

Water Resources Management Ordinance

March 29, 2009

Dakota County Rural Collaborative

Castle Rock Township
City of Coates
Douglas Township
Empire Township
Eureka Township
City of Hampton
Hampton Township
Marshan Township
Nininger Township
Ravenna Township
City of Vermillion
Vermillion Township

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ORDINANCE NO. _____

**_____, TOWNSHIP
DAKOTA COUNTY, MINNESOTA**

**AN ORDINANCE ESTABLISHING
WATER RESOURCES MANAGEMENT
PERMIT REQUIREMENTS AND
PERFORMANCE STANDARDS**

The Board of Supervisors of _____ 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 this Community. It is intended that the requirements, regulations, and performance standards of this Ordinance will:

- Implement the Dakota County 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 the Community 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. The Community 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 Vermillion River Watershed Joint Powers Organization (VRWJPO). Prior to the approval of a permit involving any following conditions, the Community 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 the Community 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 the Community 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 active 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 the community adopting this Ordinance.
- M. Community Building Inspector – The Building Inspector or Building Official hired by the Community to implement and enforce the provisions of this Ordinance.
- N. Community Engineer – The registered professional Engineer hired by the Community to implement and enforce the provisions of this Ordinance.
- O. Community – A city or township as defined in Minnesota Statutes 462.352, subdivision 2, and “this Community” shall mean the community adopting this Ordinance.
- P. Compensatory Storage – Excavated volume of material below the floodplain elevation required to offset floodplain fill.
- Q. County – Dakota County.
- R. Dakota SWCD or SWCD – The Dakota County Soil and Water Conservation District.
- S. Dead Storage – The volume of space located below the overflow point of a basin, pond or

landlocked basin.

- T. Developer – A person, firm, corporation, sole proprietorship, partnership, state agency, or political subdivision thereof engaged in a subdivision or land disturbance activity.
- U. Development – The construction of any public or private improvement project, infrastructure, structure, street or road, or the subdivision of land.
- V. 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.
- W. Erosion – The wearing away of the ground surface as a result of wind, flowing water, ice movement or land disturbing activities.
- X. 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.
- Y. Excavation – The artificial removal of soil or other earth material.
- Z. Fill – The deposit of soil or other materials by artificial means.
- AA. 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 stormwater runoff.
- 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. 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.
- GG. 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.
- HH. 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.
- II. 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.

- JJ. Infrastructure – The system of public works for a county, state, or municipality, 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.
- KK. Land Disturbing Activity (Land Disturbance) – Any change of the land surface, including removing vegetative cover, excavation, fill, grading, stockpiling soil, and the construction of any structure that may cause or contribute to erosion or the movement of sediment into waterbodies. For the purposes of this Ordinance, a land disturbing activity does not include agricultural activities.
- LL. 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.
- MM. Local Governmental Unit (LGU) – Municipalities located wholly or partly within the VRWJPO with adopted local water management plans and ordinances approved by the VRWJPO, and Dakota County within its area of floodplain jurisdiction.
- NN. 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.
- OO. Lot of Record – Any lot that legally existed prior to the adoption date of this Ordinance.
- PP. Major Waterways – Intermittent and perennial streams as shown on Map 1 attached to this Ordinance.
- QQ. Meander – A sinuous bend of a river, stream, or creek
- RR. Meander Belt – The area between lines drawn tangential to the extreme limits of fully developed meanders.
- SS. 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.

- TT. Municipality – A city or township.
- UU. 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).
- VV. Noxious Weeds – Any plant listed as a prohibited, restricted or secondary weed under Minnesota Rule Chapter 1505.
- WW. 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.
- XX. 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.
- YY. Plat – The drawing or map of a subdivision prepared for filing of record pursuant to Minnesota Statutes Chapter 505, as amended.
- ZZ. Pre-development Condition – The land use on a site that exists immediately prior to a proposed alteration.
- AAA. 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.
- BBB. 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.
- CCC. Redevelopment – The rebuilding, repair, or alteration of a structure, land surface, road or street, or facility.
- DDD. 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.
- EEE. Runoff – Rainfall, snowmelt or irrigation water flowing over the ground surface.
- FFF. Sediment – Soil or other surficial material transported by surface water as a product of erosion.
- GGG. Sedimentation – The process or action of depositing sediment.
- HHH. Sinuuous – The curving patterns of a river, stream, or creek.
- III. 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.
- JJJ. Stewardship Plan – A conservation plan completed for agricultural land and activities accepted by the Dakota Soil and Water Conservation District or the VRWJPO.
- KKK. 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.
- LLL. Stream Type – One of numerous stream types based on morphology defined by Rogen,

D., 1996, *Applied River Morphology*.

