

ORDINANCE NO. 87

AN ORDINANCE RELATING TO STORMWATER MANAGEMENT AND PROVIDING FOR PENALTIES FOR THE VIOLATION THEREOF IN THE TOWN OF WHITE BEAR, RAMSEY COUNTY, MINNESOTA

THE TOWN BOARD OF SUPERVISORS OF THE TOWN OF WHITE BEAR ORDAINS:

SECTION 1. STATUTORY AUTHORITY. This Ordinance is adopted pursuant to the authorization and policies contained in Minnesota Statutes, Chapters 103B, 105, 462, and 497, Minnesota Rules, Parts 6120.2500-6120.3900, and Minnesota Rules Chapter 8410 and 8420, as amended.

SECTION 2. PURPOSE. The purpose of this Ordinance is to set forth the minimum requirements for stormwater management that will diminish threats to public health, safety, public and private property and natural resources of the Township by establishing performance standards including:

- 2-1.** Protect life and property from dangers associated with flooding.
- 2-2.** Protect public and private property from damage resulting from runoff or erosion.
- 2-3.** Ensure the annual runoff rates and volumes from post development site conditions mimic the annual runoff rates and volumes from predevelopment site conditions.
- 2-4.** Ensure site design minimizes the generation of stormwater and maximizes pervious areas for stormwater treatment.
- 2-5.** Promote regional stormwater management by watershed.
- 2-6.** Provide a single, consistent set of performance standards that apply to all developments.
- 2-7.** Protect water quality from nutrients, pathogens, toxics, debris, and thermal stress.
- 2-8.** Ensure no increase in temperature of stormwater post-construction in order to protect cold water resources.
- 2-9.** Promote infiltration and groundwater recharge.
- 2-10.** Providing a vegetated corridor (buffer) to protect water resources from development.

2-11. Protect functional values of natural water courses and wetlands.

2-12. Provide plant and animal habitat and support riparian ecosystems.

2-13. Achieve an 80% reduction in sediment load rates to community waters compared to no controls for all new development, a 40% reduction in sediment load rates compared to no controls for all redevelopment and street reconstruction, and a 20% reduction in sediment load rates compared to no controls for existing developments.

SECTION 3. SCOPE. No person shall develop any land for residential, commercial, industrial, or institutional uses without having provided stormwater management measures that control or manage runoff from such developments.

SECTION 4. DEFINITIONS. Unless specifically defined below, words or phrases used in this Ordinance shall be interpreted so as to give them the same meaning as they have in common usage and to give this Ordinance its most reasonable application. For the purpose of this Ordinance, the words “must” and “shall” are mandatory and not permissive. All distances, unless otherwise specified, shall be measured horizontally.

4-1. BEST MANAGEMENT PRACTICES (BMPs) means erosion and sediment control and water quality management practices that are the most effective and practicable means of controlling, preventing, and minimizing degradation of surface water, including avoidance of impacts, construction-phasing, minimizing the length of time soil areas are exposed, prohibitions, and other management practices published by state or designated area-wide planning agencies.

4-1.1. Individual BMPs found in this permit are described in the current version of Protecting Water Quality in Urban Areas, Minnesota Pollution Control Agency 2000. BMPs must be adapted to the site and can be adopted from other sources. However, they must be similar in purpose and at least as effective and stringent as MPCA’s BMPs. (Other sources include manufacturers specifications, Storm Water Management Construction Activities: Developing Pollution Prevention Plans and Best Management Practices, U.S. Environmental Protection Agency 1992, and Erosion Control Design Manual, Minnesota Department of Transportation, et al, 1993).

4-2. COMMISSIONER means the Commissioner of the Minnesota Pollution Control Agenda or the Commissioner’s designee.

4-3. COMMON PLAN OF DEVELOPMENT OR SALE means a contiguous area where multiple separate and distinct land disturbing activities may be taking place at different times, on different schedules, but under one proposed plan. One plan is broadly defined to include design, permit application, advertisement or physical demarcation indicating that land-disturbing activities may occur.

4-4. CONSTRUCTION ACTIVITY. For this permit, construction activity includes construction activity as defined in 40- C.F.R. part 122.26(b)(14)(x) and small construction as defined in 40 C.F.R. part 122.26(b)(15). This includes a disturbance to the land that results in a change in the topography, existing soil cover (both vegetative and non-vegetative), or the existing soil topography that may result in accelerated storm water runoff, leading to soil erosion and movement of sediment into surface waters or drainage systems. Examples of construction activity may include clearing, grading, filling and excavating. Construction activity includes the disturbance of less than one acre of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb one (1) acre or more.

4-5. DEWATERING means the removal of water for construction activity. It can be a discharge of appropriated surface or groundwater to dry and/or solidify a construction site. I may require Minnesota Department of Natural Resources permits to be appropriated and if contaminated may require other MPCA permits to be discharged.

4-6. ENERGY DISSIPATION means methods employed at pipe outlets to prevent erosion. Examples include, but are not limited to: concrete aprons, riprap, splash pads, and gabions that are designed to prevent erosion.

4-7. EROSION PREVENTION means measures employed to prevent erosion including but not limited to: soil stabilization practices, limited grading, mulch, temporary or permanent cover, and construction phasing.

4-8. FINAL STABILIZATION means that either:

4-8.1. All soil disturbing activities at the site have been completed and a uniform (e.g., evenly disturbed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

4-8.2. For individual lots in residential construction by either:

4-8.2(a). The homebuilder completing final stabilization as specified above,
or

4-8.2(b). The homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for, and benefits of, final stabilization.

