Water Resources Management Ordinance

Ordinance No. 350-B

November 2010

(Revised September 2017)

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ORDINANCE NO. 350-A

EMPIRETOWNSHIP
DAKOTA COUNTY, MINNESOTA

AN ORDINANCE ESTABLISHING WATER RESOURCES MANAGEMENT PERMIT REQUIREMENTS AND PERFORMANCE STANDARDS

The Board of Supervisors of Empire Township ordains as follows:

SECTION 1. TITLE

This ordinance shall be known as the "Water Resources Management Ordinance" except as referred to herein as "this Ordinance."

SECTION 2. PURPOSE

The purpose of this Ordinance is to protect the public health, safety, and welfare through the effective management of water resources in EmpireTownship. It is intended that the requirements, regulations, and performance standards of this Ordinance will:

- Implement the DakotaCounty Rural Collaborative Local Water Management Plan,
- Protect and preserve the function and value of water resources,
- Prevent unregulated land disturbance activities which may harm water resources,
- Protect wetland functions consistent with the Wetland Conservation Act,
- Reduce harmful effects of erosion and sedimentation,
- Reduce property damage by seasonal flooding,
- Improve surface and groundwater quality.

SECTION 3. SCOPE AND AUTHORITY

3.01 Scope. The terms, standards, and regulations of this Ordinance shall apply within the portion of EmpireTownship located within the Vermillion River Watershed. No land shall be subdivided or disturbed, except in compliance with the terms, standards, and regulations as set forth herein.

3.02 Authority. EmpireTownship shall act as the Local Governmental Unit (LGU) for the permitting and enforcement of this Ordinance, except as otherwise specifically provided herein.

3.03 Referral to VermillionRiver Watershed Joint Powers Organization (VRWJPO). Prior to the approval of a permit involving any following conditions, the Township must forward land alterations plans to the VRWJPO for review and comment:

- Variances from this Ordinance that affect surface water or impact surface water/groundwater interactions,
- Diversions,
- Intercommunity flows (upon request of adjoining communities),
- Land disturbance area of 40 acres or more, and
- Other proposed activities, as identified in the VRWJPO Plan.

3.04 General Plan Submittal Requirements. In addition to the plan submittal requirements identified by EmpireTownship for the various permit applications in this Ordinance, any permit submittal requiring review by the VRWJPO in Section 3.03 above shall include two full sets of plans and two reduced sets (maximum 11" X 17") for referral by EmpireTownship to the VRWJPO.

SECTION 4. DEFINITIONS

4.01 Application and Interpretation. When not inconsistent with the context, words used in the present tense include the past and future tense, and words in the singular number include the plural number. Masculine gender reference includes feminine. The word "person" includes individual, firm, company, corporation, partnership, trust and other legal entities. The words "shall" and "must" are mandatory, while the words "may" or "should" are permissive.

4.02 Definitions. For the purposes of this Ordinance, the following terms, words, and phrases have the meaning stated below. Terms, words, or phrases not defined in this Ordinance shall have a dictionary or customary meaning.

A. Agricultural Activity – The use of land for the growing and/or production and wholesale distribution of field crops, livestock, and livestock products for the production of income or own use, including but not limited to the following:

1. Field crops, including but not limited to, barley, beans, corn, hay, oats, potatoes, rye, sorghum, and sunflowers
2. Livestock, including but not limited to, dairy and beef cattle, goats, sheep, hogs, horses, poultry, game birds and other animals, including deer, rabbits and mink
3. Livestock products, including but not limited to, milk, butter cheese, eggs, meat, fur, and honey
4. Trees, shrubs, bushes, and plants for wholesale distribution
5. Sod farming
6. Orchards

B. Agricultural Preserve – A land area created and restricted according to Minnesota Statutes 473H to remain in agricultural use.

C. Alteration or Alter – When used in conjunction with public waters or wetlands, any activity that will change or diminish the course, current or cross-section of public waters, public waters wetlands, or wetlands.

D. Applicant – A person or entity, or representative thereof, that applies for a building permit, subdivision approval, or a permit to allow land-disturbing activities. Applicant also means that person's agents, employees, and others acting under this person's direction.

E. Bankfull Channel Width – The channel width of a stream, creek, or river at bankfull stage.

F. Bankfull Stage – The water level in a stream channel, creek, or river where the flow just begins to leave the main channel and enter the connected floodplain.

G. Best Management Practices (BMPs) – Techniques proven to be effective in controlling runoff, erosion and sedimentation, including those documented in the Minnesota Construction Site Erosion and Sediment Control Planning Handbook (BWSR, 1988); Protecting Water Quality in Urban Areas (MPCA, 2000); the Minnesota Small Sites BMPS Manual (Metropolitan Council, 2001); The Minnesota Stormwater Manual (MPCA 2005); and, other sources as approved by the Vermillion River Watershed Joint Powers Organization (VRWJPO).

H. Board – The Board of Supervisors or Town Board of a township.

I. BWSR – Minnesota Board of Water and Soil Resources.

J. Buffer – An area of natural, minimally maintained, vegetated ground cover abutting or surrounding a major waterway, public waters wetland, or wetland.

K. Council – The City Council of a city.

L. Community – A city or township as defined in Minnesota Statutes 462.352, subdivision 2, and “the Community” shall mean Empire Township.

M. Compensatory Storage – Excavated volume of material below the floodplain elevation required to offset floodplain fill.

N. County – Dakota County, Minnesota.

O. Dakota SWCD or SWCD – The Dakota County Soil and Water Conservation District.

P. Dead Storage – The volume of space located below the overflow point of a basin, pond or landlocked basin.

Q. Developer – A person, firm, corporation, sole proprietorship, partnership, state agency, or political subdivision thereof engaged in a subdivision or land disturbance activity.

R. Development – The construction of any public or private improvement project, infrastructure, structure, street or road, or the subdivision of land.

S. Easement – A strip of privately-owned land which is legally described and encumbered for use by another party or public entity for a specific purpose described in an easement document, recorded by Dakota County.

T. Erosion – The wearing away of the ground surface as a result of wind, flowing water, ice

movement or land disturbing activities.

U. Erosion and Sediment Control Plan – A plan of BMPs or equivalent measures designed to control runoff and erosion and to retain or control sediment on land during the period of land disturbing activities with standards.

V. Drain or Drainage – Any method for removing or diverting water from water bodies, including excavation of an open ditch, installation of subsurface drainage tile, filling diking, or pumping.

W. Excavation – The artificial removal of soil or other earth material.

X. Exposed Soil Areas All areas of the construction site where the vegetation (trees, shrubs, brush, etc.) has been removed. This includes topsoil stockpile areas, borrow areas and disposal areas within the construction site. It does not include stockpiles or surcharge areas of sand, gravel, concrete or bituminous.

Y. Fill – The deposition of soil or other earth materials by artificial means.

Z. Filtration – A process by which stormwater runoff is captured, temporarily stored, and routed through a filter bed, vegetated strip, or buffer to improve water quality and slow down the velocity of stormwater runoff.

AA. Final Stabilization – Final stabilization is achieved when all soil disturbing activitiesat the site have been completed, and that a uniform perennial vegetative cover with a density of seventy-five (75) percent of the cover for unpaved areas and areas not covered by permanent structures has been established or equivalent permanent stabilization measures have been employed. (Examples of vegetative cover practices can be found in the current version of the Minnesota Department of Transportation's publication, "Supplemental Specifications to the (Year) Standard Specifications for Construction." (Simply sowing grass seed is not considered stabilization.)

BB. Floodplain – The area adjacent to a waterbody that is inundated during a 100-year flood.

CC. Floodplain Storage – The volume of space available for flood waters within the floodplain.

DD. Fragmentation - The breaking up of an organism's habitat into discontinuous chunks.

EE. Green Acres – Real property or real estate that qualifies as agricultural property having agricultural use under the Minnesota Agricultural Property Tax Law, Minnesota Statutes Section 273.111.

FF. Grassed Waterway - A natural or constructed channel that is shaped or graded to required dimensions and established in suitable vegetation for the stable conveyance of runoff. (Minnesota NRCS Conservation Practice Standard Code 412, November 2006).

GG. Hydric Soil - A soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper horizon.

HH. Hydrophytic Vegetation – Plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content.

II. Infiltration – A stormwater retention method for the purpose of reducing the volume of

stormwater runoff by transmitting water into the ground through the earth's surface.

JJ. Impervious Surface – A constructed hard surface that either prevents or retards the entry of water into the soil and causes water to run off the surface in greater quantities and at an increased rate of flow than prior to development. Examples include rooftops, sidewalks, patios, driveways, parking lots, storage areas, and concrete, asphalt, or gravel roads.

KK. Infrastructure – The system of public works for a county, state, or LGU, including, but not limited to, structures, roads, bridges, culverts, sidewalks, stormwater management facilities, conveyance systems and pipes, pump stations, sanitary sewers and interceptors, hydraulic structures, permanent erosion control and stream bank protection measures, water lines, gas lines, electrical lines and associated facilities, and phone lines and supporting facilities.

LL. Land Disturbing Activity (Land Disturbance) – Any activity on property that results in a change or alteration in the existing ground cover (both vegetative and non-vegetative) and/or the existing soil topography. Land disturbing activities include, but are not limited to, development, redevelopment, demolition, construction, reconstruction, clearing, grading, filling, stockpiling, excavation and borrow pits. Within the context of the Ordinance land disturbance does NOT include the activities listed in Section 6.01 (A) through (L).

MM. Landlocked Basin – A water basin one acre or more in size that does not have a natural outlet at or below the existing 100-year flood elevation as determined by the 100-year, storm event.

NN. Local Governmental Unit (LGU) – All cities, counties, and townships lying in whole or part within the Vermillion River Watershed.

OO. Lot – A parcel of land platted or described by metes and bounds, registered land survey, or other accepted means and separated from other parcels or portions by said description, for the purpose of sale, lease, or separation thereof, as recorded by Dakota County.

PP. Lot of Record – Any lot that legally existed prior to the original adoption date of this Ordinance, April 14, 2009.

QQ. Major Waterways – Intermittent and perennial streams as shown on Map 1 attached to this Ordinance.

RR. Meander – A sinuous bend of a river, stream, or creek

SS. Meander Belt – The area between lines drawn tangential to the extreme limits of fully developed meanders.

TT. MPCA - Minnesota Pollution Control Agency.

UU. Minimum Impact Alignment – Is the alignment for a proposed road, street, utility, path or access that creates the smallest area of impact to a buffer, waterway, or floodplain. For activities that cross a buffer, waterway, or floodplain the minimum impact alignment is one that crosses perpendicular, or near perpendicular, to the longitudinal orientation of the buffer, waterway, or floodplain as reasonable to serve to intended purpose of the

improvement.

VV. Municipality – Empire Township.

WW. Native Vegetation – Plant species that are indigenous to Minnesota, or that expand their range into Minnesota without being intentionally or unintentionally introduced by human activity, and are classified as native in the Minnesota Plant Database (Minnesota DNR, 2002).

XX. Natural Retention or Detention – Retention or detention storage of rainwater and runoff that occurs due to the natural landscape and is not artificially constructed.

YY. Noxious Weeds – Any plant listed as a prohibited, restricted or secondary weed under Minnesota Rule Chapter 1505.

ZZ. Noxious Weeds – Any plant listed as a prohibited, restricted or secondary weed under Minnesota Rule Chapter 1505.

AAA. NPDES – National Pollutant Discharge Elimination System.

BBB. NRCS – United States Department of Agriculture: Natural Resource Conservation Service.

CCC. Ordinary High Water Level (OHWL) – The boundary of water basins, watercourses, public waters, and public waters wetlands and:

1. The ordinary high water level is an elevation delineating the highest water level that has been maintained for a sufficient period of time to leave evidence upon the landscape, commonly the point where the natural vegetation changes from predominately aquatic to predominately terrestrial;
2. For watercourses, the ordinary high water level is the elevation of the top of the bank of the channel; and
3. For reservoirs and flowages, the ordinary high water level is the operating elevation of the normal summer pool.

DDD. Outlot – A platted parcel of land, designated alphanumerically as an outlot (for example – Outlot A), as recorded by Dakota County, and used to designate one of the following: land that is part of the subdivision but is to be subdivided into lots and blocks at a later date; land that is to be used for a specific purpose as designated in a development agreement or other agreement between the LGU and the developer; or for a public purpose that may have restricted uses, such as a park, stormwater pond, or buffer.

EEE. Plat – The drawing or map of a subdivision prepared for filing of record pursuant to Minnesota Statutes Chapter 505.