MMM. Stormwater Pollution Prevention Plan (SWPPP) – A plan for stormwater discharge 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.

NNN. 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.

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

PPP. VRWJPO – Vermillion River Watershed Joint Powers Organization.

QQQ. Wet Detention Facility – A permanent man-made structure for the temporary storage of runoff that contains a permanent pool of water.

RRR. 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.

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

TTT. 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-leaved 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. STORMWATER MANAGEMENT

5.01 Erosion and Sedimentation Control Plan. No person shall commence a land disturbing activity under one acre in area, unless exempted, without submitting an Erosion and Sedimentation Control Plan to the Community Engineer or the Community Building Inspector. No building permit or land disturbing activity shall be authorized until the Community approves this plan. At a minimum the erosion prevention and sedimentation standards must conform with Best Management Practices (BMPs) defined in this Ordinance. 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 5.02 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 square feet 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 LGU 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 Stormwater Pollution Prevention Plan (SWPPP), as long as any 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.

5.02 Stormwater Pollution Prevention Plan (SWPPP). No person shall commence a land disturbing activity one acre or more in area without submitting an SWPPP to the Community Engineer for review and approval. No building permit or land disturbing activity shall be authorized until the Community Engineer approves this plan and a permit is issued by the Minnesota Pollution Control Agency (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 future buffer strips and 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 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. Where permanent and temporary sedimentation basins will be located.
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. Drainage maps for the existing and proposed conditions.
2. A detailed breakdown of existing and proposed curve numbers.

3. Map identifying soil types.
 4. A drainage report, certified by a professional engineer, identifying existing and proposed peak runoff rates and volumes flowing off-site to adjacent watersheds for the 2, 10 and 100-year events.
 5. All calculations and information used in determining peak discharge rates and volumes utilizing the Soil Conservation Service TR-55/TR-20, or other approved programs/models.
 6. First floor and lowest opening elevations for all existing and proposed buildings.
 7. Delineation of existing wetlands, as defined in the Wetland Conservation Act.
 8. Lakes, streams, shoreland and floodplains shall also be shown on the plans.
 9. Locations of the normal and high water elevations for all water bodies on the plans.
 10. Locations of any well locations within 500 feet of the 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 part 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 Community), 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 reviewed and approved by the Community Engineer and the MPCA.

5.03 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. All temporary erosion and sediment controls shall be installed on all down gradient perimeters before commencing the land disturbing activity, and left in place and maintained as needed until removed per Community approval after the site had been stabilized. All permanent erosion control measures shall be installed and operational per the design and as required by the Community prior to the removal of temporary controls.
- C. Erosion and sediment controls shall meet the standards 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 (NPDES General Construction 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 the NPDES General Construction Permit requirements.
- E. All on-site stormwater conveyance channels shall be designed and constructed to withstand the expected velocity 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 timeframes specified in the NPDES General Construction permit Part IV.B.S, shall be seeded with a temporary or permanent cover before commencing the proposed land disturbing activity.
- G. The Community 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 Community. Enforcement procedures and timeframes to correct non-compliant conditions shall be as specified in this Ordinance and the NPDES General Construction 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 protocol 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.

5.04 Post Construction Water Quality Standards. Land disturbances shall be governed by the following minimum post construction water quality standards:

- A. Post construction stormwater runoff quality measures 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 (NPDES General Construction Permit)

issued by the Minnesota Pollution Control Agency, August 1 2003, as amended; except where more specific requirements are provided in paragraphs B, C, D, and E below.

- B. 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 NPDES General Construction Permit in areas that drain 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.
- C. Ponds with permanent wet pools 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 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.
- D. The water quality control volumes necessary to meet the NPDES General Construction 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.
- E. 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.
- F. Redevelopment projects are required to incorporate water quality BMPs to the extent practical.

5.05 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 7; 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 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 Community may require additional runoff temperature BMPs, if the Community finds that the site design does not minimize the potential for runoff temperature increases.