4-8.3. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land) final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed

that were not previously used for agricultural activities, such as buffer strips immediately adjacent to surface waters and drainage systems, and areas which are not being returned to their preconstruction agricultural use must meet the final stabilization criteria in 4-8.1 or 4-8.2 above.

4-9. GENERAL CONTRACTOR means the party who signs the construction contract with the owner to construct the project described in the final plans and specifications. Where the construction project involves more than one contractor, the general contractor will be the party responsible for managing the project on behalf of the owner. In some cases, the owner may be the general contractor. In these cases, the owner may contact an individual as the operator who would become the co-permittee.

4-10. HOMEOWNER FACTSHEET means a fact sheet developed by the MPCA to be given to homeowners at the time of sale by a builder to inform the homeowner of the need for, and benefits of, final stabilization.

4-11. IMPERVIOUS SURFACE means 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.

4-12. NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) means the program for issuing, modifying, revoking, reissuing, terminating, monitoring, and enforcing permits under the Clean Water Act (Sections 301, 318, 402, and 405) and United States Code of Federal Regulations Title 33, Sections 11317, 1328, 1342, and 1345.

4-13. NORMAL WETTED PERIMETER means the area of a conveyance, such as a ditch, channel, or pipe that is in contact with water during flow events that are expected to occur once every year.

4-14. NOTICE OF TERMINATION means notice to terminate coverage under this permit after construction is complete, the site has undergone final stabilization, and maintenance agreements for all permanent facilities have been established, in accordance with all applicable conditions of this permit. Notice of Termination forms are available from the MPCA.

4-15. OPERATOR means the person (usually the general contractor), designed by the owner, who has day to day operational control and/or the ability to modify project plans and specifications related to the SWPPP. The person must be knowledgeable in those areas of the permit for which the operator is responsible, (Part II.B. and Park IV). and must perform those responsibilities in a workmanlike manner.

4-16. OWNER means the person or party possessing the title of the land on which the construction activities will occur; or if the construction activity is for a lease holder, the

party or individual identified as the lease holder; or the contracting government agency responsible for the construction activity.

4-17. PERMANENT COVER means final stabilization. Examples include grass, gravel, asphalt, and concrete.

4-18. PERMITTEE means a person or persons, firm, or governmental agency or other institution that signs the application submitted to the MPCA and is responsible for compliance with the terms and conditions of this permit.

4-19. SATURATED SOIL means the highest seasonal elevation in the soil that is in a reduced chemical state because of soil voids being filled with water. Saturated soil is evidenced by the presence of redoximorphic features or other information.

4-20. SEDIMENT CONTROL means methods employed to prevent sediment from leaving the site. Sediment control practices include silt fences, sediment traps, earth dikes, drainage swales, check dams, subsurface drains, pipe slope drains, storm drain inlet protection, and temporary or permanent sedimentation basins.

4-21. SMALL CONSTRUCTION ACTIVITY means small construction activity as defined in 40 C.F.R. part 122.26(b)(15). Small construction activities include clearing, grading and excavating that result in land disturbance of equal to or greater than one acre and less than five acres. Small construction activity includes the disturbance of less than one (1) acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one and less than five (5) acres.

4-22. STABILIZED means the exposed ground surface has been covered by appropriate materials such as mulch, staked sod, riprap, wood fiber blanket, or other material that prevents erosion from occurring. Grass seeding is not stabilization.

4-23. STANDARD PLATES means general drawings having or showing similar characteristics or qualities that are representative of a construction practice or activity.

4-24. STORMWATER is defined under Minnesota Rules 7077.0105, subp. 41(b), and includes precipitation runoff, stormwater runoff, snow melt runoff, and any other surface runoff and drainage.

4-25. STORMWATER POLLUTION PREVENTION PLAN means 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.

4-26. SURFACE WATER OR WATERS means all streams, lakes, ponds, marshes, wetlands, reservoirs, springs, rivers, drainage systems, waterways, watercourses, and irrigation systems whether natural or artificial, public or private.

4-27. TEMPORARY EROSION PROTECTION means methods to prevent erosion. Examples of temporary cover include: straw, wood fiber blanket, wood chips, and erosion netting.

4-28. UNDERGROUND WATERS means water contained below the surface of the earth in the saturated zone including, without limitation, all waters whether under confined, unconfined, or perched conditions, in near surface unconsolidated sediment or regolith, or in rock formations deeper underground. The term ground water shall be synonymous with underground water.

4-29. WATERS OF THE STATE (as defined in Minnesota Statutes, Section 115.01, Subd. 22) means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof.

4-30. WATER QUALITY VOLUME means $\frac{1}{2}$ 1.1" inch of runoff from the new impervious surfaces created by this project **except public linear projects which require treatment of first .75 inches of runoff** and is the volume of water to be treated in the permanent storm water management system, as required by this permit ~~except as provided in Appendix A.C.2.~~

4-31. WETLAND OR WETLANDS is defined in Minnesota Rules 7050.0130, Subpart F, and includes those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, Wetlands generally include swamps, marshes, bogs, and similar areas. Constructed wetlands designed for wastewater treatment are not waters of the state.

4-31.1. Wetlands must have the following attributes:

4-31.1(a). A predominance of hydric soils.

4-31.1(b). Inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in a saturated soil condition; and

4-31(c). Under normal circumstances support a prevalence of such vegetation.