FFF. Pre-development Condition – The land use on a site that exists immediately prior to a proposed alteration.

GGG. Public Waters – Public Waters means:

1. Water basins assigned a shoreland management classification by the commissioner of the Minnesota Department of Natural Resources under Minnesota Statutes Sections 103F.201 to 103F.202,

2. Waters of the state that have been finally determined to be public waters or navigable waters by a court of competent jurisdiction,
3. Meandered lakes, excluding lakes that have been legally drained,
4. Water basins previously designated by the commissioner of the Minnesota Department of Natural Resources for management for a specific purpose such as trout lakes and game lakes pursuant to applicable laws,
5. Water basins designated as scientific and natural areas under Minnesota Statutes Section 84.033,
6. Water basins located within and totally surrounded by publicly owned lands;
7. Water basins where the state of Minnesota or the federal government holds title to any of the beds or shores, unless the owner declares that the water is not necessary for the purposes of the public ownership,
8. Water basins where there is a publicly owned and controlled access that is intended to provide for public access to the water basin,
9. Natural and altered watercourses with a total drainage area greater than two square miles,
10. Natural and altered watercourses designated by the commissioner of the Minnesota Department of Natural Resources as trout streams, and
11. Public waters wetlands, unless the statute expressly states otherwise.

HHH. Public Waters Wetland – All types 3, 4, and 5 wetlands, as defined in United States Fish and Wildlife Service Circular No. 39 (1971 edition), not included within the definition of public waters, that are ten or more acres in size in unincorporated areas or 2-1/2 or more acres in incorporated areas.

III. Redevelopment – The rebuilding, repair, or alteration of a structure, land surface, road or street, or facility.

JJJ. Right-Of-Way (ROW) – A strip of land occupied or intended to be occupied by a public street and acquired in fee title, or by registration, or by dedication for public use by the recording of a plat, and including railroad corridors owned in fee title.

KKK. Runoff – Rainfall, snowmelt, or irrigation water flowing over the ground surface.

LLL. Rural Preserves – Class 2a or 2b property that had been assessed under Minnesota Statutes 2006, section 273.111, or that is part of an agricultural homestead under Minnesota Statues, section 273.13, subdivision 23, paragraph (a).

MMM. Sediment – Soil or other surficial material transported by surface water as a product of erosion.

NNN. Sedimentation – The process or action of depositing sediment.

OOO. Sinuous – The curving patterns of a river, stream, or creek.

PPP. Soil – The unconsolidated mineral and organic material on the immediate surface of the earth. For the purposes of this Ordinance, stockpiles of sand, gravel, aggregate, concrete or bituminous materials are not considered “soil” stockpiles.

QQQ. Stewardship Plan – A conservation plan completed for agricultural land and activities accepted by the Dakota County SWCD or the VRWJPO.

RRR. Stormwater - Under Minnesota Rule 7077.0105, subpart 41b, stormwater means "precipitation runoff, stormwater runoff, snow melt runoff, and any other surface runoff and drainage." According to the Federal Code of Regulations under 40 CFR 122.26 [b][13], stormwater means "stormwater runoff, snow melt runoff and surface and drainage." Stormwater does not include construction site dewatering.

SSS. Stream Type – One of numerous stream types based on morphology defined by Rogen, D., 1996, Applied *River Morphology*.

TTT. Stormwater Pollution Prevention Plan (SWPPP) – A plan for stormwater discharge, signed by a registered Professional Engineer, that includes erosion prevention measures and sediment controls that, when implemented, will decrease soil erosion on a parcel of land and decrease off-site nonpoint pollution.

UUU. Structure– Anything manufactured, constructed or erected which is normally attached to or positioned on land, including portable structures, earthen structures, water and storage systems, drainage facilities and parking lots.

VVV. Subdivision – The separation of an area, lot, or tract of land under single ownership into two or more parcels, tracts, or lots.

WWW. USDA – United States Department of Agriculture.

XXX. Township – Empire Township.

YYY. Township Building Inspector – The Building Inspector or Building Official hired by the Township to implement and enforce the provisions of this Ordinance.

ZZZ. Township Engineer – The registered Professional Engineer hired by Empire Township to implement and enforce the provisions of this Ordinance.

AAAA. VRWJPO – Vermillion River Watershed Joint Powers Organization.

BBBB. WetDetention Facility – A permanent man-made structure for the temporary storage and controlled release of runoff that contains a permanent pool of water.

CCCC. Wetland – Lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this definition, wetlands must have the following three attributes:

1. Have a predominance of hydric soils,
2. Are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions, and
3. Under normal circumstances support a prevalence of such vegetation.

DDDD. Wetland Conservation Act (WCA) – The Minnesota Wetland Conservation Act of 1991, as amended.

EEEE. Wetland Type – A wetland type classified according to Wetlands of the United States, U.S. Fish and Wildlife Service Circular 39 (1971 edition), summarized as follows:

1. "Type 1 wetlands" are seasonally flooded basins or flats in which soil is covered with water or is waterlogged during variable seasonal periods but usually is well-drained during much of the growing season. Type 1 wetlands are located in depressions and in overflow bottomlands along watercourses, and in which vegetation varies greatly according to season and duration of flooding and includes bottomland hardwoods as well as herbaceous growths.
2. "Type 2 wetlands" are inland fresh meadows in which soil is usually without standing water during most of the growing season but is waterlogged within at least a few inches of surface. Vegetation includes grasses, sedges, rushes, and various broad-leafed plants. Meadows may fill shallow basins, sloughs, or farmland sags, or these meadows may border shallow marshes on the landward side.
3. "Type 3 wetlands" are inland shallow fresh marshes in which soil is usually waterlogged early during a growing season and often covered with as much as six inches or more of water. Vegetation includes grasses, bulrushes, spikerushes, and various other marsh plants such as cattails, arrowheads, pickerelweed, and smartweeds. These marshes may nearly fill shallow lake basins or sloughs, or may border deep marshes on the landward side and are also common as seep areas on irrigated lands.
4. "Type 4 wetlands" are inland deep fresh marshes in which soil is usually covered with six inches to three feet or more of water during the growing season. Vegetation includes cattails, reeds, bulrushes, spikerushes, and wild rice. In open areas, pondweeds, naiads, coontail, water milfoils, waterweeds, duckweeds, water lilies, or spatterdocks may occur. These deep marshes may completely fill shallow lake basins, potholes, limestone sinks, and sloughs, or they may border open water in such depressions.
5. "Type 5 wetlands" are inland open fresh water, shallow ponds, and reservoirs in which water is usually less than ten feet deep and is fringed by a border of emergent vegetation similar to open areas of type 4 wetland.
6. "Type 6 wetlands" are shrub swamps in which soil is usually waterlogged during growing season and is often covered with as much as six inches of water. Vegetation includes alders, willows, buttonbush, dogwoods, and swamp-privet. This type occurs mostly along sluggish streams and occasionally on floodplains.
7. "Type 7 wetlands" are wooded swamps in which soil is waterlogged at least to within a few inches of the surface during growing season and is often covered with as much as one foot of water. This type occurs mostly along sluggish streams, on floodplains, on flat uplands, and in shallow basins. Trees include tamarack, arborvitae, black spruce, balsam, red maple, and black ash. Northern evergreen swamps usually have a thick ground cover of mosses. Deciduous swamps frequently support beds of duckweeds and smartweeds.
8. "Type 8 wetlands" are bogs in which soil is usually waterlogged and supports a spongy covering of mosses. This type occurs mostly in shallow basins, on flat uplands, and along sluggish streams. Vegetation is woody or herbaceous or both.

Typical plants are heath shrubs, sphagnum moss, and sedges. In the north, leatherleaf, Labrador-tea, cranberries, carex, and cottongrass are often present. Scattered, often stunted, black spruce and tamarack may occur.

SECTION 5. EXCAVATION AND GRADING PERMITS

5.01 Purpose. The purpose of this section is to complement the Township's MS4 Stormwater Pollution Prevention Plan (SWPPP) and to protect the general welfare of residences and businesses residing in Empire Township. The Township Engineer shall review project specific SWPPPs and Temporary Erosion and Sedimentation Control (TESC) Plans associated with Excavation and Grading Permit applications.

5.02 Scope. This portion of the Ordinance establishes rules and regulations to control land disturbances including but not limited to grading, excavation, and earthwork construction. This portion of the Ordinance will also establish procedures and policies for filing an Excavation and Grading Permit, issuance of permits, review of plans and submittals, and site inspections.

5.03 Permits. All grading or excavation work undertaken within the limits of Empire Township that conform to the general action of the following shall require an Excavation and grading permit (See Section 6.01(A) through (L) for those activities that do not require an Excavation and Grading permit):

A. If proposed grading activities exceed 30 cubic yards (CY) of material either excavated, stockpiled, or placed as an embankment on lots of one-acre in size or less

B. If proposed grading activities exceed 300 CY of material either excavated, stockpiled, or placed as an embankment and/or land disturbances of one-acre or more in size on lots greater than one-acre in size

C. Excavation of basements, footings, retaining walls or any other types of structure that may also be covered by Township building permits.

D. Refuse disposal sites that are covered by other Township permits and regulations.

E. Mining, quarrying, stockpiling, or activities related to the processing of sand, gravel, or other materials normally associated with an aggregate production plant that are covered by other Township permits and regulations.

5.04 Excavation and Grading Permit Requirements. Except as outlined in Section 5.03 Excavation and Grading Permits are required for all grading and excavation work taking place within Empire Township.

A. Separate permits will be required for each site or development. If construction is broken down into separate phases or portions that may extend for several months or years, the Township Engineer may require a new updated permit and plans for every phase or portion of the project.

B. All permits submitted shall include the following information:

1. Completed legal description of affected property.
2. Copy of half-section map or plat maps of areas to be filled or excavated. All areas where work will occur shall be clearly highlighted on the submitted plat.
3. Method of construction to be utilized.

4. Copy of a Certificate of Survey or As-Built Survey if the work is to take place on an existing lot.
5. Calculations for approximate quantities to be excavated and/or filled.
6. Three copies of 22" x 34" grading plans along with one 11" x 17" plan shall be submitted for review. The plan shall illustrate existing and proposed contours (minimum of 2-foot intervals; shall extend 300-feet beyond property limits), contain information related to any existing structures, utilities, platting and easement boundaries, street and railroad right-of-ways, vegetation, waterways, topography (2' minimum contours) and all other requirements outlined in the SWPPP. All information shall be current (collected within 6 months) to accurately reflect existing conditions.
7. A copy of the required MPCA Construction Stormwater Permit application and SWPPP detailing erosion control methods to be utilized during and after grading operations as well as any staging or sequencing that may be required.
8. If deemed necessary by the Township Engineer, geotechnical sampling and testing by an approved firm may be required. Compaction and soil density requirements shall be submitted as necessary.
9. A list of property owners who reside within 350-feet of the boundaries of the construction site.
10. Certificate of comprehensive liability insurance.

5.05 Issuance of Excavation and Grading Permits. Excavation and Grading Permits will be issued only after plans and calculations of excavated or embankment materials have been reviewed and approved, payment of fees, and all appurtenant plans and maps have been approved. Permits can be issued with either the formal permit application form or through a written Development Contract.

5.06 Construction Grading Requirements

A. All cut slopes shall be no steeper than is safe for the intended use and shall in no circumstances exceed 2-ft horizontally and 1-ft vertically (2:1) for short-term interim periods. All final slopes shall not exceed a 4:1 slope unless approved by the Township Engineer.

B. Fill material that contains greater than 1% organic materials or rocks larger than 4-in. shall not be permitted in building pads or roadway areas.

C. Soil stockpiles that are to remain in place longer than 7 days shall be seeded and mulched immediately. All stockpiles within 200 linear feet of any surface water must follow MPCA Construction Stormwater Permit stabilization requirements.

D. All timbers, logs, trees, brush, stumps, or rubbish shall be removed from the site and disposed of properly. No burning or burying of material is permitted. Logs and trees that are chipped to a size smaller than a 2-in. diameter may be spread to a depth of no more than 6-in. and covered with a minimum of 6-in. of topsoil.

E. All fill areas shall be compacted to a minimum of 90% of maximum dry density. All home pads and street areas to be filled are to be compacted to 95% of maximum dry density. Home pads that have fill placed in excess of 3-feet shall have a minimum one density measurement per pad. Density shall be determined in accordance with ASTM D698-07e1.

F. Home pads that have had in excess of 15-ft of fill placed on them shall have settlement plates installed. Issuances of building permits for these lots will only be permitted after one freeze and thaw cycle. Monthly (Except December through February) elevation shots recorded on the settlement plates shall be furnished to the Township Engineer before building permits will be released.