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

- A. A hydrograph method based on sound hydrologic theory will be used to analyze runoff for the design or analysis of flows and water levels.
- B. Runoff rates for proposed activities, and development shall
 1. Not exceed existing runoff rates for the 1-year, and 10-year critical duration storm events.
 2. 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.
 3. Not exceed the existing rate for the 100-year critical duration storm event or the VRWJPO Intercommunity Flow study goal flow value for the Community, 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 5.04 C. above is met.

5.07 Runoff Volume Control Standards. Land disturbances shall be governed by the following minimum runoff volume control standards:

- A. Development that creates one acre or more of new impervious surface must incorporate volume control practices into the design sufficient to prevent an increase in the runoff volume for the 2-year 24-hour storm above pre-development conditions, unless waived in accordance with Runoff Volume Control Standard G. below. Determination of the necessary control volume to achieve this standard shall be calculated on a site-by-site basis for each individual proposal.
- B. Credits for site design are the preferred methods for meeting the Volume Control standards and shall be discussed and approved by the Community Engineer prior to the design of infiltration or filtration facilities. Such credits will be considered on a case by case basis and must be consistent with any credit system established by the VRWJPO. Potential credits for Volume Control include:
 1. Natural area conservation credit that gives a credit for the net runoff volume conserved compared to how the property could have been developed.
 2. Rooftop disconnection credit that allows rooftop areas to not be counted as impervious area in the volume control calculation if roof drainage is directed to pervious areas.

3. Non-rooftop disconnection credit that allows small developed areas to not be counted for the volume control calculation if these areas are directed as sheet flow to pervious areas.
 4. Permeable paver disconnection credit that allows some fraction or percentage of the surface area covered by permeable pavers to not be counted as developed area.
 5. Grass channel credits that allows some credit for the use of grassed channels instead of lined channels or underground pipe.
 6. Soil amendment credit that allows for a percentage reduction of impervious surface used in the volume control calculation for each acre of soil area amended. Amendment would include deep or chisel plowing and the addition of an amendment such as compost.
 7. Green rooftop credit that allows some fraction or percentage of the area of green rooftop to not be counted as impervious surface in the volume control calculation.
 8. Forest/Prairie cover credit that allows some percentage reduction of impervious surface used in the volume control calculation for each acre of new forest or prairie created.
 9. Reuse of stormwater for irrigation credit that allows for a fraction of runoff volume requirement reduction where stormwater from cisterns or wet ponds is preferentially used for irrigation instead of potable water supplies.
- C. The water quality control volumes necessary to meet the NPDES General Construction 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 three methods below:
 - a. Using the following hydrological soil group classification and saturated infiltration rate:

Hydrologic Soil Type	Infiltration Rate	Soil Texture
A	0.30 inches/hour	Sand, loamy sand, or sandy loam
B	0.15 inches/hour	Silt, loam, or loam
C	0.07 inches/hour	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 engineer, or
 - c. Using the method provided in the Minnesota Stormwater Manual Volume 2 (MPCA 2005) Chapter 12-INF.
 2. The design shall consider the infiltration rates of the least permeable horizon within the first five feet below the bottom of the infiltration practice.
 3. The system shall be capable of infiltrating the required volume in 72 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 feet of a municipal or other community supply well or within 100 feet 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 feet vertical separation from the bottom of the infiltration system and the seasonal high ground water table, and
 5. Cannot be used in Type D soils.
- F. Infiltration areas must be fenced or otherwise protected from disturbance before the land disturbing activity starts.
- G. Volume control amounts may be waived by the LGU or the VRWJPO 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, and the range of soil moisture conditions anticipated.