SECTION 5. STORMWATER MANAGEMENT. The following standards shall apply to all developments within the Township:

5-1. STORMWATER MANAGEMENT PLAN. Every applicant for a building permit that involves disturbing ~~20,000~~ 10,000 square feet of land, subdivision approval, or a permit to allow land disturbing activities must submit a stormwater management plan to the Township. No building permit, subdivision approval, or permit to allow land disturbing activities shall be issued until approval of this plan. All plans shall be consistent with National Pollution Discharge Elimination Permit (NPDES) requirements, and the filing or approval requirements of the Rice Creek Watershed District, Vadnais Lake Area Water Management Organization, the Ramsey Soil and Water Conservation District, or other regulatory bodies. All stormwater mitigation and management technologies shall be consistent with the Community Stormwater Management Design Manual (Design Manual). The Design Manual is the compilation of design, performance, and review criteria approved by the Town and adopted by the Town Board for stormwater management practices.

5-1.1. GENERAL POLICY ON STORMWATER RUNOFF RATES. Site plans for new development of any kind will be assessed for stormwater quantity control and stormwater quality management. The general policy on stormwater runoff rates is to reduce impacts of development by maintaining pre-development hydrological conditions. When a site is designed for new or renewed development, the hydrologic regime can be altered in the following ways:

5-1.1(a). Increased runoff volume.

5-1.1(b). Increased imperviousness.

5-1.1(c). Increased flow frequency, duration, and peak runoff rate.

5-1.1(d). Reduce infiltration (groundwater recharge).

5-1.1(e). Modification of the flow pattern.

5-1.1(f). Faster time to peak, due to shorter time of concentration through storm sewers.

5-1.1(g). Loss of storage.

5-1.1(h). Accelerated channel erosion.

5-1.2. STORMWATER MANAGEMENT PLAN REQUIREMENTS. The minimum requirements of the Stormwater Plan shall be consistent with the most recent version of the Minnesota Pollution Control Agency's NPDES Construction Permit Requirements.

5-1.2(a). IDENTIFICATION AND DESCRIPTION.

(1). Project name.

(2). Project type (residential, commercial, industrial, road construction, or other).

(3). Project location.

(4). County parcel identification number (legal description).

(5). Names and addresses of the record owner, developer, land surveyor, engineer, designer of the plat, and any agents, contractors, and subcontractors who will be responsible for project implementation.

(6). Identification of the entity responsible for long term maintenance of the project. This induces a maintenance plan and schedule for all permanent stormwater practices.

(7). Phasing of construction with estimated start date, time frames and schedules for each construction phase, and completion date.

(8). Copies of permits or permit applications required by any other governmental entity or agencies including mitigation measures required as a result of any review for the project.

5-1.3. EXISTING CONDITIONS. A complete site plan and specifications, signed by the person who designed the plan shall be drawn to an easily legible scale, shall be clearly labeled with a north arrow and a date of preparation, and shall include, at a minimum, the following information:

5-1.3(a). Project Map. An 8.5 by 11 inch United States Geological Survey (USGS) 7.5 minute quad or equivalent map indicating site boundaries and existing elevations.

5-1.3(b). Property lines and lot dimensions.

5-1.3(c). Existing zoning classifications for land within and abutting the development, including shoreland, floodway, flood fringe, or general floodplain, and other natural resource overlay districts.

5-1.3(d). All buildings and outdoor uses including all dimensions and setbacks.

5-1.3(e). All public and private roads, interior roads, driveways and parking lots.

5-1.3(f). Identify all natural and artificial water features (including drain tiles) on site and within ½ mile of project boundary, including, but not limited to

lakes, ponds, streams, and ditches. Show ordinary high water marks and 100 year flood elevation for all lakes and county ditches and delineated wetland boundaries, if any. If not available, appropriate flood zone determination or wetland delineation, or both, may be required at the applicant's expense.

5-1.3(g). Map of watershed drainage areas, soil types, infiltration rates, depth to bedrock, and depth to seasonal high water table.

5-1.3(h). Steep slopes where areas of 12% or more existing over a distance for 50 feet or more.

5-1.3(i). Bluff areas where the slope rises at least 25 feet above the toe of the bluff and the grade of the slope from the toe of the bluff to a point 25 feet or more above the toe of the bluff averages 30% or greater.

5-1.3(j). Wooded area and tree survey as defined by the Zoning Ordinance.

5-1.3(k). Agricultural Land Preservation Area (s), County Biological Survey sites, or other officially designated natural resource.

5-1.3(l). Hydrologic calculations for volume runoff, velocities, and peak flow rates by watershed, for the 2.0-yr, 10-yr, and 100 yr 24-hour storm events.

(1). They shall include:

(i). Pre-existing peak flow rates.

(ii). Assumed runoff curve numbers.

(iii). Time of concentration used in calculations.

(iv). The 100-year flood elevation with and without the floodway.

5-1.3(m). Bank full discharge rate (1.5 year recurrence interval) of County Ditch #1 and #14.

5-1.4. PROPOSED CONDITIONS. A complete site plan and specifications, signed by the person who designed the plan shall be drawn to an easily legible scale, shall be clearly labeled with a north arrow and a date of preparation, and shall include, at a minimum, the following information:

5-1.4(a). PROJECT MAP. An 8.5 by 11 inch United States Geological Survey (USGS) 7.5 minute quad or equivalent map indicating site boundaries, proposed elevations, and areas not to be disturbed.

5-1.4(b). Property lines and lot dimensions of plat.

5-1.4(c). The dimensions and setbacks of all buildings and easements.