G. All drainage swales and ditches shall exceed 2-ft vertically in 100-ft horizontally (2.0%.) in longitudinal grade.

H. All erosion control devices shall be in place where necessary prior to beginning up-gradient grading operations. As grading proceeds, site erosion control practices shall be followed as outlined in the SWPPP and the MPCA Construction Stormwater Permit.

5.07 On-Site Inspections. The Township Engineer or their designated representative may perform inspections of any portion of the grading operations.

A. For projects over 10,000 CY of disturbance or when determined necessary by the Township Engineer an inspector from an independent testing firm or engineering firm with demonstrated knowledge of proper grading and erosion control practices shall be on-site. The Township Engineer will determine the need for full-time or part-time inspection.

B. The inspector shall observe and document grading operation progress and practices, erosion control procedures, density testing conformance, and that the contractor is complying with approved drawings and specifications.

C. All discrepancies observed shall be brought to the immediate attention of the contractor for correction. If uncorrected, the discrepancy will be brought to the attention of the Township Engineer.

5.08 Final Reports and Documents

A. Upon completion of grading activity, the Applicant is required to submit a final report signed by a registered professional engineer documenting any deviations from the original plans along with a final record plan of post grading conditions. The final grading plan should include original ground surface elevations, as-graded ground surface elevations, lot drainage patterns and locations, elevations of all surfaces and subsurface drainage facilities, and future street grades and elevations. The as-built survey should also include, but not be limited to, cross-sections of ponds, location and cross-sections of all swales, wetlands, mitigation areas, ditches, lot corner elevations and house pad elevations.

B. A geotechnical soils report prepared by the geotechnical engineer including locations and elevations of all field density tests and any corrective tests or actions that where required while grading operation where in progress. The final geotechnical report shall also include a table of all densities performed on individual building pads.

C. The final geotechnical grading report should also include information outlined in Section 5.06(F) regarding measurements collected on settlement plates on filled lots.

5.09 Final Inspection

A. The Applicant or his agent shall notify the Township Engineer when grading is ready for final inspection. Final approval of grading will only be given when all drainage facilities are in place, all permanent erosion control is in place, turf establishment has reached 70% density, and all temporary erosion controls have been removed.

B. For projects that will transition into utility construction projects the Township Engineer may waive a portion or all of the requirements required to be in place for final inspection at their discretion.

5.10 Expiration of Excavation and Grading Permits

A. Grading permits will expire one year after the date of issue. Any portion of work not completed within the one year time frame will have to reapply for a permit unless otherwise notified by the Township Engineer.

B. Permits will need to be reissued for any work not completed within the one-year time frame. All information required for the initial permit will need to be resubmitted along with repayment of applicable permit fees.

5.11 Suspension or Revocation of Permits. The Township may, in writing, suspend or revoke a permit if the information provided is deemed to be incorrect or if an Applicant is found to be in violation of any portion of this Ordinance.

5.12 Excavation and Grading Permit Fees. Fees shall be charged in accordance with the provisions of this Ordinance and shall be as set forth in a periodically updated Township resolution. All permit fees shall be paid in full prior to permits being issued. All projects between 30-500 CY of disturbance shall require a $200 permit fee. Projects greater than 501 CY of disturbance shall require a permit fee to be determined by the Township Board at the time of project review. All permit fees will be used for plan review and administration. Any required inspection or testing services deemed necessary by the Township Engineer shall be paid for by the project Applicant.

5.13Inspection, Engineering, & Geotechnical Fees

A. All fees associated with project inspection, meetings, re-reviews of plans, reviewing geo-technical reports, or time required of the Township Engineer or their designated representative associated with a grading project will be billed to the Applicant. Final acceptance of the project will be withheld until all Township engineering fees are paid in full.

B. The Applicant shall pay all cost associated with engineering or geotechnical inspection and testing. This would include the cost of any additional reports deemed necessary by the Township Engineer.

SECTION 6. STORMWATER MANAGEMENT

6.01 Temporary Erosion and Sedimentation Control (TESC) Plan. No person shall commence a land disturbing activity less than one acre in area, unless exempted, without submitting a TESC Plan to the Township Engineer for review and approval. No land disturbing activity shall be authorized until the Township Engineer approves this plan and the Township issues the Applicant an Excavation and Grading Permit. At a minimum the erosion and sedimentation control standards must conform to the Best Management Practices (BMPs) defined in this Ordinance. All TESC Plans shall include the general information identified in Section 6.02, A. 1 through 9. Exemptions for preparing an Erosion and Sedimentation Control Plan include the following:

A. Minor land disturbing activities such as home gardens, repairs, and maintenance work.

B. Construction, installation, and maintenance of individual sewage treatment systems, other than those on steep slopes (e.g., 6 percent or greater), or on riparian lots within a Shoreland District.

C. Construction, installation, and maintenance of public utility lines or individual service connections unless the activity disturbs more than 1-acre, in which case the requirements in Section 6.02 apply.

D. A land disturbing activity that creates less than 1-acre of new impervious surface and does not cause off-site erosion, sedimentation, flooding or other damage, and disturbs:

   1. In a Shoreland District, an area less than 10,000-sqft or less than 100-linear feet of shoreline, or

   2. Outside of a Shoreland District, an area of less than 1-acre.

E. Installation of any fence, sign, telephone or electric poles, or other kinds of posts or poles.

F. Emergency activity necessary to protect life or prevent substantial harm to persons or property.

G. Minor wetland impacts that have received a “de minimus certificate of exemption or no-loss” determination by the Township in administering the Wetland Conservation Act, as amended.

H. All maintenance, repair, resurfacing and reconditioning activities of existing road, bridge, and highway systems, which do not involve land disturbing activities outside of the existing roadway surfaces.

I. Construction of any structure on an individual lot in a subdivision with an approved SWPPP, as long as the land disturbing and stormwater management activity complies with the approved plan.

J. Development or redevelopment of, or construction of a structure on, an individual lot with a land disturbing activity that does not cause off-site erosion, sedimentation, flooding or other damage, and creates less than 1-acre of cumulative impervious surface.

K. Tilling, planting or harvesting of agriculture, horticulture, or silviculture crops.

L. Refuse disposal sites that are covered by other state/federal permits and regulations.

6.02 Stormwater Pollution Prevention Plan (SWPPP). No person shall commence a land disturbing activity one acre or more in area without submitting a SWPPP to the Township Engineer for review and approval. No building permit or land disturbing activity shall be authorized until the Township Engineer reviews and approves this plan and permits are issued by the Township and the MPCA.

A. The SWPPP shall contain the following general information:

1. The name and address of the Applicant and the location of the activity. The property boundary and lot lines.
2. Project narrative including the nature and purpose of the land disturbing activity and the amount of grading, utilities, and building construction involved.
3. Phasing of construction including time frames and schedules for the project's various aspects.
4. A map of the existing site conditions showing: existing topography, property information, steep slopes, existing drainage boundaries and patterns, type of soils, impervious surfaces, waterways, wetlands, vegetative cover, 100-year floodplain boundaries, locations of existing and futurebuffer stripsand labeling the portions of the site that are within trout stream or Outstanding Resource Value Water watersheds. This information should extend a minimum of 300-feet beyond the property lines.
5. A site construction plan that includes the location and limits of the proposed land disturbing activities, stockpile locations, erosion and sediment control measures, construction schedule, and the plan for the maintenance and inspections of the stormwater pollution control measures.
6. All surface waters and existing wetlands which will receive stormwater from the construction site, during or after construction. Where these sites may not fit on the plan sheet, they must be identified with an arrow, indicating both direction and distance to the surface water or wetland.
7. Designate the site's areas that have the potential for serious erosion problems.
8. Erosion and sediment control measures: the methods that will be used to control erosion and sedimentation on the site, both during and after the construction process.
9. Permanent stabilization: how the site will be stabilized after construction is completed, including specifications, time frames and/or schedules.
10. Location of all rock construction entrances.
11. Calculations: any that were made for the design of such items as sediment basins, wet detention basins, diversions, waterways, infiltration zones, pipe networks, and other applicable practices.

B. The SWPPP shall address the following general criteria:

1. Stabilizing all exposed soils and soil stockpiles and the related time frame or schedule.
2. Establishing permanent vegetation and the related time frame or schedule.
3. Scheduling for erosion and sediment control practices.
4. The location of permanent and temporary sedimentation basins.
5. Engineering the construction and stabilization of steep slopes.
6. Measures for controlling the quality and quantity of stormwater leaving a site.
7. Stabilizing all waterways and outlets.
8. Protecting storm sewers from the entrance of sediment.
9. What precautions will be taken to contain sediment when working in or crossing water bodies.
10. Re-stabilizing utility construction areas as soon as possible.
11. Protecting paved roads from sediment and mud brought in from access routes.
12. Disposing of temporary erosion and sediment control measures.
13. How and when the temporary and permanent erosion and sediment control practices will be maintained.
14. How collected sediment and floating debris will be disposed of.

C. The following additional information shall be submitted along with the SWPPP.

1. Scaled drainage maps for the existing and proposed conditions.
2. A detailed breakdown of existing and proposed hydrologic curve numbers.
3. Map identifying soil types.
4. A drainage report, signed by a registered Professional Engineer, identifying existing and proposed peak runoff rates and volumes flowing onsite and off-site for the 1-yr, 2-yr, 10-yr, and 100-yr critical duration storm events.
5. All calculations and information used in determining peak discharge rates and volumes must utilize the Soil Conservation Service TR-55, or other approved hydrologic programs/models.
6. First floor and lowest opening elevations for all existing and proposed buildings.
7. Identification and delineation of existing wetlands, as defined by the Wetland Conservation Act.
8. Identification of lakes, streams, shoreland, and floodplains within 300-ft of the project boundary shall be shown on the plans.
9. Identification of the normal and high water elevations for all water bodies on the plans.

10. Identification, by MDH Well Number, of any well locations within 500-ft of the project site.
11. Additional details required in the VRWJPO Rules for any land disturbance required to be referred to the VRWJPO for review.

D. The following stormwater management practices must be investigated in developing the stormwater management portion of the SWPPP in the following descending order of preference:

1. Protect and preserve as much natural or vegetated area on the site as possible, minimizing impervious surfaces, and directing runoff to vegetated areas rather than to adjoining streets, storm sewers and ditches,
2. Flow attenuation of treated stormwater by use of open vegetated swales and natural depressions,
3. Stormwater detention/retention facilities (including on-site filtration/infiltration facilities if required by the Township), and
4. A combination of successive practices may be used to achieve the applicable minimum control requirements. The Applicant shall provide justification for the method selected.

E. All modifications or amendments to a SWPPP must be reviewed and approved by the Township Engineer.

6.03 Construction Erosion Control Standards. Land disturbances shall be governed by the following minimum construction erosion control standards:

A. Erosion and sediment control measures shall be consistent with Best Management Practices (BMPs), and shall be sufficient to retain sediment on site.

B. Temporary erosion and sediment control measures shall be installed on all down gradient perimeters before commencing land disturbing activity. They shall be left in place and maintained as needed until removed per Township Engineer approval after the site has been stabilized. All permanent erosion control measures shall be installed and operational per the approved design and as required by the Township Engineer prior to the removal of temporary controls.

C. Erosion and sediment controls shall meet the standards of this Ordinance and the General Permit Authorization to Discharge Storm Water Associated With Construction Activity Under the National Pollutant Discharge Elimination System/State Disposal System Permit Program Permit MN R100001 (MPCA Construction Stormwater Permit) issued by the Minnesota Pollutant Control Agency, August 1, 2008, as amended for projects disturbing more than 1-acre.

D. Final stabilization of the site must be completed in accordance with this Ordinance and the MPCA Construction Stormwater Permit requirements.

E. All on-site stormwater conveyance channels shall be designed and constructed to convey the 10-yr, 24-hr storm event and to withstand the expected velocity and of flow from a 10-year, 24-hour storm without erosion.

F. If the activity creates more than 1-acre of disturbed area, and the activity is taking place on a site where soils are currently disturbed (e.g., a tilled agricultural site that is being developed), areas that will not be graded as part of the development and areas that will not be stabilized according to the time frames specified in the MPCA Construction Stormwater Permit Part IV. B. 2., shall be seeded with a temporary and permanent cover before commencing the proposed land disturbing activity.

