1. Applicability.

- a. Application. An erosion control plan shall be submitted to the Engineering Division of the Public Works Department when required by this Section along with a permit application. All applications for a building permit shall be accompanied by a processing and approval fee as set by the City Fee Schedule.

Subd.2. Required plan submittals. The erosion control plan shall contain all of the following with respect to conditions existing on site during construction and after final structures and improvements have been completed.

- a. A description of and specifications for sediment retention and settling devices.
- b. A description of, specifications for, and detail plates for surface runoff and erosion control devices.
- c. A description of vegetative measures.
- d. A detailed timetable for restoring all disturbed areas.
- e. A graphic representation of the location of all specified erosion and sediment control devices.
- f. An implementation schedule for installing and subsequently removing devices described above.
- g. A maintenance schedule for all sediment and erosion control devices specified.
- h. (An estimate of the costs to implement all final and temporary erosion and sediment control measures.
- i. An Information sheet on the parties responsible for constructing and maintaining the erosion control measures as shown on the erosion control plan. The information sheet should contain the phone numbers and addresses of at least two persons and indicate how they can be contacted at all times (days, nights, weekends, etc.) regarding repairing and maintaining the erosion control measures.

- j. The erosion control plan must contain details to specify which erosion and sediment control facilities are permanent and which are temporary.
- k. If required, a NPDES Construction General Permit must be obtained from the MPCA prior to commencing construction activities. The associated Stormwater Pollution Prevention Plan (SWPPP) should be included in the erosion control plan and approved by the Engineering Division of the Public Works Department prior to construction. A copy of the NPDES Construction General Permit must be provided to the City prior to construction.

Subd. 3. Application review and inspection fees.

- a. The City of Tonka Bay shall charge an application review fee for the review of the building permit application and the erosion control plan. As part of this review, the City will review the permittee's as-built survey submitted after the completion of grading activities to ensure that it conforms to the overall erosion control plan for the area. The application fee shall be set by the City Fee Schedule.
- b. An inspection fee will be charged for any inspections of the site by the City that are needed to review corrective erosion control work or to follow up on previously incomplete work. This inspection fee will be deducted from the financial security. The amount will be set by the City Fee Schedule. If this fee is not paid within 45 days, the fee may be taken from the financial security provided by the applicant.

Subd. 4. Implementation of erosion control plan. Prior to the start of any earthwork activities, the permittee must have in-place and functional erosion and sediment controls as outlined on the approved erosion control plan and/or SWPPP. Additional erosion control measures may be required as directed by the Engineering Division of the Public Works Department or its designee.

- a. No earthmoving activities shall commence until the erosion controls have been field inspected and approved by the Engineering Division of the Public Works Department.
- b. At a minimum, the permittee shall meet the specifications set forth below and observe the standards established in the NPDES Construction General Permit requirements:
 - 1) Soil Stabilization. Soil stabilization shall be completed in a time period as specified by the NPDES Construction General Permit and the City's general specifications and standards. The City of Tonka Bay may require the site to be reseeded or a nonvegetative option employed.
 - 2) Seeding. Seeding shall be in accordance with seeding specifications. All seeded areas shall be fertilized, mulched, and disc anchored as necessary for seed retention.
 - 3) Soil Stockpiles. Soil stockpiles which shall be inactive for a period of fourteen (14) or more days must be stabilized or covered at the end of each workday. Stockpiles shall include perimeter sediment controls and must not be placed in natural buffers or surface waters, including stormwater conveyance systems.
 - 4) Ninety Percent Coverage. The entire site must be stabilized at a ninety percent (90%) coverage, using a heavy mulch layer or another method that does not require germination to control erosion, at the close of the construction season.