5-1.4(d). The location and area of all proposed impervious surfaces including public and private roads, interior roads, driveways, parking lots, pedestrian ways, and rooftops. Show all traffic patterns and types of paving and surfacing materials.

5-1.4(e). Location, size, and approximate grade of proposed public sewer and water mains.

5-1.4(f). Elevations, sections, profiles, and details as needed to describe all natural and artificial features of the project.

5-1.4(g). Identify all natural and artificial water features on site and within ½ mile of project boundary, including, but not limited to lakes, ponds, streams, and ditches. Show ordinary high water marks of all lakes, 100-year flood elevations and delineated wetland boundaries, if any. If not available, appropriate flood zone determination or wetland delineation, or both, may be required at the applicant's expense.

5-1.4(h). Hydrologic calculations for volume runoff, velocities, and peak flow rates by watershed, for the 2.0-yr, 10-yr, and 100-yr 24-hour storm events. These shall include:

(1). Post construction peak flow rates with no detention.

(2). Post construction peak flow rates with detention.

(3). Assumed runoff curve numbers.

(4). Time of concentration used in calculations.

(5). If a flood insurance study has been done by the National Flood Insurance Program, the 100-year flood elevation with and without the floodway.

5-1.4(i). Hydrologic calculations for retaining soil particles greater than 5 microns (80% reduction) for new construction sites and greater than 20 microns (40% reduction) for redevelopment sites resulting from a one-year 24-hour storm event.

5-1.4(j). Bank full discharge rate (1.5 year recurrence interval) of creek or stream if there is a waterway on the site or if the site discharges directly to the waterway.

5-1.4(k). Locations of all stormwater management practices, infiltration areas, and areas not to be disturbed during construction.

5-1.4(l). Steep slopes where areas of 14 12% or more existing over a distance for 50 feet or more.

5-1.4(m). LOCATION OF TEMPORARY SEDIMENTATION BASINS. If more than 10 acres are disturbed and drained to a single point of discharge temporary sediment basins must be installed, however, if the site has sensitive features as determined by the Town or the potential of offsite impacts, then temporary sediment basins must be installed to protect the resource. This is determined on a site by site basis. When site restrictions do not allow for temporary sediment basin, equivalent measures such as smaller basins, check dams, and vegetated buffer strips can be included.

5-1.4(n). Location and engineered designs for structural stormwater management practices including stormwater treatment devices that remove oil and floatable material (e.g. basin outlets with submerged entrances).

5-1.4(o). Normal water level, high water level, and emergency overflow elevations for the site.

5-1.4(p). For discharges to cold water fisheries, a description and plans to control temperature from stormwater runoff.

5-1.4(q). Floodway and flood fringe boundary, if available.

5-1.5. All proposed stormwater practices, hydrologic models, and design methodologies shall be reviewed by the Town Engineer and certified for compliance by the Town in accordance with their plans and specifications.

5-2. STORMWATER MANAGEMENT PERFORMANCE STANDARDS AND DESIGN CRITERIA. The applicant shall consider reducing the need for stormwater management performance standards by incorporating the use of natural topography and land cover such as natural swales and depressions as they exist before development to the degree that they can accommodate the additional flow of water without compromising the integrity or quality of the receiving waterbody. The development shall minimize impact to significant natural features. Review the site for steep slopes (greater than 12%), wetlands, wooded areas of significance, rare and endangered species habitat, areas designated by the County Biological Survey, metro greenways, or County parks and open space. These areas should not be developed. The development shall limit impervious

surface coverage. Impervious surface coverage of a site shall not exceed twenty five percent (25%) of the site area unless stormwater is conveyed to an approved, on-site or regional stormwater ponding/retention facility designed to accommodate the increased runoff prior to discharge from the site into public waters or wetlands. In designated shoreland areas the development shall meet the impervious surface requirements of the Zoning Ordinance regardless of conveyance systems. Proposed design, suggested location and phased implementation of effective, practicable stormwater management measures for plans shall be designed, engineered and implemented to achieve the following results:

5-2.1. VOLUME CONTROL. At a minimum, the first half-inch of runoff from a 24-hour storm is infiltrated unless the site is within 2,000 feet of a special water where the first 1-inch of runoff from a 24-hour storm event shall be infiltrated. Calculations shall use the appropriate Hydrologic Soil Group Classification and saturated infiltration rates unless specific rates are measured by a registered soil scientist.

5-2.2. SEDIMENT CONTROL.

5-2.2(a). For new construction, design practices to retain soil particles greater than 5 microns on the site (80% reduction) resulting from a one-year 24-hour storm event, according to approved procedures, and assuming no sediment resuspension.

5-2.2(b). For redevelopment and street reconstruction resulting in exposed surface parking lots and associated traffic areas, design practices to retain soil particles greater than 20 microns on the entire site (40% reduction) resulting from a one-year 24-hour storm event, according to approved procedures, and assuming no sediment resuspension. Under no circumstances shall the site's existing sediment control level or trapping efficiency be reduced as a result of the redevelopment.

5-2.3. OIL AND GREASE CONTROL. For all stormwater plans for commercial or industrial developments and all other uses where the potential for pollution by oil or grease, or both, exists, the first 0.5 inches of runoff will be treated using the best oil and grease removal technology available. This requirement may be waived by the plan reviewer only when the applicant can demonstrate that installation of such practices is not necessary.