G. The Township may, at its discretion, use turbidity measurements as an indicator of potential non-compliance with the construction erosion control standards. If Nephelometric Turbidity Unit (NTU) measurements taken at a point of site stormwater discharge exceeds 50 NTUs (25 NTU for trout stream), a construction erosion control inspection of the site shall be completed by the Township Engineer. Enforcement procedures and time frames to correct non-compliant conditions are as specified in this Ordinance and the MPCA Construction Stormwater Permit. Exceedence of the turbidity indicator alone shall not constitute non-compliance. Sampling and analysis of turbidity shall be completed as follows:

1. Samples should be taken from the horizontal and vertical center of the outflow, and care should be taken to avoid stirring bottom sediments.
2. A written narrative of site-specific analytical methods and conditions used to collect, handle and analyze the samples will be completed and kept on file, and a chain-of-custody record kept if the analysis is performed at a laboratory.
3. All sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test procedures established by EPA method 180.1 or Standard Method 2130B.
4. Other sampling protocols include:
   a. Sample containers should be labeled prior to sample collection.
   b. Samples should be well mixed before transferring to a secondary container.
   c. Sample jars should be cleaned thoroughly to avoid contamination.
   d. Sampling and analysis of receiving waters or outfall below the minimum detection limit should be reported at the detection limit.

6.04 <u>Post Construction Water Quality Standards</u>. Land disturbances shall be governed by the following minimum post construction water quality standards:

A. Post construction stormwater runoff quality measurements shall meet the standard for the General Permit Authorization to Discharge Storm Water Associated With Construction Activity Under the National Pollutant Discharge Elimination System/State Disposal System Permit Program Permit MN R100001 (MPCA Construction Stormwater Permit) issued by the MPCA, August 1 2008, as amended; except where more specific requirements are provided in paragraphs B, C, D, and E below.

B. Green infrastructure techniques and practices (including, but not limited to, infiltration, evapotranspiration, reuse/harvesting, conservation design, urban forestry, and green roofs), shall be given preference as design options for meeting the requirements of 6.04 C. below, consistent with zoning, subdivision and Planned Unit Development

requirements.

C. Stormwater runoff rates for proposed activities, development or redevelopment conditions, shall not exceed the existing conditions. Runoff rates may be restricted to less than the existing rates when necessary for the public health and general welfare of the watershed.

1. For new development projects there shall be no net increase from pre-project conditions (on an annual average basis) of:
   a. Stormwater volume, unless precluded by the limitations and exceptions in the permit:
   b. Stormwater discharges of Total Suspended Solids (TSS), and;
   c. Stormwater discharges of Total Phosphorus (TP).

2. For redevelopment projects there shall be a net reduction from pre-project conditions (on an average annual basis) of:
   a. Stormwater volume, unless precluded by the limitations and exceptions in the permit;
   b. Stormwater discharges of Total Suspended Solids (TSS), and;
   c. Stormwater discharges of Total Phosphorus (TP).

D. Infiltration/filtration options, and Credits described under Runoff Volume Control Standard B, are the preferred approach to satisfying the water quality treatment requirements of the MPCA Construction Stormwater Permit in areas that drain to the trout stream portions of the Vermillion River and its tributaries where such areas do not first drain toa waterbody with 10 or more acres of open water.

E. Ponds with permanent wet pools, designed to N.U.R.P. Standards, are allowed in areas tributary to the trout stream portions of the Vermillion River and its tributaries where such areas do not first drain to a waterbody with 10 or more acres of open water, if the Applicant demonstrates:

1. No net increase in the temperature of the discharge for the 2-year, 24-hour storm event with the use of alternative technologies and has met the Volume Control requirements of these Standards; or

2. That the wet pond is designed for zero discharge for the 2-year, 24-hour storm; or

3. That the Volume Control requirements of these Standards are met and the following measures are used to the extent practical in order of decreasing preference:

   a. The wet pond is designed with a combination of measures such as shading, filtered bottom withdrawal, vegetated swale discharges, or constructed wetland treatment cells that will limit temperature increases.

   b. Additional volume control measures and credits are used beyond that required to meet the Runoff Volume Standards as a means of limiting the frequency and duration of discharges from the pond.

F. The water quality control volumes necessary to meet the MPCA Construction Stormwater Permit that are satisfied using infiltration or filtration technologies (filtration only on Type C and D soils) can count toward the Volume Control

requirements of this Ordinance.

G. Ponds with overflows or outlets located below the seasonally high water table are allowed only where it can be demonstrated that there is a reasonable need for such an outlet to control seepage damage to existing structures.

H. Redevelopment projects are required to incorporate water quality BMPs to the extent practical.

I. Mitigation Provisions: If the owner and/or operator of a construction activity believes that the requirements for TP and/or TSS cannot be met on the site of the original construction activity, the owner and/or operator must provide appropriate documentation to the township as support. Stormwater discharges that do not meet the TP and/or TSS standards on the site of the original construction activity may be mitigated off-site at the township's discretion. The proposed mitigation must meet the following criteria:

a. Mitigation project areas should be selected in the following order of preference and in consultation and with approval by the township:

i. Locations that yield benefits to the same receiving water that receives runoff from the original construction activity;

ii. Locations within the same Department of Natural Resources (DNR) catchment area as the original construction activity;

iii. Locations in the next adjacent DNR catchment area up-stream; and,

iv. Locations within the township.

b. Mitigation projects must involve the creation of new structural stormwater BMPs, the retrofit of existing structural stormwater BMPs, or the use of a properly designed regional structural stormwater BMP.

c. Routine maintenance of structural stormwater BMPs required by this section cannot be used to meet mitigation requirements.

d. Mitigation projects shall be completed within 24 months after the start of the original construction activity.

e. If the mitigation project is a private structural stormwater BMP and the township is not responsible for long-term maintenance of the project, the township will require written and recorded documentation of maintenance responsibilities.

6.05 Runoff Temperature Control Standards. Land disturbances shall be governed by the following minimum runoff temperature control standards:

A. Post construction runoff criteria for controlling temperature increases relies on the establishment of buffers as specified in Section 8; the prioritization of temperature sensitive BMPs such as infiltration and filtration, and the designation of temperature sensitive wet pond design approaches in the Post Construction Water Quality Standards above; and the control of runoff volume increases and the use of credits with the Runoff Volume Control Standards below. No additional specific temperature criteria are

incorporated since these standards emphasize approaches sensitive to runoff temperature. Since these other standards allow flexibility, and in some cases waivers, permit applications involving the creation of one or more acres of new impervious surface in the trout stream portions of the Vermillion River and its tributaries, where such areas do not first drain to a waterbody with 10 or more acres of open water, must include a narrative description of the temperature sensitive practices incorporated.

B. The Township may require additional runoff temperature BMPs if, during review, they determine the proposed site design does not minimize the potential for runoff temperature increases.

6.06 Peak Runoff Rate Control Standards. Land disturbances shall be governed by the following minimum runoff rate control standards:

A. A hydrograph method approved by the Township Engineer and based on sound hydrologic theory will be used to analyze runoff for the design or analysis of flows and water levels.

1. Precipitation depths using NOAA Atlas 14 Volume 8 precipitation frequency estimates, published June 2013, or its successor, shall be used for each project location.

B. Runoff rates for proposed activities and development shall

1. Apply land cover conditions existing in 2005 as the baseline for existing conditions in runoff calculations.
2. Not exceed existing runoff rates for the 1-year, and 10-year critical duration storm events.
3. Be implemented such that peak runoff rate controls keep future peak flood flows for the Vermillion River 100-year, 4-day event from increasing above existing conditions peak flows.
4. Not exceed the existing offsite flow rates for the 100-year critical duration storm event or the VRWJPO Intercommunity Flow study goal flow value for the Township, whichever is more restrictive.

C. Detention basins with permanent wet pools are allowed in area's tributary to the trout stream portions of the Vermillion River provided Post Construction Water Quality Standard 6.04(C) is met.

6.07 Runoff Volume Control Standards.

New development projects shall achieve no net increase from pre-project conditions (on an annual average basis) of stormwater discharge volume; discharges of Total Suspended Solids (TSS); and discharge of Total Phosphorus (TP).

Redevelopment projects shall achieve a net reduction from pre-project conditions (on an annual average basis) of stormwater discharge volume; discharges of Total Suspended Solids (TSS); and discharge of Total Phosphorus (TP).

Land disturbances shall be governed by the following minimum runoff volume control standards:

A. Development and redevelopment that creates one acre or more of new impervious surface must incorporate volume control practices meeting the most restrictive of either of the following two volume control standards, unless waived in accordance with Section 6.07 (G-K). Determination of the necessary control volume to achieve these standards shall be calculated on a site-by-site basis for each individual project:

   1. Two (2) year standard: The proposed runoff volume shall be limited to the 2-yr, 24-hour storm pre-development conditions.

   2. One inch (1") standard: One inch of runoff from the new impervious surfaces created by the project shall be retained on site and meet the requirements of the NPDES/SDS General Permit.

B. The use of green infrastructure techniques and practices shall be the preferred BMPs for meeting the Volume Control Standards.

C. The water quality control volumes necessary to meet the MPCA Construction Stormwater Permit that are satisfied using infiltration or filtration technologies (filtration only on Type C and D soils) can count toward the Volume Control requirements of this ordinance.

D. When using infiltration for volume control:

   1. Infiltration volumes and facility sizes shall be calculated using one of the two methods below:

      a. Using the following hydrological soil group classification and saturated infiltration rate:

Hydrologic Soil Type	Infiltration Rate/Soil Texture
A	0.30 in/hr – Sand, loam sand, or sandy loam
B	0.15 in/hr – Silt, loam, or loam
C	0.07 in/hr – Clay loam, silty clay loam, silty clay, or clay

      b. Using documented site specific infiltration or hydraulic conductivity measurements completed by a licensed soil scientist or professional engineer.

   2. The design shall consider the infiltration rates of the least permeable horizon within the first five (5) feet below the bottom of the infiltration practice.

   3. The system shall be capable of infiltrating the required volume in 48 hours.

E. Constructed infiltration facilities, such as infiltration basins and trenches:

   1. Can only be used if there is pretreatment of stormwater runoff designed to protect the infiltration system from clogging with sediment and to protect groundwater quality.

2. Cannot be used within 400-ft of a municipal or other Township supply well or within 100-ft of a private well unless specifically allowed by an approved wellhead protection plan.
3. Cannot be used for runoff from fueling and vehicle maintenance areas and industrial areas with exposed significant materials.
4. Cannot be used on areas with less than 3-ft vertical separation from the bottom of the infiltration system and the seasonal high groundwater table.

F. Infiltration areas must be fenced or otherwise protected from construction related disturbance before the land disturbing activity starts.

G. Volume control amounts may be waived by the Township for sites with predominately Type C and D soils, or where a shallow water table prevents construction of infiltration systems, provided the following are met in order of decreasing preference.

1. Credits and site design practices to minimize the creation of connected impervious surfaces are used to the extent practical.
2. Underdrains are used to promote filtration instead of infiltration.

H. Vegetation used in conjunction with infiltration systems must be tolerant of urban pollutants, the range of soil moisture conditions anticipated, and be preapproved by the Township Engineer.

I. Infiltration practices shall be restricted, without higher engineering review provides sufficient information that the treatment system can function properly and prevent adverse impacts to groundwater, when the infiltration practice will be constructed in areas:

1. With predominately Hydrologic Soil Group D soils.
2. Within 1,000 feet up-gradient, or 100 feet down-gradient of active karst features.
3. Within a Drinking Water Source Management (DWSMA) as defined in the township's Wellhead Protection Plan.
4. Where soil infiltration rates are more than 8.3 inches per hour.

J. When the post-construction stormwater management for total suspended solids and phosphorus cannot be cost effectively managed on the site of the original construction activity, mitigation measures shall be met as required by the NPDES/SDS General Permit and per Section 6.04 I.

K. For linear projects that lack right-of-way for the installation of volume control practices, a reasonable attempt must be made to obtain right-of-way during the planning process. Exceptions may be made for lesser volume on-site if any limitations are encountered as allowed per the NPDES/SDS General Permit.

6.08 Minimum Stormwater Pollution Prevention Measures and Related Inspections. These minimum control measures are required where bare soil is exposed. All solid and hazardous wastes on construction sites that result in land disturbance of equal to or greater than one acre must be managed in accordance with the Minnesota Pollution Control Agency's Construction Stormwater General Permit (MN R100001). Due to the diversity of individual construction sites, each site will be individually evaluated. Where additional control measures are needed, they will be specified by and at the discretion of the Township Engineer. The Township Engineer reserves

the right to receive comments from the Dakota County Soil and Water Conservation District (SWCD). The Township Engineer will determine what action is necessary to prevent excessive erosion from occurring on the site. If the following conditions are not met as outlined below, the MPCA will be notified for lack of compliance, fines may be levied, and prosecution for non-compliance with this Ordinance will be pursued.