- 5) Site Development Sediment Controls. Site development sediment controls practices shall include those identified in the City's general specifications including, but not limited to:
 - I. Settling basins, sediment traps, or tanks.
 - II. Protection for adjacent properties by the use of a vegetated buffer strip in combination with perimeter controls.
 - III. Perimeter control including machine sliced silt fence or other City approved BMP, which shall be in place before, during and after grading of the site. Fencing shall be removed only after seventy percent (70%) stabilization.
 - IV. Designated as a temporary construction staging area.
- 6) Temporary sediment basins. For sites that have more than ten (10) acres of disturbed soil that drains to a common location (or, five (5) or more acres for special or impaired waters), one or more temporary sediment basins shall be constructed. Use of temporary basins is encouraged when construction projects will impact steep slopes or when highly erodible soils are present. The basin shall provide treatment to the runoff before it leaves the construction site or enters surface waters. The temporary sediment basins must be designed and constructed as follows:
 - I. Provide live storage for a calculated volume of runoff from a two (2)-year, 24-hour storm from each acre drained to the basin. All basins shall provide at least 1,800 cubic feet of live storage from each acre drained or more.
 - II. For basins where the calculation in Section 153.08(B)(b)6.a) has not been performed, a temporary sediment basin providing 3,600 cubic feet of live storage from each acre drained to the basin shall be provided for the entire drainage area of the temporary basin.
 - III. The outlet structure must be designed to withdraw water from the surface in order to minimize the discharge of pollutants.
 - IV. The basin outlet shall be designed to prevent short-circuiting and the discharge of floating debris.
 - V. Ensure the basin can be completely drawn down to conduct maintenance activities.
 - VI. Include energy dissipation on the outlet of the basin and a stabilized emergency overflow to prevent failure of pond integrity.
 - VII. Be located outside of surface waters or any buffer zone, and be designed to avoid draining water from wetlands unless appropriate approval from the USACE and the MnDNR is obtained.
 - VIII. If installation of a temporary sediment basin is infeasible equivalent sediment controls such as smaller sediment basins, and/or sediment traps, silt fences, vegetative buffer strips, or any appropriate combination of measures are required for all down-slope boundaries of the construction area and for side-slope boundaries where appropriate. Determination of infeasibility shall be documented in the erosion and sediment control plan.
- 7) Individual Construction Site Sediment Controls. Individual construction site sediment controls shall include:
 - I. Rock construction entrance (driveway) or equivalent.

- II. Perimeter controls including silt fence in-place before, during and after grading of the site. Fencing shall be removed only after proper turf establishment.
- 8) Waterway and Watercourse Protection. Waterway and watercourse protection requirements shall include stabilization of the watercourse channel before, during and after any in-channel work consistent with the City's general specifications.
- I. A temporary stream crossing must be installed and approved by the local government unit and regulating agency if a wet watercourse will be crossed regularly during construction.
 - II. The watercourse channel shall be stabilized before, during, and within 24 hours after any in-channel work.
 - III. No in-water work shall be allowed in Public Waters during the MnDNR's work exclusion dates.
 - IV. Prior to placement of any equipment into any waters, all equipment must be free of aquatic invasive species.
 - V. All on-site stormwater conveyance channels designed according to the criteria outlined in this document. Stabilization adequate to prevent erosion located at the outlets of all pipes and paved channels is required.
- 9) Site Dewatering. Site dewatering shall be conducted pursuant to the NPDES Construction General Permit. Water pumped from the site shall be treated by temporary sediment basins, grit chambers, sand filters, or other controls as appropriate to ensure adequate treatment is obtained and that nuisance conditions will not result from the discharge. Discharges from the site shall not be released in a manner that causes erosion, scour, sedimentation or flooding of the site to receiving channels or wetlands.
- 10) Waste and Material Disposal. All waste and unused building materials (including garbage, debris, cleaning wastes, wastewater, toxic materials or hazardous materials) shall be properly disposed of off-site and not allowed to be carried by runoff into a receiving channel or storm sewer system.
- I. Solid waste. All unused building materials and waste (including, but not limited to: collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, etc.) must be disposed of accordingly and shall comply with disposal requirements set forth by the MPCA.
 - II. Hazardous/toxic waste. Paint, gasoline, oil and any hazardous materials must be properly stored, including secondary containment, to prevent spills, leaks or other discharges. Access to the storage areas must be restricted to prevent vandalism. Storage and disposal of hazardous or toxic substance must be in compliance with the requirements set forth by the MPCA.
 - III. Liquid waste. All other non-stormwater discharges (including, but not limited to, concrete truck washout, vehicle washing or maintenance spills) produced during the construction activity shall not be discharged to any surface waters.
 - IV. External washing of equipment and vehicles. All external washing activities shall be limited to a designated area of the site. All runoff must be contained and wastes from external washing activities must

be disposed of properly. No engine degreasing shall be allowed on the site.