5-2.4. RUNOFF RATE CONTROL – HYDROLOGIC CALCULATIONS. All runoff calculations shall be according to the methodology described in the Natural Resources Conservation Service's Technical Release 55, "Urban Hydrology for Small Watersheds" (commonly known as TR-55), or other methodology approved by the Town. For agricultural land subject to this section, the maximum runoff curve number (RCN) used in such calculations shall be 51 for Hydrologic Soil Group (HSG) A, 68 for hydrologic soil group B, 79 for HSG C, and 84 for HSG D. The TR-55- specified curve numbers for other land uses shall be used. Heavily disturbed

sites will be lowered one permeability class for hydrologic calculations. Lightly disturbed areas require no modification. Where practices have been implemented to restore soil structure to pre-developed conditions, no permeability class modification is required.

5-2.5. RUNOFF RATE CONTROL – DESIGN STANDARDS. All stormwater facilities shall be designed, installed and maintained to effectively accomplish the following:

5-2.5(a). Maintain predevelopment peak runoff rates for the 2-year, 24-hour storm event.

5-2.5(b). Maintain predevelopment peak runoff rates for the 10-year, 24-hour storm event. At a minimum the storm sewer conveyance system shall be designed for this storm event. Low areas must have an acceptable overland drainage route with the proper transfer capacity when the storm event is exceeded.

5-2.5(c). Safely pass the 100-year, 24-hour storm event.

5-2.6. OUTLETS. Discharges from new construction sites must have a stable outlet capable of carrying designed flow at a non-erosive velocity. Outlet design must consider flow capacity and flow duration. This requirement applies to both the site outlet and the ultimate outlet to stormwater conveyance or waterbody.

5-2.7. MINIMIZE IMPERVIOUS SURFACE AREA AND MAXIMIZE INFILTRATION. The project shall use existing natural drainage ways and vegetated soil surfaces to convey, store, filter, and retain stormwater runoff before discharge into public waters or a stormwater conveyance system (permanent pool areas of wet ponds tend to lose infiltration capacity and will not be accepted as an infiltration practice). The applicant shall limit the impervious surface of the developed site or subdivision by incorporating the following design considerations, consistent with zoning, subdivision, and PUD requirements:

5-2.7(a). Narrowing street widths.

5-2.7(b). Reducing parking lot space.

5-2.7(c). Sidewalk locations.

5-2.7(d). Reducing setbacks and driveways.

5-2.7(e). Maximizing open space while incorporating smaller lot sizes to conserve natural areas and reduce the amount of stormwater runoff generated at the site.

5-2.7(f). Using landscaping and soils to treat and infiltrate stormwater runoff.

5-2.7(g). Eliminate curb and gutter where practicable, and use vegetated swales or equivalent.

5-2.7(h). Look for vegetated areas that can filter sheet flow, removing sediment and other pollutants, and increasing the time of concentration.

5-2.7(i). Disconnect impervious areas by allowing runoff from small impervious areas to be directed to pervious areas where it can be infiltrated or filtered.

5-2.7(j). All runoff from downspouts, driveways and other impervious areas shall be directed to pervious surfaces, where feasible, or unless the applicant can demonstrate that the practice is likely to result in groundwater contamination.

5-2.7(k). Increase buffers around streams, steep slopes, and wetlands to protect from flood damage and provide additional water quality treatment.

5-2.7(l). Install semi-permeable/permeable or porous paving.

5-2.8. POND REQUIREMENTS. For all projects creating more than one acre of impervious surface, ponding shall be required. At a minimum all pond design specifications shall conform to the current version of the approved Community Design Manual and the current requirements found in the NPDES construction permit. In addition the following are required:

5-2.8(a). Stormwater infiltration areas shall be provided when feasible as an alternative to stormwater treatment ponds.

5-2.8(a b). All stormwater ponds shall be provided with a fore bay area to provide for the settlement of fine sand sized particles.

5-2.8(b c). Pond side slopes shall not exceed 4 feet horizontal to 1 foot vertical (4:1) and should provide a bench just at the normal water level with side slopes no less than 10 feet horizontal to 1 foot vertical (10:1) for safety considerations.

5-2.8(e d). All public and private owned stormwater management facilities shall provide an unobstructed access path (minimum of 20 feet) capable of supporting light truck traffic during normal whether for the purpose of conducting inspections of the facility and maintenance thereof. No private stormwater facility may be approved unless an easement is provided to the Town allowing for access for maintenance and inspection. Maintenance agreements before, during, and after development are also required.

5-2.8(d e). To provide proper protection for adjacent property within the first tier from the pond, the design storm interval for the ponding area is a 100-year, 24-hour storm with correctly sized conveyances for 100-year, 24-hour storm flows consistent with standards used by the cities, townships, counties, state, and federal agencies in planning for the flood protection of homes and public facilities. As an additional safety factor, the lowest floor and low opening elevation of a structure in a development should be at least three feet above the 100-year 24-hour elevation of the pond. The low floor and low opening elevation of structures that are adjacent to ponds should be certified by the builder during basement shall be staked by the Town Engineer prior to construction to ensure adequate freeboard. An emergency overflow system must be established for the health and safety of the area. If the area is landlocked (no natural drainage outlet), the low floor and low opening elevation of structures should be five feet above the calculated high water level. In consideration of the groundwater table, the low floor and low opening elevation of structures should be four feet above the normal groundwater elevation. The table below gives the recommended flood control and freeboard criteria.