A. All grading plans and building site surveys must be reviewed by the Township Engineer for review of the effectiveness of erosion control measures in the context of the site topography and drainage.

B. The stormwater pollution prevention plan's measures, the limit of disturbed surface and the location of buffer areas shall be marked on the approved grading plan, and identified with flags, stakes, signs etc. on the development site before work begins.

C. Sediment control measures must be properly installed by the Applicant before construction activity begins. Such structures may be adjusted during dry weather to accommodate short-term activities, such as those that require the passage of very large vehicles. As soon as this activity is finished or before the next significant rainfall, the erosion and sediment control structures must be returned to the configuration approved by the Township Engineer. Sufficient erosion control structures must be in place before a footing inspection will be done.

D. Diversion of channeled runoff around disturbed areas, if practical, or the protection of the channel.

E. If a stormwater management plan involves directing some or all of the site's runoff, the Applicant or his designated representative shall obtain from adjacent property owners any necessary easements or other property interests concerning the flowing of such water.

F. Land disturbing activities should be phased or scheduled to minimize the amount of exposed soil at any time to lessen the potential for erosion and sedimentation.

G. The Applicant is required to obtain a National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) construction stormwater permit from the MPCA for any project that disturbs 1-acre or more of land.

H. Sediment basins related to impervious surface area. Where a project's ultimate development replaces surface vegetation with 1 or more acres of cumulative impervious surface, and all runoff has not been accounted for in the Township's existing stormwater management plan or practice, the runoff must be discharged to a wet sedimentation basin prior to entering waters of the state.

I. Generally, sufficient silt fence or other sediment control device will be required to hold all sheet flow runoff generated at an individual site, until it can either infiltrate or seep through the device's pores.

J. Temporary stockpiling of thirty (30) or more cubic yards of excess soil on any lot or other vacant area will not be allowed without issuance of a grading permit for the earth moving activity in question.

K. For soil stockpiles greater than 10 cubic yards the toe of the pile must be more than 25-ft from a road, drainage channel or stormwater inlet. If such stockpiles will be left for

more than 7-days; they must be stabilized with mulch, vegetation, tarps or other means. If left for less than 7-days, erosion from stockpiles must be controlled with silt fences or rock check dams.

1. If for any reason a soil stockpile of any size is located closer than 25-ft from a road, drainage channel or stormwater inlet, and will be left for more than 7-days, it must be covered with tarps or controlled in some other manner

L. All sand, gravel, or other mining operations taking place on the development site shall have a National Pollutant Discharge Elimination System General Stormwater permit for industrial activities and any required Minnesota Department of Natural Resources permits.

M. Temporary rock construction entrances, conforming to Township standards, are required wherever vehicles enter and exit a construction site. Slash mulch, 10-in to 12-in thick, may be used in lieu of Class I Riprap if approved by the Township Engineer.

N. Parking is prohibited on all bare lots and all temporary construction entrances, except where street parking is not available.

O. Streets must be cleaned and swept whenever tracking of sediments occurs and before sites are left idle for weekends and holidays. Regular sweeping must occur on paved roads at least once a week, unless notified by the Township, in which case sweeping will need to occur within 24-hrs of notification.

P. Water (impacted by the construction activity) removed from the site by pumping must be treated by temporary sedimentation basins, geotextile filters, grit chambers, sand filters, up-flow chambers, hydro-cyclones, swirl concentrators, or other appropriate controls prior to being discharged offsite**.** Such water shall not be discharged in a manner that causes erosion or flooding of the site, receiving channels, adjacent properties or wetlands.

Q. All storm drain inlets must be protected during construction until control measures are in place with either silt fence or an equivalent barrier that meets accepted design criteria, standards and specifications as contained in the latest version of the MPCA's publication, "Minnesota Stormwater Manual" or other approved publication.

R. Catch basins and sediment ponds must be cleaned prior to acceptance by the Township.

S. Roof drain leaders. All newly constructed and reconstructed buildings must route roof drain leaders to pervious areas (not natural wetlands) where the runoff can infiltrate. The discharge rate shall be controlled so that no erosion occurs in the pervious areas.

T. Follow-up inspections must be performed by the Township Engineer on a regular basis to ensure that erosion and sediment control measures are properly installed and maintained. In all cases the inspectors will attempt to work with the Applicant to maintain proper erosion and sediment control at all times.

1. In cases where cooperation is withheld, construction Stop Work Orders may be issued by the Township Engineer until erosion and sediment control measures meet the approval of the Township Engineer. A second erosion and sediment control/grading inspection must then be scheduled and passed before the final inspection will be done.

U. Removal of more than 1-acre of topsoil shall not be undertaken, unless written permission is given by the Township Engineer.

V. Inspection and maintenance. All stormwater pollution control management facilities must be designed to minimize the need for maintenance, provide easy vehicle and personnel access for maintenance purposes, and be structurally sound. These facilities must have a operation and maintenance plan that ensures continued effective removal of the pollutants carried in stormwater runoff. The Applicant shall inspect all stormwater management facilities during construction in accordance with the MPCA Construction Stormwater Permit requirements. A copy of the inspection records shall be given to the Township upon request. It shall be the responsibility of the Applicant to obtain any necessary easements or other property interests to allow access to the stormwater management facilities for inspection and maintenance purpose.

6.09 Minimum Design Standards for Stormwater Drainage Facilities. Stormwater drainage facilities shall be designed to convey the flow of surface waters without damage to persons or property. The system shall insure drainage at all points along streets, and provide positive drainage away from buildings. Drainage plans shall be consistent with local and regional drainage plans. The facilities shall be designed to protect against surface erosion and siltation of surface water, and to prevent the discharge of excess runoff onto adjacent properties.

A. All storm sewer pipe shall be designed to convey the 10-year critical duration storm event under gravity flow conditions based on the Rational Method (Q=CIA). A runoff coefficient of 0.9 shall be used for all hard surfaces.

B. MnDOT Intensity-Duration-Frequency (IDF) Curves shall be used to determine rainfall intensity for various times of concentration.

C. A map identifying all of the individual drainage areas, and storm sewer design sheets identifying drainage area, runoff coefficient, time of concentration, intensity, runoff, slope, diameter, length, and capacity of the pipe, velocity within the pipe and invert elevations shall be submitted with the plans. All normal and high water levels of existing and proposed stormwater ponds, wetlands, lakes, streams and rivers shall be included on the plans.

D. If required by the Township Engineer, 100-ft of 4-in perforated drain tile shall be installed at all low point catch basins located within Township right-of-way. This drain tile shall be connected to proposed storm sewer structures.

E. Catch basins shall have a minimum depth of 3.5-ft.

6.10 Minimum Design Standards for Stormwater Wet Detention Facilities. All stormwater detention basins that do not discharge directly into the Vermillion River or its tributaries shall be designed in accordance with the Walker Method for Wet Detention Basins (N.U.R.P). The following standards shall be utilized.

A. The permanent pool volume shall be equal to or greater than the runoff from a 2.5-in rainfall for fully developed watershed conditions, with a 25% additional volume to allow for sedimentation.

B. The average pond depth obtained by dividing the permanent pool volume by the

permanent pool area shall be a minimum of 3-ft.

C. Side slopes shall be a maximum of 4:1 above the Normal Water Level (NWL) and a maximum of 3:1 below the NWL with a 10:1 bench located at the NWL.

D. Pond inlets and outlets shall be located to minimize plug flow.

E. A 20-ft minimum easement adjacent to a public road shall be provided to all ponds so Township maintenance crews have unobstructed access to the pond.

F. Concrete outlet structures shall be provided for all stormwater ponds in accordance with Township standards.

G. The lowest opening for all structures adjacent to stormwater ponds, wetlands, lakes or other water ways shall be a minimum of 3-ft above the 100-yr high water elevation.

H. The lowest opening in any structure adjacent to stormwater ponds, wetlands, lakes or other water ways shall be at least 2-ft above the emergency overflow elevation. A minimum separation of 1-ft is required between the 100-yr flood elevation and the emergency overflow elevation.

I. The minimum floor elevation for all structures adjacent to land-locked stormwater ponds, wetlands, lakes, or other water ways shall be at least 2-ft above the back-to-back 100-yr HWL elevation.

J. A phasing plan for the construction of new and/or temporary detention basins shall be submitted to the Township Engineer for approval. Temporary detention basins shall be constructed prior to any other construction for the area draining to that particular basin. The temporary detention basins shall be cleaned of all sediment when the up gradient area has been stabilized and the Applicant has received approval by the Township Engineer. Infiltration basins shall not be constructed until the end of the project to eliminate unnecessary compaction of the soils.

6.11 Permanent Maintenance of Stormwater Facilities. All stormwater management structures and facilities shall be maintained in perpetuity to assure the structures and facilities function as originally designed. The responsibility for maintenance shall be assumed either by the Township with jurisdiction over the structures and facilities, or by the Applicant entering into a maintenance agreement with the Township.

A. Maintenance of private structural stormwater BMPs. Any structural stormwater BMP that the township determines to be private shall meet the following requirements:

1. A permanent public easement shall be provided to the township for access for inspection and/or maintenance purposes. Costs incurred by the township for any maintenance of private systems will be billed and/or assessed to the owner/operator;

2. Recorded inspection and maintenance agreements that define inspection and maintenance responsibilities are required. A minimum annual inspection for private systems shall be required. These requirements are transferrable to any party that becomes the owner/operator of the site; and,

3. If site configurations or structural stormwater BMPs change, causing decreased BMP effectiveness, new or improved structural stormwater BMPs must be

implemented to meet the requirements of this section.

6.12 Stormwater Easements and Covenants. The Applicant for stormwater permits shall establish, in a form acceptable to the Township, temporary and permanent drainage and utility easements, or dedicated outlots, for ponding, flowage, and drainage purposes over hydrologic features such as waterbodies and stormwater basins. The easements, or outlots, shall include the right of reasonable access for inspection, monitoring, maintenance, and enforcement purposes. The Township may require that the land be subjected to restrictive covenants or a conservation easement or other easement, in form acceptable to the Township, to prevent the future expansion of impervious surface and the loss of infiltration capacity.

6.13 Waivers. The Township may waive runoff rate, water quality, and runoff volume on-site standards, consistent with the Collaborative Local Water Management Plan, and provided the off-site stormwater facilities are capable of meeting the other requirements in this Section.

6.14 Trading. Consistent with criteria approved by the VRWJPO, the Township may consider "trading" for stream temperature, such as re-vegetation of streamside areas with inadequate shading for a lower degree of on-site temperature control with individual developments.

SECTION 7. WETLAND MANAGEMENT

7.01 Wetland Alteration Approval Required. No person or political subdivision shall drain, fill, excavate, or otherwise alter a wetland or public waters wetland without completing a wetland application provided by the Minnesota Board of Water and Soil Resources (BWSR), consistent with the requirements of the Wetland Conservation Act (WCA). The application may be referred to the technical evaluation panel appointed by the Township, BWSR, and the Dakota County SWCD for technical findings and recommendations prior to any action on the application by the Township. Empire Township is the LGU for all WCA review and permitting issues.

7.02 Wetland Determinations and Delineations. The Township shall refer to all maps and resources available in determining whether a land disturbing activity may impact a wetland. The Township has the authority and responsibility to carefully evaluate all potential wetland impacts. In instances when a potential wetland area is not illustrated on any maps or other resources and its existence is questioned, the Township may contact the Dakota County SWCD and request a determination as to whether a wetland may, in fact, exist. If the SWCD determines that a wetland may exist, the Township shall require the Applicant proposing the land disturbing activity to conduct a field evaluation and delineation of the potential wetlands based on MnRAM Standards. The Township shall approve the evaluation and delineation, if the area is determined to be a wetland. Nothing shall prevent the Township from requiring the Applicant engaged in the land disturbing activity to reimburse the Township for its out-of-pocket expenses incurred in the wetland determination, delineation, and review procedure.

7.03 Wetland Management Priorities. The Township has established the following priorities in managing wetlands:

A. Work to achieve no net loss of wetlands.

B. Replace lost wetlands in the same subwatershed whenever possible.

C. Provide equal or greater functions and values for lost wetlands at the replacement ratios dictated by the WCA.

D. Avoid direct or indirect wetland disturbance in accordance with State and Federal requirements and approved local wetland management plans.

E. Limit the use of high quality wetlands for stormwater management where other alternatives exist.

F. Prevent direct discharge of stormwater runoff facilities into wetlands.

G. Avoid fragmentation of natural areas and corridors when feasible and mitigate when unavoidable.

7.04 Wetland Alteration/Mitigation Standards.

A. Any drainage, filling, excavation, or other alteration of a public waters wetland or wetland shall be conducted in compliance with Minnesota Statutes Section 103G.245, the WCA, Minnesota Rule Chapter 8420, Minnesota Rule Chapter 7050.0186, and regulations established herein.