- X. Wastes generated by concrete and other washout operations. All liquid and solid wastes generated by any concrete or other washout operations must be contained in a leak proof facility or impermeable liner. Concrete waste must not come into contact with the ground. Concrete waste must be disposed of properly and in compliance with applicable MPCA regulations.
- 11) Drain Inlet Protection. All storm drain inlets shall be protected during construction until all sources with potential for discharging to the inlet have been stabilized. Inlet protection measures must meet the City's standards and specifications.
- 12) Energy Dissipation. Pipe outlets must have temporary or permanent energy dissipation within 24 hours of connection to a surface water.
- 13) Tracking. Vehicle tracking BMPs (including, but not limited to: rock pads, mud mats, slash mulch, concrete or steel wash racks, or similar systems) must be installed to minimize track out of sediment from the construction site. If vehicle tracking BMPs are not actively preventing sediment from being tracked into the street, the applicant must utilize street sweeping to contain sediment.
- 14) Final Stabilization. Final stabilization is not complete until the following criteria are met:
- I. All land disturbing activities must be finished and all soils shall be stabilized by a uniform perennial vegetative cover with a density of 70 percent or greater of its expected final growth density over the entire pervious surface area, or other equivalent means necessary to prevent soil failure under erosive conditions.
 - II. The permanent stormwater management system is constructed, meets all of the required design parameters and is operating as designed.
 - III. All temporary synthetic and structural erosion prevention and sediment control BMPs (such as silt fence) have been removed. BMPs designed to decompose on site may be left in place.
 - IV. For residential construction only, individual lots are considered finally stabilized if the structure(s) are finished and temporary erosion protection and down gradient perimeter control has been completed and the residence has been sold to the homeowner.
 - V. For construction projects on agricultural land the disturbed land has been returned to its preconstruction agricultural use.
- c. The permittee must maintain the erosion and sediment control measures on the site to the satisfaction of the City Engineer throughout the entire construction process. If erosion and sediment control is not being maintained to the City Engineer's satisfaction, the City may perform remedial work on the site as outlined in this section.
- d. All erosion control systems must be maintained by the permittee in an acceptable condition until turf is established or structural surfaces are constructed to protect the soil from erosion.

Subd. 5. Inspection of erosion control plan. The City will make periodic inspections of the site to ensure compliance with the erosion control plan. The permittee or his/her agent shall ensure that a trained person will regularly inspect the construction site at least once every seven days until final stabilization and within 24 hours of a rainfall event of one-half inch or greater in a 24 hour period. All inspection and maintenance activities conducted on the site during construction must be recorded in writing and retained within the erosion control plan. Records of each inspection and maintenance activity shall include the following:

- a. Date and time of inspection.
- b. Name of person(s) conducting the inspection.
- c. Findings of inspections, including recommendations for corrective actions.
- d. Corrective actions taken, including the dates, times and the name of the party completing the corrective action.
- e. Date and the amount of rainfall events that are greater than one-half inch in a 24 hour period.
- f. Documentation of any changes made to the erosion and sediment control plan.

Subd. 6. Site and BMP Maintenance. Prior to any construction, the applicant shall provide the City Engineer with a schedule for erosion and sediment control inspection and maintenance, including schedules for street cleaning, and street sweeping. All site and BMP maintenance activities must comply with the requirements of the NPDES construction general permit. The applicant shall investigate and comply with the following BMP maintenance requirements:

- a. Perimeter control. All perimeter controls must be repaired, replaced or supplemented when they become nonfunctional or the sediment reaches one-half (1/2) of the height of the fence. Repairs shall be made by the end of the next business day after discovery or as soon as field conditions allow access.
- b. Temporary Sediment Basins. Temporary sedimentation basins must be drained and the sediment must be removed when the depth of the sediment collected in the basin reaches one-half the storage volume. Drainage and removal must be completed within 72 hours of discovery or as soon as field conditions allow access.
- c. Surface Waters and Conveyance Systems. Surface water, including drainage ditches and conveyance systems, must be inspected for visible signs of sediment being deposited by erosion. The applicant must remove all sediment deposited in surface waters, including drainage ways, catch basins, and other drainage systems and must restabilize the areas of exposed soil as a result of sediment removal. The removal and stabilization must take place within seven days of discovery unless legal, regulatory or physical access constraints prevent remediation. In the event of an access constraint, the applicant shall use all reasonable efforts to obtain access. If access is precluded, removal and stabilization must take place within seven calendar days of obtaining access. The applicant is responsible for contacting all local, regional, state and federal authorities and obtaining any required permits prior to conducting any work.
- d. Streets and Impervious Surfaces. Where vehicle traffic leaves any part of the site, the exit locations must be inspected for visible signs of off-site sediment tracking onto impervious surfaces. Tracked sediment must be removed from all off-site impervious surfaces as soon as possible or within 24 hours of discovery.
- e. General Maintenance. The applicant shall be responsible for the operation and maintenance of temporary and permanent water quality management BMPs, as well as erosion prevention and sediment control BMPs for the duration of the construction work on the site. The applicant remains responsible until another party

has assumed control over all areas of the site that have not established final stabilization and a Notice of Termination (NOT) has been submitted to the MPCA.

- f. Infiltration Areas. All infiltration areas must be inspected to ensure that no sediment from ongoing construction activities is reaching the infiltration area and these areas are protected from compaction caused by construction equipment driving across the infiltration area.

Subd. 7. Notification of failure of erosion control plan. The City shall notify the permittee of the failure of the erosion control measures that have been constructed. The notification will be by phone or written correspondence to the parties listed on the information sheet required by this section. The City, at its discretion, may begin remedial work within forty-eight hours after notification has been provided.

Subd. 8. Erosion off-site. If erosion breaches the perimeter of the site, the permittee shall immediately develop a cleanup and restoration plan, obtain a right-of-entry from the adjoining property owner, and implement the cleanup and restoration plan within forty-eight hours of obtaining the adjoining property owner's permission. In no case, unless written approval is received from the Engineering Division of the Public Works Department, may more than seven calendar days pass without any corrective action being taken. If at the discretion of the City, the permittee does not repair the damage caused by the erosion, the City may perform the remedial work required, after notice is provided to the permittee.

Subd. 9. Erosion into streets, wetlands, or other surface waters. If eroded soils enter, or entrance appears imminent into streets, wetlands, or other surface waters, cleanup and repair shall be immediate. The permittee shall provide all traffic control and flagging required to protect the public during the cleanup operations. If at the discretion of the City, the permittee does not repair the erosion and sedimentation, the City may perform the remedial work required, after notice is provided to the permittee.

Subd. 10. Failure to complete corrective work. When a permittee fails to conform to any provision of this Section within the time stipulated, the City may take the following actions:

- a. Issue a Notice of Violation. When the City determines that an activity is not being carried out in accordance with the requirements of this ordinance, it shall issue a written notice of violation to the owner of the property. The notice of violation shall contain:
 - 1) The name and address of the owner or applicant.
 - 2) The address when available or a description of the land upon which the violation is occurring.
 - 3) A statement specifying the nature of the violation.
 - 4) A description of the remedial measures necessary to bring the development activity into compliance with this ordinance and a time schedule for the completion of such remedial action.
 - 5) A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed.
 - 6) A statement that the determination of violation may be appealed to the City by filing a written notice of appeal within 15 days of service of the notice of violation. Service may be accomplished by mail or by personal delivery of the notice.
- b. Withhold the scheduling of inspections.

- c. Withhold the issuance of a certificate of occupancy.
- d. Issue a stop work order.
- e. The City may take any additional action available in law or at equity, including enforcement of any of the provisions of the agreement between the City and the Applicant/Permittee.

370.09 **PENALTY**

A person violating any provision of this Section shall be guilty of a misdemeanor and upon conviction shall be subject to the penalties imposed by Minnesota Statutes for misdemeanor offenses.

Section 2. This ordinance shall be in full force and effect upon its passage and publication.

Gerry De La Vega, Mayor

ATTEST:

Lindy Crawford, Clerk/Administrator

First Reading: March 27, 2018
Second Reading: Waived
Publication: April 5, 2018