5-2.8(e f). Floodplain filling shall be consistent with a state and FEMA approved floodplain ordinance and RCWD & VLAWMO Rules and shall not cause a net decrease in flood storage capacity below the projected 100-year flood elevation unless it is shown that the proposed filling, together with the filling of all other properties on the affected reach of the waterbody to the same degree of encroachment as proposed by the applicant, will not cause high water or unduly aggravate flood flows to the point of flooding on other properties. The allowable fill area shall be calculated by a professional engineer registered in the State of Minnesota.

Condition	Water Bodies with Piped Outlets (includes graded areas that will create ponded conditions during the 100-yr storm event)	Landlocked Water Bodies	Flowing Channels Passing Through Roadways
New Road Construction (low point in roadway)	No Lower than the 100-yr 24-hr elevation	1 foot above the 100-yr 24-hr elevation	No lower than the 50-yr flood level. Overflow swale for flows over the 50-yr flood level to protect downstream roadway embankment
Existing Roadways (low point in roadway)	If the existing road is below the 100-yr flood level, the Town should require a variance for the road. This will allow for proper review of safety standards.	No lower than 10 inches below 100-yr 24-hr elevation.	No lower than the 50-yr flood level.
New construction and additions to existing structures (low floor elevation and lowing opening of building)	Minimum of 3 feet above 100-yr, 24-hr storm event. Additional recommendations: 1. At least 1 foot above the emergency overflow elevations. 2. At least 4 feet above normal groundwater elevation. 3. At least 2 feet above hydric or mottled soils elevation.	Minimum of 5 feet above 100-yr 24-hr elevation.	N/A
Existing Structures (low floor elevation and low opening of building)	Existing structures should require a proper review of safety standards, but in any event must be a minimum of 2 feet above the 100-yr, 24-hr storm event.	Minimum of 5 feet above 100-yr 24-hr elevation.	N/A

5-2.9. MINIMUM PROTECTION FOR RIVERS, LAKES AND WETLANDS.

Rivers, streams, lakes, and wetlands shall be protected from runoff generated during construction and after completion of the development. Runoff shall not be discharged directly into wetlands without appropriate quality and quantity runoff control, depending on the individual wetland's vegetation. Wetlands must not be drained or filled, wholly or partially, unless replaced by either restoring or creating wetland areas of at least equal public value. Compensation, including the replacement ratio and quality of replacement should be consistent with the requirements outlined in the Board of Water and Soil Resources rules that implement the Minnesota Wetland Conservation Act 1991 including any and all amendments to it, and consistent with Local Government unit (LGU) regulations including RCWD and VLAWMO.

5-2.10. BUFFER PROTECTION FOR RIVERS, STREAMS, LAKES, AND WETLANDS.

A minimum 20-foot buffer strip around wetlands, and a 50-foot buffer along streams, rivers, lakes, and special waters identified in the NPDS construction permit shall be maintained at all times using native vegetation. Buffer width shall be increased by at least two feet for every one percent of slope for the surrounding land along rivers, streams, and lakes and four feet for every one percent slope for wetlands. The Town may allow buffer area averaging in cases where averaging will provide additional protection to either the resource or environmentally valuable adjacent upland habitat, provided that the resources total buffer area remains the same. Care should be taken in averaging so that the buffers usefulness is not short circuited. Detailed buffer design is site specific, and therefore, the Town can require a larger buffer than the minimum specified. The applicant shall maintain the buffer for the first year after completion of the project. Drain tiles will short circuit the benefits of buffers. Therefore, drain tiles on the project site shall be identified and rendered inoperable.

5-2.11. REGIONAL PONDING. The Town may establish off-site stormwater management and associated fees, provided that provisions are made to manage stormwater by an off-site facility, and provided that all of the following conditions for the off-site facility are met:

5-2.11(a). The facility is in place.

5-2.11(b). The facility is designed and adequately sized to provide a level of stormwater control that at least meets the ordinance standards.

5-2.11(c). The Town is satisfied that the facility has a legally obligated entity responsible for its long-term operation and maintenance.

5-3. STORMWATER AND URBAN RUNOFF POLLUTION CONTROL.

5-3.1. ILLEGAL DISPOSAL

5-3.1(a). No person shall throw, deposit, place, leave, maintain, or keep or permit to be thrown, placed, left, maintained or kept, any refuse, rubbish, garbage, or any other discarded or abandoned objects, articles, or accumulations, in or upon any street, alley, sidewalk, storm drain, inlet, catch basin conduit or drainage structure, business place, or upon any public or private plot of land in the Town so that the same might be or become a pollutant, except in containers, recycling bags, or other lawfully established waste disposal facility.

5-3.1(b). No person shall intentionally dispose of grass, leaves, dirt, or other landscape debris into a water resource buffer, street, road, alley, catch basin, culvert, curb, gutter, inlet, ditch, natural watercourse, flood control channel, storm drain or any fabricated natural conveyance.

5-3.2. ILLICIT DISCHARGES AND CONNECTIONS.

5-3.2(a). No person shall cause any illicit discharge to enter the Town storm water system unless such discharge: (1) consists of non-storm water that is authorized by an NPDES point source permit obtained from the MPCA; or (2) is associated with firefighting activities; or (3) is otherwise compliance with Township Ordinance.

5-3.2(b). No person shall use any illicit connection to intentionally convey non-storm water to the Town storm water system.

5-3.3. GOOD HOUSEKEEPING PROVISIONS. Any owner or occupant of property within the Town shall comply with the following good housekeeping requirements:

5-3.3(a). No person shall leave, deposit, discharge, dump, or otherwise expose any chemical or septic waste in an area where discharge to streets or storm drain system may occur. This section shall apply to both actual and potential discharges.