B. In order to preserve WCA exemptions or no loss determinations, projects involving excavation in Types 1, 2, 6, and 7 wetlands must demonstrate a beneficial purpose, such as habitat or water quality improvements, and minimize loss of wetland function as determined by the Township.

C. A high quality (or equivalent value) public waters wetland or wetland, as determined using the Minnesota Routine Assessment Method (MNRAM 3.0 as amended) or other state accepted functional assessment method for vegetative diversity, may not be used for stormwater management and treatment unless the use will not adversely affect the function and public value of the wetland and other alternatives do not exist.

D. Wetland replacement/mitigation siting must follow the priority order below:

1. Mitigation on-site.
2. Mitigation within the same minor subwatershed as established by the Minnesota Department of Natural Resources for the "1979 Watershed Mapping Project" pursuant to Minnesota Laws 1977, chapter 455, section33, subdivision 7, paragraph (a).
3. Mitigation within the VRWJPO boundary.
4. Mitigation within Dakota County.

E. Transportation projects shall pursue wetland mitigation projects to the extent practical using the standards above; however, this does not preclude the use of the BWSR Replacement Program.

SECTION 8. WETLAND AND WATERWAY BUFFERS

8.01 Wetland and Waterway Protection. It is a stated purpose of this Ordinance to protect and preserve the function and value of water resources in the Township. The provisions of this Section identify requirements for land preservation adjacent to wetlands and waterways for the purpose of protecting the function and value of water resources.

8.02 Buffers Required. A buffer of land adjacent to wetlands, public waters wetlands, and major waterways shall be established according to the requirements of this Section and encumbered by permanent easement or other formal mechanism, as described in Section 8.06, for all lots created after the original date of this Ordinance, April 9, 2009, except as follows:

A. A division of land exempt from local subdivision regulation as defined in Minnesota Statutes.

B. A court-ordered division of land that precludes the Township from establishing these regulations.

C. A division of land, where the resulting lots qualify for Green Acres or Rural Preserves agricultural tax classification.

D. An authorized division of land enrolled in an Agricultural Preserve.

8.03 Structure Setbacks in Lieu of Buffers. All non-agricultural structures approved after the original date of this Ordinance, April 9, 2009, shall comply with a setback standard equal to the minimum buffer widths prescribed in Section 8.04 and Section 8.05 of this Ordinance, in areas where buffers have not been established.

8.04 Wetland Buffer Criteria and Dimensions. For all wetlands and public waters wetlands requiring buffers according to this Ordinance, a wetland delineation shall be required and a wetland functional assessment using the Minnesota Routine Assessment Method (MNRAM 3.0 as amended) or other state accepted functional assessment method for vegetative diversity shall be completed by the Applicant required to establish the buffer. The functional assessment shall be consistent with standards established by MnRAM or as recommended by the Dakota County SWCD. Buffer dimensions shall be established, based on the value of wetlands, identified as follows:

Buffer Dimension	**Exceptional Quality** (Preserve)	**High Quality** (Manage 1)	**Medium Quality** (Manage 2)	**Low Quality** (Manage 3)
Average Width	50 feet	40 feet	30 feet	25 feet
Minimum Width	30 feet	30 feet	25 feet	16.5 feet

If a 50 foot buff is not provided around wetlands then redundant sediment controls need to be provided adjacent to the wetland prior to the start of land disturbance activities.

8.05 Major Waterways Buffer Criteria and Dimensions. Major Waterways in the Township are identified by the VRWJPO, as illustrated on Map 1, October 26, 2006, attached to this Ordinance as Appendix A. At any point in time that Map 1 is updated and formally adopted by the VRWJPO, and the updated map of Major Waterways is formally transmitted to the Township by the VRWJPO, the Township shall replace Map 1 with the updated map. For all Major Waterways requiring buffers according to this Ordinance, required buffers shall meet the following dimensions, based upon the following classifications of the waterways.

Waterway Classification	Buffer Dimensions and Standards
Conservation Corridor	Lower Reach (Vermillion River downstream of Biscayne Avenue): 150-feet average, 100-feet minimum, measured from the edge of the meander belt of the river. Upper Reach (Vermillion River upstream of Biscayne Avenue and South Branch Vermillion River): 150-feet average, 100-feet minimum, measured from the edge of the meander belt of the river
Aquatic Corridor - Principal Connector	Required buffer width 100-feet average, 65 feet minimum, measured from the edge of the meander belt of the river
Aquatic Corridor - Principal Connector with Trout Stream Designation	100-feet minimum, no averaging, measured from the edge of the meander belt of the river
Aquatic Corridor - Tributary Connector	50-feet average, 35-feet minimum: plus 2 feet for every 1 percent of slope,
Water Quality Corridor	30-feet average, 20-feet minimum where there is a flow path for concentrated surface runoff, measured from the center line of the flow path

8.06 Buffer Standards. The following standards shall apply to all buffers established in this Section.

A. Where acceptable natural vegetation exists in buffer areas, the retention of such vegetation in an undisturbed state is required unless approval to replace such vegetation is received. A buffer has acceptable vegetation if it:

1. Has a continuous, dense layer of perennial grasses that has been uncultivated or unbroken for at least 5 consecutive years, or
2. Has an overstory of trees and/or shrubs that has been uncultivated or unbroken for at least 5 consecutive years, or
3. Contains a mixture of the plant communities in 1 and 2 above that has been uncultivated or unbroken for at least 5 years.

B. Buffers shall be staked and protected in the field prior to start of construction unless the vegetation and the condition of the buffer are considered inadequate. Existing conditions vegetation will be considered unacceptable if:

1. Topography or sparse vegetation tends to channelize the flow of surface water, or
2. Some other reason the vegetation is unlikely to retain nutrients and sediment.

C. Where buffer vegetation and conditions are unacceptable, or where approval has been obtained to replant, buffers shall be replanted and maintained according to the

following standards:

1. Buffers shall be planted with a native seed mix approved by the Township, MnDOT, BWSR, NRCS or the Dakota SWCD, with the exception of a one-time planting with an annual nurse or cover crop. Plantings of native forbs and grasses may be substituted for seeding. All deviations must be approved by the Township. Groupings/clusters of native trees and shrubs, of species and at densities appropriate to site conditions, shall also be planted throughout the buffer area.
2. The seed mix and planting shall be broadcast/installed according to the Township, MnDOT, BWSR, NRCS or Dakota SWCD specifications. The selected seed mixes and plantings for permanent cover shall be appropriate for the soil site conditions and free of invasive species.
3. Buffer vegetation (both natural and created) shall be protected by erosion and sediment control measures during construction.
4. During the first five full growing seasons, except where the Township has determined vegetation establishment is acceptable, the owner or Applicant must replant buffer vegetation where the vegetative cover is less than 90%. The owner or Applicant must assure reseeding or replanting if the buffer changes at any time through human intervention or activities.

D. Where a buffer is required, the Township shall require the protection of the buffer under a conservation easement, or include the buffer in a dedicated outlot as part of platting and subdivision approval, except where the buffer is located in a public transportation right-of-way. For all buffers established, the edge of the buffers shall be identified with permanent markers (post and sign), noting the location and purpose of the buffer.

E. Alterations, including building, storage, paving, routine mowing, burning, plowing, introduction of noxious vegetation, cutting, dredging, filing, mining, dumping, grazing livestock, agricultural production, yard waste disposal, or fertilizer application are prohibited within any buffer. Periodic mowing or burning, or the use of fertilizers and pesticides for the purpose of managing and maintaining native vegetation is allowed with approval of the Township. Noxious weeds may be removed and mechanical or spot herbicide treatments may be used to control noxious weeds, but aerial or broadcast spraying is not acceptable. Prohibited alterations would not include plantings that enhance the natural vegetation or selective clearing or pruning of trees or vegetation that are dead, diseased or pose similar hazards, or as otherwise clarified in Standard F.

F. The following activities shall be permitted within any buffer, and shall not constitute prohibited alterations:

1. The following activities are allowed within both the minimum and average buffer width areas:
   a. Use and maintenance of an unimproved access strip through the buffer, not more than 10-ft in width, for recreational access to the major waterway or wetland and the exercise of riparian rights.
   b. Structures that exist when the buffer is created.

c. Placement, maintenance, repair, or replacement of public roads and utility and drainage systems that exist on creation of the buffer or are required to comply with any subdivision approval or building permit obtained from the LGU, so long as any adverse impacts of public road, utility, or drainage systems on the function of the buffer have been avoided or minimized to the extent practical.

d. Clearing, grading, and seeding is allowed if part of an approved Wetland Replacement Plan, or approved Stream Restoration Plan.

e. Construction of a multipurpose trail, including boardwalks and pedestrian bridges, provided it is constructed to minimize erosion and new impervious surface, and has an undisturbed area of vegetative buffer at least ten (10) feet in width between the trail and the wetland or public waters wetland edge, or the bank of the major waterway; or where needed to cross the major waterway, the minimum impact alignment is used.

f. The construction of underground utilities such as water, stormwater, and sanitary sewers, and pipelines provided the minimum impact alignment is used, the area is stabilized in accordance with Standard 8.06(B) above, and setbacks established in the Floodplain Alterations Standard 9.03(D) are met.

2. The following activities are allowed within those portions of the average buffer width that exceed the minimum buffer width:

a. Stormwater management facilities, provided the land areas are stabilized in accordance with Standard 8.06(A) above, and alterations prohibited in Standard 8.06(E) above are upheld.

b. The area of shallow vegetated infiltration and biofiltration facilities, and water quality ponds not to exceed 50 percent of the pond area, adjacent to wetlands and major waterways may be included in buffer averaging provided the facilities do not encroach into the minimum buffer width, and the land areas are stabilized in accordance with Standard 8.06(C) above, and alterations prohibited in Standard 8.06(E) above are upheld.

8.07 Exceptions.

A. The Buffer Standards do not apply to any wetland or public waters wetland with an applicable exemption listed under the WCA, and to those portions of wetlands that will be filled under an approved wetland replacement plan per the WCA, as amended.

B. If the Township has adopted a BWSR or VRWJPO approved Comprehensive Wetland Management Plan (prior to March 9, 2007), which prescribes required buffer widths for public waters wetlands, wetlands, and major waterways; the applicable ordinance shall govern buffer widths, restrictions, allowable uses, and monumentation until such time as the VRWJPO completes second generation Watershed Plan in 2015. With the 2015 Plans the Township needs to include standards equivalent to the VRWJPO Buffer Standards, or have updated plans approved by BWSR or VRWJPO.

C. The Buffer Standards for Water Quality Corridors do not apply to lots of record as of March 9, 2007, that are less than one acre in size.

D. The Buffer Standards do not apply to existing outlots that received preliminary plat approval in the two year period (or more if the preliminary plat approval was extended by the Township) preceding March 9, 2007.

E. Where a stream meandering project has been completed, the buffer width shall be established by the Township and shall be no less than the minimums identified in this Ordinance.

F. The Township may consider "trading" re-vegetation of streamside areas with inadequate shading or inadequate stabilization for smaller buffer widths, or trading reduced buffer widths in one area for establishing buffers in identified critical areas.

G. An existing grassed waterway approved by Dakota SWCD or NRCS and constructed according to USDA Field Office Technical Guide requirements acts as a buffer in a Water Quality Corridor as long as it meets or exceeds the required buffer width and is properly maintained as a grassed waterway. Grassed waterways effectively acting as buffers technically remain grassed waterways until such time as one of the following applies:

1. The land use zoning is changed from an agricultural land use to some other use to accommodate development.
2. The dimensions of the grassed waterway have fallen below the required buffer width.
3. The land use designation is changed as managed under a conditional use permit to a non-agricultural use.
4. The land encompassing the grassed waterway has become ineligible for USDA or State cost share to maintain or reconstruct the grassed waterway.

H. In areas where land use zoning provides for agricultural zoning with one building eligibility per every quarter of a quarter section (40 acres) of property, the buffer requirement will not be exercised until such time as the land use zoning is changed to an alternate use zoning or a higher density of residential building eligibilities. At that time, the buffer requirement will be fully implemented. For all properties seeking a permit under this exemption, the permit will require that setbacks are met which allow the future implementation of the buffer requirement with no impact to permanent structural elements.

8.08 Required Submittals. When buffers are established as required in Section 8.02, the following information shall be submitted to the Township:

A. Construction plans and specifications showing the delineated wetland edge, buffer strip location(s), the location of buffer monuments and the location of any temporary fencing required.