5.08 Minimum Stormwater Pollution Prevention Measures and Related Inspections. These minimum control measures are required where bare soil is exposed. Due to the diversity of individual construction sites, each site will be individually evaluated. Where additional control measures are needed, they will be specified at the discretion of the Community Engineer. The Community Engineer reserves the right to receive comments from the Dakota County Soil and Water Conservation District (SWCD). The Community 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 Community for 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 builder 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 rainfall, the erosion and sediment control structures must be returned to the configuration specified by the Community. 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 Minnesota Pollution Control Agency 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 Community'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 feet 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 feet 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 all required Minnesota Department of Natural Resources permits.
- M. Temporary rock construction entrances will be required wherever vehicles enter and exit a site, according to specifications required by the Community Engineer. Slash mulch, 4"-10", may be used in lieu of rock if approved by the Community 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 Community, in which case sweeping will need to occur within 24 hours of being notified by the Community.
- 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. Such water shall not be discharged in a manner that causes erosion or flooding of the site, receiving channels, adjacent property or a wetland.
- 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 Minnesota Pollution Control Agency's publication, "Minnesota Stormwater Manual" or other approved publication.
- R. Catch Basins and sediment ponds must be cleaned prior to acceptance by the Community.
- 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. At a minimum, SWPPP inspections shall be done weekly and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours by the applicant or the applicant's representative.
- U. Follow-up inspections must be performed by the Community 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 developer and/or builder to maintain proper erosion and sediment control at all sites.
 - 1. In cases where cooperation is withheld, construction stop orders may be issued by the Community, until erosion and sediment control measures meet specifications. A second erosion and sediment control/grading inspection must then be scheduled and passed before the final inspection will be done.
- V. Removal of more than 1 acre of topsoil shall not be done, unless written permission is given by the Community Engineer. Excessive removal of topsoil can cause significant soil erosion problems.
- W. Inspection and maintenance. All stormwater pollution control management facilities must be designed to minimize the need for maintenance, to provide easy vehicle and personnel access for maintenance purposes and be structurally sound. These facilities must have a plan of operation and maintenance that ensures continued effective removal of the pollutants carried in stormwater runoff. The NPDES permittee shall inspect all stormwater management facilities during construction in accordance with the NPDES

permit requirements. A copy of the inspection records shall be given to the Community. 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.

5.09 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 shall be designed to convey the 10-year critical duration storm event according to methods of accepted engineering practice subject to approval by the Community Engineer.
- B. 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.
- C. If required by the Community Engineer, 100-feet of 4-inch perforated drain tile shall be installed at all low point catch basins located within Community right-of-way. The drain tile shall be connected to proposed storm sewer facilities.
- D. Catch basins shall have a minimum depth of 3.5-feet.

5.10 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. The following standards shall be utilized.

- A. The permanent pool shall be equal to or greater than the runoff from a 2.5-inch rainfall for fully developed watershed conditions.
- B. The average pond depth obtained by dividing the permanent pool volume by the permanent pool area shall be a minimum of 3 feet.
- C. Side slopes shall be a maximum of 3:1 above the normal water level (NWL) and a maximum of 3:1 below the NWL with a 10:1 bench located below the NWL.
- D. Pond inlets and outlets shall be located so as not to encourage plug flow.
- E. A 20-foot minimum easement adjacent to a public road shall be provided to all ponds so Community maintenance crews have access to the pond.
- F. Concrete outlet structures shall be provided for all stormwater basins in accordance with

Community standards or a standard approved by the Community Engineer.

- G. The lowest opening for all structures adjacent to stormwater ponds, wetlands, lakes or other water ways shall be at least 3 feet above the 100-year 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 feet above the emergency overflow elevation. A minimum freeboard of 1 foot is required between the 100-year 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 feet above the back to back 100-year flood elevation.
- J. A phasing plan for the construction of new and/or temporary detention basins shall be submitted to the Community Engineer for approval. Detention basins shall be constructed prior to other construction. The detention basins shall be cleared of sediment by the contractor at the end of the project. Infiltration basins shall not be constructed until the end of the project to eliminate unnecessary compaction of the soils.

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

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

5.13 Waivers. The Community 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.

5.14 Trading. Consistent with criteria established by or approved by the VRWJPO, the Community may consider “trading” re-vegetation of streamside areas with inadequate shading for a lower degree of on-site temperature control with individual developments.

SECTION 6. WETLAND MANAGEMENT

6.01 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 Community, BWSR, and the Dakota County SWCD for technical findings and recommendations prior to any action on the application by the Community. The Community is the LGU for all WCA review and permitting.

6.02 Wetland Determinations and Delineations. The Community shall refer to all maps and resources available in determining whether a land disturbing activity may impact a wetland. The Community 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 Community shall 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 Community shall require the person proposing the land disturbing activity to conduct a field evaluation and delineation of the potential wetland. The SWCD shall approve the evaluation and delineation, if the area is determined to be a wetland. The Community shall reimburse the SWCD for its determination and evaluations, according to fees established by the SWCD. Nothing shall prevent the Community from requiring the person engaged in a land disturbing activity to reimburse the Community for its out-of-pocket expenses incurred in the wetland determination and delineation procedure.