(1) For pools, water should be allowed to sit seven days to allow for chlorine to evaporate before discharge. If fungicides have been used, water must be tested and approved for discharge to the wastewater treatment plant.

5-3.3(b). Runoff of water from residential property shall be minimized to the maximum extent practicable. Runoff of water from the washing down of paved areas in commercial or industrial property is prohibited unless necessary for health or safety purposes and not in violation of any other provisions in Town Ordinances.

5-3.3(c). Storage of Materials, Machinery, and Equipment:

(1) Objects such as motor vehicle parts, containing grease, oil or other hazardous substances, and unsealed receptacles containing hazardous materials, shall not be stored in areas susceptible to runoff.

(2) Any machinery or equipment that is to be repaired or maintained in areas susceptible to runoff shall be placed in a confined area to contain leaks, spills, or discharges.

5-3.3(d). Removal of Debris and Residue – Debris and residue shall be removed, as noted below:

(1) All motor vehicle parking lots shall be swept at a minimum of twice a year to remove debris, such debris shall be collected and properly disposed. However, parking lots are not required to be swept for one month following a day on which precipitation of one-half inch or more occurs.

(2) Fuel and chemical residue or other types of potentially harmful material, such as animal waste, garbage or batteries, which is located in an area susceptible to runoff, shall be removed as soon as possible and disposed of properly. Household hazardous waste may be disposed of at the Ramsey County sponsored disposal site and shall not be placed in a trash container.

5-4. REVIEW. The Town shall review the stormwater management plan. This review shall be completed within fourteen (14) days of receiving the plan from the developer.

5-4.1. PERMIT REQUIRED. If the Town determines that the stormwater management plan meets the requirements of this ordinance, the Town shall issue a permit valid for a specified period of time that authorizes the land disturbance activity contingent on the implementation and completion of this plan.

5-4.2. DENIAL. If the Town determines that the stormwater management plan does not meet the requirements of this ordinance, the Town shall not issue a permit for the land disturbance activity. This plan must be resubmitted for approval before

the land disturbance activity begins. All land use and building permit shall be suspended until the developer has an approved stormwater management plan.

5-5. MODIFICATION OF PLAN. An approved stormwater management plan may be modified on submission of an application for modification to the Town, and after approval by the Town. In reviewing such an application, the Town may require additional reports and data.

5-6. VARIANCE REQUESTS. The Town may grant a variance on a case-by-case basis. The content of a variance shall be specific, and shall not affect other approved provision of a SWPPP.

5-6.1. The variance request shall be in writing and include the reason for requesting the variance.

5-6.2. Economic hardship is not sufficient reason for granting a variance.

5-6.3. The Town shall respond to the variance request in writing and include the justification for granting or denying the request.

5-7. FINANCIAL SECURITIES. The applicant shall install or construct, or pay the Town fees for all stormwater management performance standards necessary to maintain design criteria as given under Section ____, ____, _____. As designated by the Town under a stormwater utility fee, an applicant may be required to provide an in-kind or monetary contribution to the development and maintenance of Town stormwater management facilities designed to serve multiple land disturbing and development activities undertaken by one or more persons.

5-8. INSPECTIONS AND ENFORCEMENT. Follow up inspections will be performed by the Town on a regular basis during construction to ensure that stormwater management plan measures are properly installed and maintained. In all cases the inspectors will attempt to work with the applicant or developer to maintain proper stormwater management.

5-8.1. CONSTRUCTION STOP ORDER. The Town may issue construction stop orders until stormwater management measures meet specifications. A second stormwater management inspection must then be scheduled and passed before the final inspection will be done.

5-8.2. PERIMETER BREACH. If stormwater management measures malfunction and breach the perimeter of the site, enter streets, other public areas, or waterbodies, the applicant shall immediately develop a cleanup and restoration plan, obtain the right-of-way from the adjoining property owner, and implement the cleanup and restoration plan within 48 hours of obtaining permission. If in the discretion of the Town, the applicant does not repair the damage caused by the

stormwater runoff, the Town can do the remedial work required and charge the cost to the applicant.

5-8.3. ACTIONS TO ENSURE COMPLIANCE. The Town can take the following action in the event of a failure by applicant to meet the terms of this ordinance:

5-8.3(a). Withhold inspections or issuance of certificates of occupancy.

5-8.3(b). Revoke any permit issued by the Town to the applicant.

5-8.3(c). Conduct remedial or corrective action on the development site or adjacent site affected by the failure.

5-8.3(d). Charge applicant for all costs associated with correcting the failure or remediating damage from the failure. If payment is not made within thirty days, payment will be made from the applicant's financial securities.

5-8.3(e). Bring other actions against the applicant to recover costs of remediation or meeting the terms of this ordinance.

5-8.3(f). 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. Each day that a separate violation exists shall constitute a separate offense.

5-9. MAINTENANCE OF STORMWATER FACILITIES. The Town requires that stormwater facilities be maintained.

5-9.1. PRIVATE STORMWATER FACILITIES. All private stormwater facilities shall be maintained in proper condition consistent with the performance standards for which they were originally designed.

5-9.2. REMOVAL OF SETTLED MATERIALS. All settled materials from ponds, sumps, grit chambers, and other devices, including settled solids, shall be removed and properly disposed of on a five (5) year interval. One to five (5) year waivers from this requirement may be granted by the Town when the owner presents evidence that the facility has additional capacity to remove settled solids in accordance with the original design capacity.