B. A narrative description of each buffer strip identifying its current condition.

C. A legal description and drawing of each buffer strip, signed forms for conservation easements; or record of an administrative land split, preliminary plat or final plat demonstrating that the buffer area is contained in an dedicated Outlot.

D. For buffer strips with unacceptable vegetation as defined by Section 8.06(B) or where grading in a buffer strip is proposed. A landscaping and vegetation management plan

prepared in accordance with Section 8.06(C) including a compliance monitoring and certification plan and a cost estimate must be submitted to the Township.

SECTION 9. FLOODPLAIN ALTERATION

9.01 Floodplain Alteration Approval Required. No person or political subdivision shall alter or fill land, or build a structure or infrastructure below the 100-yr critical flood elevation of any major waterway, public waters, public waters wetland, or other wetland without first obtaining a permit from the Township.

9.02 Floodplain Management Priorities. The Township establishes the following priorities in managing floodplains:

A. Protect the natural function of the floodplain storage areas from encroachment.

B. Work to maintain no net loss of floodplain storage.

C. Manage floodplains to maintain critical 100-yr storage volumes.

D. Limit floodplain alterations in order to obtain "no net loss" of floodplain storage, and include the preservation, restoration, and management of floodplain wetlands.

E. Require compensatory storage for new developments within the floodplain.

9.03 Floodplain Management Standards. Land disturbing activities in or near the 100-yr critical flood elevation shall be subject to the following standards.

A. Floodplain alteration or filling shall not cause a net decrease in flood storage capacity below the projected 100-yr critical flood elevation unless it is shown that the proposed alteration or filling, together with the alteration or filling of all other land on the affected reach of the waterbody to the same degree of encroachment as proposed by the Applicant, will not cause high water or aggravate flooding on other land and will not unduly restrict flood flows.

B. Where 100-yr flood critical elevations have been established, all new structures shall be constructed with the low floor consistent with the minimum elevations as specified in State of Minn. R. Ch. 6120 Shoreland and Floodplain Management, and Dakota County Ordinance No. 50 Shoreland and Floodplain Ordinance, as applicable.

C. Projects involving development, redevelopment, or the subdivision of land, shall establish flood storage, flowage, and drainage easements over areas below the 100-yr critical flood elevation of any public water, public waters wetland, or wetland.

D. Setbacks for floodplain alterations, fill, and new underground utilities, such as water, sanitary and storm sewers and interceptors, gas lines, phone lines, and pipelines; shall be established and used along major waterways. These setbacks shall be established as follows: (the exception is for utilities that need to reach or cross the major waterway, provided the minimum impact alignment is used)

1. Where a major waterway has a sinuous flow pattern and a meander belt can be identified, the setback for new underground utilities shall be setback 15-ft from the outer edge of the meander belt.
2. Where a sinuous flow pattern and meander belt are not readily identifiable because of past channel alterations and/or the geomorphology of the channel, the setback established for new underground utilities shall provide for the potential for restoration and a sinuous flow pattern as follows.
3. Where there are existing encroachments that limit full restoration of the stream to the meander widths appropriate for the stream type, the setback shall be 15-ft from the reasonably achievable restoration width for the meander belt given the existing encroachments.
4. Where full restoration is possible, the setback shall be 15-ft from a meander belt width established along the stream reach that has a width 10 times (10x) the bankfull channel width. An assessment of the stream type may be completed, and meander belt widths established according to the stream type, in place of using the above 10x formula. Note: the 1999 Vermillion River Assessment Report, as amended, available at the Dakota County SWCD or the Dakota County offices of the VRWJPO, provides assessment of stream type for many reaches of the Vermillion River.
5. Where buffers are required, aboveground encroachments, alterations, and fill shall be consistent with the prohibited and allowed uses and widths specified in the Buffer Standard.
6. Projects that alter floodplain boundaries, such as bridge crossings and regional ponds that increase upstream high water levels are allowed provided that:
    a. The Applicant shall submit easements or other documentation in a form acceptable to the Township demonstrating and recording the consent of the owner of any land affected by the increased high water levels,
    b. The action is consistent with other portions of these Standards; and Local, State and Federal Regulations, and
    c. The upstream impacts, riparian impacts and habitat impacts of the proposed action are analyzed and no detrimental impacts result, or adverse impacts are mitigated.

9.04 Required Submittals. For any permit required in this Section, the following information shall be submitted to the Township:

A. Site plan showing boundary lines, delineation and existing elevation contours of the work area, ordinary high water level, and 100-yr critical flood elevation. All elevations shall be referenced to NGVD, 1929 datum.

B. Grading plan showing any proposed elevation changes.

C. Draft preliminary plat of any proposed subdivision.

D. Determination by a registered Professional Engineer of the 100-yr critical flood elevation before and after the proposed activity.

E. Computation of the change in flood storage capacity as a result of the proposed alteration

or fill.

F. Erosion control and sediment plan, or Stormwater Pollution Prevention Plan, which complies with the Stormwater Management Rule.

G. Soil boring results if available.

SECTION 10. DRAINAGE ALTERATION

10.01 Drainage Alteration Approval Required. No person or political subdivision shall artificially drain surface water, or obstruct or divert the natural flow of runoff so as to affect a drainage system, or harm the public health, safety, or general welfare of the Township, without first obtaining a permit from the Township.

10.02 Drainage System Priorities. The Township establishes the following priorities in managing existing drainage systems:

A. Use existing natural retention and detention areas for stormwater management to maintain or improve existing water quality.

B. Manage stormwater to minimize erosion.

C. Allow outlets from landlocked basins, provided such outlets are consistent with State and Federal regulations, verify the downstream impacts, riparian impacts, and habitat impacts of such outlets have been analyzed and no detrimental impacts result.

D. Mitigate and reduce the impact of past increase in stormwater discharge on downstream conveyance systems.

E. Address known flooding/erosion problems that cross jurisdictional boundaries and address other boundary issues and the diversion/alteration of watershed flows in local water plans.

F. Address gully erosion problems in the watershed.

G. Maximize upstream floodwater storage.

10.03 Drainage Alteration Standards. Land disturbing activities affecting existing drainage systems shall be subject to the following standards.

A. Outlets from landlocked basins with a tributary drainage area of 100-acres or more will be allowed, provided such outlets are consistent with other portions of this Ordinance, State and Federal regulations, and the downstream impacts, riparian impacts, and habitat impacts of such outlets have been analyzed and no detrimental impacts result. The analysis and determination of detrimental impacts shall:

1. Use of a hydrograph method based on sound hydrologic theory to analyze runoff for the design or analysis of flows and water levels,
2. Ensure a hydrologic regime consistent with the Peak Runoff Rate Control Standards and the Runoff Volume Control Standards of this Ordinance,
3. Ensure the outlet does not create adverse downstream flooding or water quality conditions, or materially affect stability of downstream major waterways,

4. Maintain dead storage within the basin to the extent possible while preventing damage to property adjacent to the basin,
5. Ensure that the low floors of new structures adjacent to the basin are set consistent with the Floodplain Alterations Standards, and
6. Ensure that proposed development tributary to the land-locked basin has incorporated runoff volume control practices to the extent practical.

B. Artificial drainage, flow obstruction, and diversions involving waterways, public waters, public water wetland, wetlands with drainage areas of 640-acres or more will be allowed provided such alterations or diversions are consistent with other portions of these this Ordinance, State and Federal regulations, and the downstream impacts, riparian impacts and habitat impacts of such alterations or diversions have been analyzed and no detrimental impacts result. Proposals for drainage alterations and diversions shall demonstrate that:

1. There is a reasonable necessity for such drainage alteration or diversion to improve or protect human health and safety, or to improve or protect aquatic resources;
2. Reasonable care has been taken to avoid unnecessary injury to upstream and downstream land;
3. The utility or benefit accruing to the land on which the drainage will be altered reasonable outweighs the gravity of the harm resulting to the land receiving the burden; and
4. The drainage alteration or diversion is being accomplished by reasonably improving and aiding the normal and natural system of drainage according to its reasonable carrying capacity, or in the absence of a practicable natural drain, a reasonable and feasible artificial drainage system is being adopted.

C. Drainage alterations, diversions, and landlocked basin outlets shall be provided with stable channels and outfall.

10.04 Exceptions.

A. No permit shall be required where it is demonstrated to the Township that the proposed drainage alteration or diversion does not cause off-site erosion, sedimentation, flooding, or other damage.

B. The Township may waive the requirements regarding upstream and downstream flooding impacts if the Applicant submits easements or other documentation in a form acceptable to the Township, demonstrating and recording the consent of the owner(s) of any burdened lands to the proposed alteration.

10.05 Required Submittals. For any permit required in this Section, the following information shall be submitted to the Township:

A. Map showing location of proposed alteration and tributary area.

B. Existing and proposed cross sections and profiles of affected drainage area.

C. Description of bridges or culverts required.

D. Narrative and calculations, signed by a Professional Engineer, verifying compliance with this Ordinance.

SECTION 11. FINANCIAL SECURITES AND NOTIFICATION

11.01 Purpose and Amount. The total security amount in the project's development contract with the Township (earthwork, sanitary sewer, watermain, storm sewer, street construction, monuments, street lighting, street signs, etc.) shall provide security for the performance of work approved by the Township in the Applicant's SWPPP, and any SWPPP-related remedial work. The security shall total three thousand dollars ($3000) per acre for the maximum acreage of soil that will be exposed during the project's construction. (See the definitions of "exposed soil area" and "final stabilization" for clarification. The total security shall be five-thousand ($5000) per acre for the maximum acreage of soils that will be exposed during the project's construction for project developments that outlet to a special water, as defined by the state of Minnesota.

11.02 Additional Security. The Township may request a greater financial security, if the Township concludes the development site is especially prone to erosion, or the resource to be protected is exceptionally valuable. The fact that the total security in the project's development contract can be drawn from to pay for the performance of the work approved by the Township in the SWPPP and any SWPPP-related remedial work shall be clearly stated in the developer's contract with the Township.

11.03 Maintaining the Financial Security. If at any time during the course of the work this amount falls below 50% of the required deposit, the Applicant shall make another deposit in the amount necessary to restore the deposit to the required amount.

A. If the Applicant does not bring the financial security back up to the required amount within seven (7) days after written notification by the Township that the amount has fallen below 50% of the required amount the, Township may:

1. Withhold the scheduling of inspections and/or the issuance of a Certificate of Occupancy.
2. Revoke any or all permits issued by the Township to the Applicant for the site in question and any other of the Applicant's sites within the Township's jurisdiction.

11.04 Proportional Reduction of the Financial Security. When more than half of the development's maximum exposed soil area achieves final stabilization; the Township may reduce the total required amount of the financial security by half, if recommended by the Township Engineer.

11.05 Action Against the Financial Security. The Township may act against the financial security if any of the conditions listed below exist. The Township shall use funds from this security to finance any corrective or remedial work undertaken by the Township or a contractor under contract to the Township and to reimburse the Township for all direct cost incurred in the process of remedial work including, but not limited to, staff time and attorney's fees.

A. The developer ceases land disturbing activities and/or filling and abandons the work site prior to completion of the grading plan.

B. The developer fails to conform to any Township approved grading plan and/or the SWPPP as approved by the Township.

C. The techniques utilized under the SWPPP fail within two years of installation.

D. The Applicant fails to reimburse the Township for corrective action taken under this Ordinance.

11.06 Returning the Financial Security. Any unspent amount of the financial security deposited with the Township for faithful performance of the SWPPP and any stormwater and pollution control plan related remedial work will be released two (2) years after the completion of the installation of all such measures and the establishment of final stabilization.

11.07 Notification of Failure of the Stormwater Pollution Prevention Plan. The Township shall notify the developer, when the Township is going to act on the financial securities part of this Ordinance.

11.08 Notification by the Township. The initial contact will be to a party or parties listed on the permit and/or the SWPPP. Forty-eight (48) hours after notification by the Township or seventy-two (72) hours after the failure of the erosion control measures, whichever is less, the Township, at its discretion, may begin corrective work. Such notifications shall be in writing, but if it is verbal, a written notification should follow as quickly as practical.

11.09 Erosion Off-Site. If erosion breaches the perimeter of the project site, the Applicant shall immediately develop a cleanup and restoration plan, obtain the right-of-entry from the adjoining property owner, and implement the cleanup and restoration plan within forty-eight (48) hours of obtaining the adjoining property owner's permission. In no case, unless written approval is received from the Township, shall more than seven (7) calendar days go by without

corrective action being taken. If in the discretion of the Township, the Applicant does not repair the damage caused by the erosion, the Township may complete the remedial work required and charge the associated costs to the Applicant.