6.03 Wetland Management Priorities. The Community establishes 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.

6.04 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, including all exemptions, and regulations established herein.
- B. In order to preserve WCA exemption or no loss determination, 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 LGU.

- C. Wetlands on agricultural land enrolled in the Federal Farm Program retain the WCA exemption as long as wetlands are: 1) not drained, excavated, or filled beyond that necessary to replace, maintain, or repair existing drainage infrastructure with a capacity not to exceed that which was originally constructed; or 2) replaced at a ratio of 1:1 or greater under United States Department of Agriculture provisions as supported by documentation from the United States Department of Agriculture, which must be included as evidence to support this exemption.
- D. Per the WCA, if the activity would result in loss of eligibility or conversion to non-agricultural land within 10 years, the landowner cannot qualify for the exemption.
- E. A high quality (or equivalent value) public waters wetland or wetland (as determined by methods acceptable to the VRWJPO 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.
- F. 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, section 33, subdivision 7, paragraph (a).
 - 3. Mitigation within the VRWJPO boundary.
 - 4. Mitigation within Dakota County.
 - 5. Mitigation within major watershed number 38: Mississippi & Lake Pepin, excluding minor subwatersheds 3800400, 3800500, 3800401, 3801700, 3800402, 3800200, 3800302, 3800600 3800800, 3800301, 3800300, 3800700, 3801601, 3800100, 3801800, 3801200, 3801100, 3801000, and 3800900, which are located in Goodhue County and are tributary to the Mississippi River instead of the Vermillion River.
- G. 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 7. WETLAND AND WATERWAY BUFFERS

7.01 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 Community. 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.

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

7.06 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 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 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 substitutions must be approved by the Community. 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 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 Community 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 Community 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. The specifications for markers and the interval spacing of the markers shall be determined by the Community.
- 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 Community. 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 feet 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 municipality

or county, 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 7.06B above, and setbacks established in the Floodplain Alterations Standard 8.03D 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 7.06B above, and alterations prohibited in Standard 7.06E 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 7.06C above, and alterations prohibited in Standard 7.06E above are upheld.

7.07 Exceptions.

- A. The Buffer Standards do not apply to any wetland or public waters wetland with a surface area equal to or less than the area of wetland impact allowed without replacement as determined under the WCA, and to those portions of wetlands that will be filled under approved wetland replacement plans per the WCA.
- B. If the Community 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 LGUs need 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 the date of the published VRWJPO Rules, 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 Community) preceding the date of the published VRWJPO Rules, March 9, 2007.

- E. Where a stream meandering project has been completed, the buffer width shall be established by the LGU and shall be no less than the minimum.
- F. Consistent with criteria established by or approved by the VRWJPO, the Community 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.

7.08 Required Submittals. When buffers are established as required in Section 7.02, the following information shall be submitted to the community:

- 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. A landscaping and vegetation management plan according to Criteria 3 below, including a compliance monitoring and certification plan and a cost estimate, for buffer strips with unacceptable vegetation as defined by Criteria 2 below or where grading in a buffer strip is proposed.

SECTION 8. FLOODPLAIN ALTERATION

8.01 Floodplain Alteration Approval Required. No person or political subdivision shall alter or fill land, or build a structure or infrastructure below the 100-year critical flood elevation of any major waterway, public waters, public waters wetland, or other wetland without first obtaining a permit from the Community or Dakota County, acting as the LGU. Where Dakota County has floodplain management jurisdiction, the provisions of this Section and Dakota County Ordinance No. 50 Shoreland and Floodplain Management Ordinance shall apply.

8.02 Floodplain Management Priorities. The Community 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-year storage volumes.
- D. Limit floodplain alterations in order to obtain “no net loss” of floodplain storage, and including the preservation, restoration, and management of floodplain wetlands.
- E. Require compensatory storage for new developments within the floodplain.

8.03 Floodplain Management Standards. Land disturbing activities in or near the 100-year 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-year 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-year 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-year 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 feet 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 feet 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 feet from a meander belt width established along the stream reach that has a width 10 times 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, available at the Dakota SWCD or the Dakota County offices of the VRWJPO, provide assessment of stream type for many reaches of the Vermillion River.
 - 5. Where buffers are required, above ground 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 submits easements or other documentation in a form acceptable to the LGU or the VRWJPO 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.