5-9.3. MAINTENANCE PLAN REQUIRED. No private stormwater facilities may be approved unless a maintenance plan is provided that defines who will conduct the maintenance, the type of maintenance and the maintenance intervals.

5-9.4 MAINTENANCE-FRIENDLY DESIGN. All stormwater facilities must be designed to minimize the need for maintenance, to provide easy vehicle and personnel access for maintenance purposes, and be structurally sound. It shall be

the responsibility of the applicant to obtain any necessary easements or other property interests to allow access to the facilities for inspection or maintenance.

5-9.5. INSPECTION. The Town shall inspect all stormwater facilities during construction, during the first year of operation, and at least once every five years thereafter.

5-9.6. MAINTENANCE OF PUBLICLY OWNED STORMWATER FACILITIES. The Town shall annually perform the maintenance of the in place stormwater facilities within the Town as provided for in the local water management plan. Further, the Town shall notify the owners of other publicly owned stormwater facilities if scheduled maintenance is needed according to periodic site inspections or maintenance plans on file.

5-10. INVENTORY OF STORMWATER FACILITIES. Upon adoption of this section, the Town shall inventory and maintain a database for all private and public stormwater facilities within the Town requiring maintenance to assure compliance with this ordinance. The Town shall notify owners of public and private stormwater facilities of the need for conducting maintenance at least every five years, starting in 2016.

SECTION 6. REQUIREMENTS FOR DISCHARGING TO WETLANDS. If the project has any storm water discharges with the potential for significant adverse impacts to a wetland (e.g. conversion of a natural wetland to a storm water pond), the Permittee(s) must demonstrate that the wetland mitigative sequence has been followed in accordance with ~~_____ or _____ of this section~~ Section 9-5.5 of Ordinance No. 35, the Zoning Ordinance.

6-1. If the potential adverse impacts to a wetland on a specific project site have been addressed by permits or other approvals from an official statewide program (U.S. Army Corps of Engineers 404 program, Minnesota Department of Natural Resources, or the State of Minnesota Wetland Conservation Act) that are issued specifically for the project and project site, the Permittee may use the permit or other determination issued by these agencies to show that the potential adverse impacts have been addressed. For the purposes of this permit, de minimus actions are determinations by the permitting agency that address the project impacts, whereas a non-jurisdictional determination does not address project impacts.

6-2. If there are impacts from the project that are not addressed in one of the permits or other determinations discussed in Section 6 (e.g. permanent inundation or flooding of the wetland, significant degradation of water quality, excavation, filling, draining), the Permittee must minimize all adverse impacts to wetlands by utilizing appropriate measures. Measures used must be based on the nature of the wetland, its vegetative community types and the established hydrology. These measures include in order of preference:

6-2.1. Avoid all significant adverse impacts to wetlands from the project and post project discharge.

6-2.2. Minimize any unavoidable impacts from the project and post project discharge.

6-2.3. Provide compensatory mitigation when the Permittee determines that there is no reasonable and practicable alternative to having a significant adverse impact on a wetland. For compensatory mitigation, wetland restoration or creation shall be of the same type, size and whenever reasonable and practicable in the same watershed as the impacted wetland.

SECTION 7. DISCHARGES REQUIRING ENVIRONMENTAL REVIEW. This permit does not replace or satisfy any environmental review requirements, including those under the Minnesota Environmental Policy Act (MEPA) or the national Environmental Policy Act (NEPA). The owner must complete any environmental review required by law, including any required Environmental Assessment Worksheet or Environmental Impact Statements, Federal environmental review, or other required review.

SECTION 8. DISCHARGES AFFECTING ENDANGERED OR THREATENED SPECIES. This permit does not replace or satisfy any review requirements for Endangered or Threatened species, from new or expanded discharges that adversely impact or contribute to adverse impacts on a listed endangered or threatened species or adversely modify a designated critical habitat. The owner must conduct any required review and coordinate with appropriate agencies for any project with the potential of affecting threatened or endangered species, or their critical habitat.

SECTION 9. DISCHARGES AFFECTING HISTORIC PLACES OR ARCHEOLOGICAL SITES. This permit does not replace or satisfy any review requirements for Historic Places or Archeological Sites, from new or expanded discharges which adversely affect properties listed or eligible for listing in the National Register of Historic Places or affecting known or discovered Archeological Sites. The owner must be in compliance with national Historic Preservation Act and conduct all required review and coordination related to historic preservation, including significant anthropological sites and any burial sites, with the Minnesota Historic Preservation Officer.

SECTION 10. SEVERABILITY. Should any section, subdivision, clause or other provision of this Ordinance be held to be invalid by any court of competent jurisdiction, such decision shall not affect the validity of the Ordinance as a whole, or of any part hereof, other than the part held to be invalid.

SECTION 11. EFFECTIVE DATE. This Ordinance shall take effect and be in force from and after its passage and publication.

Passed by the Town Board of Supervisors of the Town of White Bear, Ramsey County, Minnesota, this ___ day of _____, 2015.

APPROVED:

ROBERT J. KERMES, Chair

ATTEST:

WILLIAM F. SHORT, Clerk-Treasurer

Board of Supervisor
ROBERT J. KERMES, Chair
ED M. PRUDHON, Supervisor
STEVEN A. RUZEK, Supervisor

Published in the White Bear Press _____, 2015.

Historical Notes
2015

Ordinance, Title and Section 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11 originally passed _____,
2015, and effective _____, 2015 by Kermes (Chair), Prudhon, Ruzek; Short (Clerk).