11.10 Erosion into Streets, Wetlands, or Water Bodies. If eroded soils (including tracked soils from construction activities) enter or appear likely to enter streets, wetlands, or other water bodies, prevention strategies, cleanup and repair must be immediate. The Applicant shall provide all traffic control and flagging required to protect the traveling public during the cleanup operations.

11.11 Failure to Do Corrective Work. When an Applicant fails to conform to any provision of this policy, including, but not limited to, temporary and permanent BMPs, within the time stipulated, the Township may take the following actions:

A. Withhold the scheduling of inspections and/or the issuance of a Certificate of Occupancy.

B. Revoke any and all permits issued by the Township to the Applicant for the site in question or any other of the applicant's sites within the Township's jurisdiction.

C. Direct the correction of the deficiency by Township forces or by a separate contract. The issuance of a permit constitutes a right-of-entry for the Township or its contractor to enter upon the construction site for the purpose of correcting deficiencies in erosion control.

D. All costs incurred by the Township in correcting stormwater pollution control deficiencies must be reimbursed by the Applicant. If payment is not made within thirty (30) days after the Township incurs costs, payment will be made from the applicant's financial securities as described in this Ordinance.

E. If there is insufficient financial amount in the applicant's financial securities as described in this Ordinance to cover the costs incurred by the Township, then the Township may assess the remaining amount against the subject property. As a condition of the permit, the Applicant shall waive notice of any assessment hearing to be conducted by the Township, concur that the benefit to the property exceeds the amount of the proposed assessment, and waive all rights by virtue of Minnesota Statute 429.081 to challenge the amount or validity of assessment.

SECTION 12. VARIANCES AND ENFORCEMENT

12.01. Qualification and Process. In any case where, upon application of the responsible person or persons, the Township finds that by reason of exceptional circumstances, strict conformity with this Ordinance would be unreasonable, impractical, or not feasible under the circumstances; the Township, in its discretion, may grant a variance there from upon such conditions as it may prescribe for prevention, control, or abatement of pollution in harmony with the general purposes of this Ordinance. Written notification shall be made to the VRWJPO of any proposed appeal or variance proceeding no later than at the time notice if the proceeding is delivered to the official newspaper for publication.

12.02. Variance Request. The variance request must be in writing.

12.03. Variance Response.The variance response must be in writing, and include the justification for either granting or denying the requested variance.

12.04. Time Limit. The variance shall become void one (1) year after being granted, unless used.

12.05. Revocation. If any of the variance's conditions are violated, the Township may revoke the variance.

12.06. Enforcement. The Township shall be responsible enforcing this Ordinance. Any person, firm, or corporation failing to comply with or violating any of these regulations, shall be deemed guilty of a misdemeanor and be subject to a fine or imprisonment or both. All land use and building permits must be suspended until the developer has corrected the violation. Each day that a separate violation exists shall constitute a separate offense.

SECTION 13. RIGHT OF ENTRY AND INSPECTION

The applicant shall allow the Township and their authorized representatives, upon presentation of credentials to:

A. Enter upon the permitted site for the purpose of obtaining information, examination of records, conducting investigations, surveys.

B. Bring such equipment upon the permitted development as is necessary to conduct such surveys and investigations.

C. Examine and copy any books, papers, records, or memoranda pertaining to activities or records required to be kept under the terms and conditions of this permitted site.

D. Inspect the stormwater pollution control measures required by the Township.

E. Sample and monitor any items or activities pertaining to permits issued by theTownship.

SECTION 14. AMENDMENTS

Amendments to this Ordinance may be initiated by petition of any person or by direction of the Township. Any consideration for an amendment to this Ordinance shall require a public hearing, including publication of the public hearing in the Township official newspaper at least 10-days prior to the date of the public hearing. The public hearing may be held by the Planning Commission or the governing body, as determined by the Township. Prior to action on any amendment to this Ordinance by the governing body, the Township must forward a notice of the public hearing to the VRWJPO at the time the notice of the proceeding is delivered to the official newspaper for publication. The Township should review and consider any comments from the VRWJPO prior to acting on any amendment.

SECTION 15. ABROGATION AND STRICTER PROVISIONS

It is not intended by this Ordinance to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. Where any provision of this Ordinance is in conflict with a provision of other Township ordinances, the stricter provisions shall prevail.

SECTION 16. VIOLATIONS AND PENALTIES

16.01. Civil Remedy. In the event of a violation of this Ordinance, the Township may institute appropriate actions or proceedings. These actions may include injunctive relief to prevent, restrain, correct, or abate such violations or threatened violations. The Township Attorney may institute such action.

16.02. Criminal Remedy. Any Applicant, person, firm or corporation who shall violate any of the provisions of this Ordinance or who shall fail to comply with any of the provisions of this Ordinance or who shall make any false statement in any document required to be submitted under the provisions of this Ordinance, shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished as provided by law. Each day that a violation continues shall constitute a separate offense.

SECTION 17. SEVERABILITY

The provisions of this Ordinance are severable, and if any provisions of this Ordinance, or application of any provision of this Ordinance to any circumstance, are held invalid, the application of such provision to other circumstances, and the remainder of this Ordinance must not be affected thereby.

SECTION 18. REPEAL AND REPLACEMENT

Ordinance No. 350-A, adopted November 9th, 2010, is repealed in its entirety and replaced with Ordinance No. 350-B.

SECTION 19. EFFECTIVE DATE

This Ordinance will take effect and be in force after its passage and official publication.

Adopted this 26th day of September, 2017 by the Board of Supervisors of Empire Township, Minnesota.

ATTEST:

_____

Terry L. Holmes, Chair

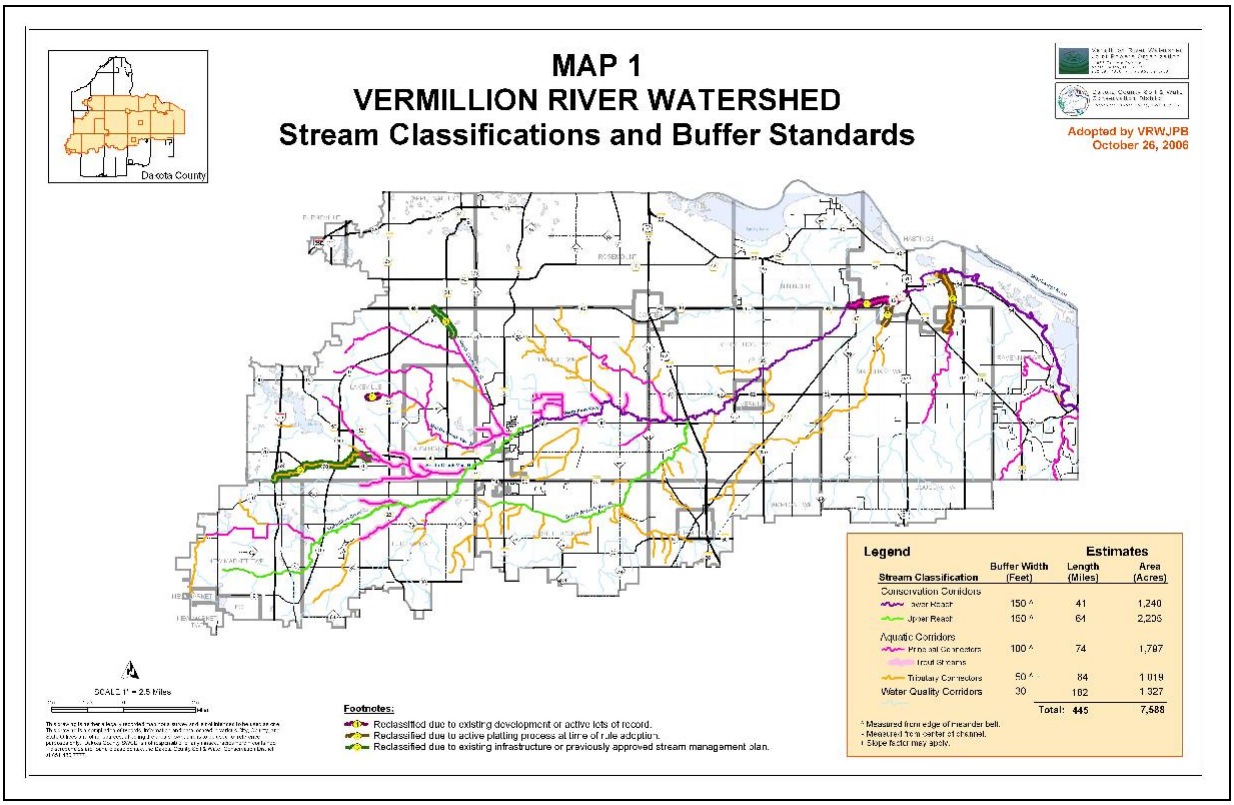
_____

Kathleen B. Krippner, Clerk-Treasurer

Official summary published in the Farmington Independent on October 5, 2017.

APPENDIX A

Map 1 – Stream Classifications and Buffer Standards


MAP 1
VERMILLION RIVER WATERSHED
Stream Classifications and Buffer Standards
Dakota County
Adopted by VRWJPB
October 26, 2006
Legend
Estimates
Stream Classification
Buffer Width (Feet)
Length (Miles)
Area (Acres)
Conservation Corridors
Lower Reach 150 ^ 41 1,240
Upper Reach 150 ^ 64 2,206
Aquatic Corridors
Primary Corridors 100 ^ 74 1,787
Trout Streams
Tributary Corridors 50 ^ 84 1,019
Water Quality Corridors 30 182 1,327
Total: 445 7,588
^ Measured from edge of meander belt.
- Measured from center of channel.
‡ Slope factor may apply.
SCALE 1" = 2.5 Miles
Footnotes:
Reclassified due to existing development or active lots of record.
Reclassified due to active platting process at time of rule adoption.
Reclassified due to existing infrastructure or previously approved stream management plan.

APPENDIX B

Excavation and Grading Permit Application

Permit No._____

Type_____

EMPIRE TOWNSHIP
APPLICATION FOR EXCAVATION AND GRADING PERMIT
IN EXCESS OF 30 CUBIC YARDS

Date of Application_____

Permit Holder Information:

Name (Print)_____

Company Name_____

Address_____

City_____ State_____ Zip_____

Telephone (O)_____ (C)_____

Fax_____

Land Owner (1)

Name (Print)_____

Company Name_____

Address_____

City_____ State_____ Zip_____

Telephone (O)_____Fax_____

PID No_____

Legal Description: Lot_____ Block_____ Addition_____

_____

Section _____ Range _____ Township_____

Land Owner (2)

Name (Print)_____

Company Name_____

Address_____

City_____ State_____ Zip_____

Telephone (O)_____Fax_____

PID No_____

Legal Description: Lot_____ Block_____ Addition_____

_____

Section _____ Range _____ Township_____

For additional landowners fill out information on second copy of page 1 of permit and attach.

SECTION 20. Description of Land to be Graded or Excavated

General Location of Property _____

_____

Purposed of work_____

Value of Work $ _____

Estimated Start Date_____ Estimated Completion Date_____

Source and Composition of Fill_____

Cubic Yards of Fill _____cy

Cubic Yards of Excavation _____cy

Cubic Yards of Land Alteration = _____cy

Total Area of Land Altered _____ Acres

SECTION 21. Permit Fees

Disturbance Volume	Fee
30 - 500 CY	$200
501 – 50,000 CY	TBD at Review
over 50,000 CY	$5 / 100 CY

Total Permit Fees $_____

Total Amount of Bond Requirements $_____
(110% of value of work to be completed)

Attachment to the Application (The following plans, drawings, calculations, bonds and/or statements are required by Township Engineer).

- ❑ Half-section map or copy of plat showing all adjacent property indicating location of all existing structure with area of work highlighted.
- ❑ Grading plan showing existing and proposed finished contours and elevations

- ❑ SWPPP plan showing all erosion control methods and practices to be implemented.
- ❑ Calculations for and approximate quantities of excavation and/or fill required.
- ❑ Signed statement from the property owner accepting responsibility for the operation and granting permission for land alteration/mining operation.
- ❑ Statement to be attached to deed advising of potential need for soil tests prior to any construction on lots where additional fill material has been placed.
- ❑ Soil borings/Geo-technical reports.
- ❑ A final use plan illustrating the ultimate land use projected for the property.
- ❑ Certificate of Comprehensive General Liability Insurance.
- ❑ Compaction and /or Soil Density Requirements.
- ❑ Other:_____

_____