8.04 Required Submittals. For any permit required in this Section, the following information shall be submitted to the Community and/or Dakota County:

- A. Site plan showing boundary lines, delineation and existing elevation contours of the work area, ordinary high water level, and 100-year 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-year 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 9. DRAINAGE ALTERATION

9.01 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 Community, without first obtaining a permit from the Community.

9.02 Drainage System Priorities. The Community 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, and 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.

9.03 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 these Standards, 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 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 Standards, 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.

9.04 Exceptions.

- A. No permit shall be required where it is demonstrated that the proposed drainage alteration or diversion does not cause off-site erosion, sedimentation, flooding, or other damage.
- B. The LGU may waive the requirements regarding upstream and downstream flooding impacts if the applicant submits easements or other documentation in form acceptable to the LGU, demonstrating and recording the consent of the owner of any burdened land to the proposed alteration.

9.05 Required Submittals. For any permit required in this Section, the following information shall be submitted to the Community, the VRWJPO, and Dakota County if the LGU:

- A. Map showing location of proposed alteration and tributary area.
- B. Existing and proposed cross sections and profile of affected drainage area.
- C. Description of bridges or culverts required.
- D. Narrative and calculations verifying compliance with the following criteria.

SECTION 10. APPLICATIONS, PERMIT FEES, ESCROWS, AND SURETY

10.01 Applications. All requests for approvals required in this Ordinance shall be made on application forms or by procedures prescribed by the Community, and reviewed and acted upon through procedures established by the Community, and according to timeframes established by state law.

10.02 Permit Fees. All requests for approvals required in this Ordinance shall be obligated to pay applicable permit fees established by the Community and review procedure fees, including the reimbursement of out-of-pocket expenses incurred by the Community in the review and approval process. Out-of-pocket expenses include but are not limited to consulting fees, other agency review fees, public hearing publications, mailings, and similar expenses.

10.03 Escrow Fund. The Community may require a cash escrow fund, in amounts as established by the Community, to cover the anticipated out-of-pocket expenses incurred by the Community identified in Section 10.02 above. A person seeking approvals from the Community shall be obligated to cover all out-of-pocket expenses regardless of the existence of an escrow fund or the amount required in an escrow fund.

10.04 Financial Surety. The Community may require cash, a letter of credit, or performance bond, or other surety, in a form and amount determined by the Community, to guarantee satisfactory completion of any land disturbing activities and to protect the public health, safety and welfare.

SECTION 11. APPEALS AND VARIANCES

Appeals for the interpretation of any provision of this Ordinance and variances from the literal application of the provisions in this Ordinance may be appropriate in certain circumstances. The appeals and variance procedures to consider interpretations or relief from the provisions of this Ordinance shall follow the procedures and requirements, and shall require the same findings and considerations for granting appeals or variances, as are prescribed in the Community Zoning Ordinance. In addition to the Community's appeals and variance procedures, written notification shall be made by the Community to the VRWJPO of any proposed appeal or variance proceeding no later than at the time notice of the proceeding is delivered to the official newspaper for publication. The Community must take into consideration any comments from the VRWJPO before acting on any appeal or variance.

SECTION 12. AMENDMENTS

Amendments to this ordinance may be initiated by petition of any person or by direction of the Community. Any consideration for an amendment to this Ordinance shall require a public hearing, including publication of the public hearing in the Community's 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 Community. Prior to action on any amendment to this Ordinance by the governing body, the Community must forward a notice of the public hearing to the VRWJPO at the time notice of the proceeding is delivered to the official newspaper for publication. The Community should review and consider any comments from the VRWJPO prior to acting on any amendment.

SECTION 13. 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 Community ordinances, the stricter provisions shall prevail.

SECTION 14. VIOLATIONS AND PENALTIES

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

14.02 Criminal Remedy. Any 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 15. 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 16.EFFECTIVE DATE

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

Adopted this ____ day of April, 2009 by the Board of Supervisors of _____ Township, Minnesota.

ATTEST:

_____, Chair

_____, Clerk

Official summary published in the _____ on _____, 2009.

APPENDIX A

Map 1 – Stream Classifications and Buffer Standards