

**CITY OF GEM LAKE, RAMSEY COUNTY, MINNESOTA**

**ORDINANCE NO. 125**

**AN ORDINANCE AMENDING THE ZONING ORDINANCE OF GEM LAKE TO REPLACE SECTIONS 21 AND 22 RELATING TO GEM LAKE WATERS, WETLANDS, SHORELANDS, EROSION CONTROL AND STORMWATER MANAGEMENT.**

**THE CITY COUNCIL OF THE CITY OF GEM LAKE ORDAINS:**

**SECTION 1. AMENDMENT.** Section 3.2 of Ordinance 43K (Definitions) is amended, as follows (deleted text ~~struck through~~, new text underlined):

**ALTERATION OR ALTER** – When used in connection with public waters or wetlands, is any activity that will change or diminish the course, current or cross-section of public waters or wetlands.

**BEST MANAGEMENT PRACTICES OR 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 Urban Small Sites BMP Manual (Metropolitan Council 2001); Minnesota Stormwater Manual (MPCA, 2005); and other sources as approved by the VLAWMO: as such documents may be amended, revised or supplemented.

~~**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:~~

~~a) Individual BMPs found in this section 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 for 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).~~

**BIOENGINEERING** – The use of live plantings in constructed features to stabilize streambanks and shorelines.

**CONSTRUCTION ACTIVITY** – 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 stormwater runoff, leading to soil erosion and the movement of sediment into surface waters or drainage systems.

~~**CONSTRUCTION ACTIVITY** – For these permits, construction activity includes construction activity as defined in 40 C.F.R. part 122.26(b)(14)(x) and small construction activity as defined in 40 C.F.R. part 122.26(b)(15). This includes disturbances to the land that result in 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 disturbances 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 ultimately disturbs one (1) acre or more.~~

**DEAD STORAGE** – The permanent pool volume of a water basin, or the volume below the runout elevation of a water basin.

**DETENTION BASIN** – Any natural or manmade depression for the temporary storage of runoff.

**DEVELOPMENT** – The construction of any public improvement project, infrastructure, structure, street, or road, or the subdivision of land.

**DEWATERING** – The removal of water for construction activity.

**DRAIN OR DRAINAGE** – Any method for removing or diverting water from waterbodies, including excavation of an open ditch, installation of subsurface drainage tile, filling, diking or pumping.

**ENERGY DISSIPATION** – Methods employed at pipe outlets to prevent erosion including but not limited to concrete aprons, riprap, splash guards, and gabions.

**EROSION** – The wearing away of the ground surface as a result of wind, flowing water, ice movement or land disturbing activities.

**EROSION AND SEDIMENT CONTROL PLAN** – A plan of BMPs or equivalent measures developed in accordance with the requirements of Gem Lake, Ramsey County, Regional, State of Minnesota, and Federal guidelines that includes all proposed alterations to real property and the methods to be employed before undertaking the proposed alterations to prevent potential erosion and contamination of shorelands, wetlands, and watershed areas, streets and by ways, and adjacent private and public real property using accepted best practices control runoff and erosion and to retain or control sediment on land during the period of land disturbing activities.

**EXCAVATION** – The artificial removal of soil or other earth material.

**EXTRAORDINARY MANAGEMENT PRACTICES OR REDUNDANT BMP** – A stormwater management practice to control erosion and sedimentation and nutrient loading during and for two (2) years after construction using redundant Best Management Practices.

**FILL** – The deposit of soil or other earth material by artificial means.

**FILTRATION PRACTICE** – A stormwater control that captures, temporarily stores, and routes stormwater runoff through a filter bed to improve water quality, as described in the Minnesota Stormwater Manual, 2005, and as amended.

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

**GROUNDWATER RECHARGE** – The replenishment of groundwater storage through infiltration of surface runoff into subsurface aquifers.

**HYDRIC SOILS** – A soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

**INFILTRATION PRACTICE** – A stormwater retention method for the purpose of reducing the volume of stormwater runoff by transmitting a flow of water into the ground through the soils, as described in the Minnesota Stormwater Manual, 2005, and as amended.

**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.

**LAND DISTURBING ACTIVITY** – Any change of the land surface to include 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 water bodies. The use of land for new and continuing agricultural activities shall not constitute a land disturbing activity under these Policies.

~~**LAND DISTURBANCE OR LAND DISTURBING ACTIVITY** – mean any activity which leaves soil or other erodible materials exposed to precipitation and/or runoff. For the purposes of this Section, farming operations are not considered land disturbing activities.~~

**MPCA GENERAL CONSTRUCTION PERMIT** – General Permit Authorization to Discharge Stormwater 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, and as amended.

**NONPOINT SOURCE** – Nutrient and pollution sources not discharged from a single point e.g. runoff from agricultural fields, feedlots or urban landscapes.

**NON-DEGRADATION** – Section 303 (Title 33 of United States Code [U.S.C.] 1313) of the Clean Water Act (CWA) requires states and authorized tribes to adopt water quality standards for waters of the U.S. within their applicable jurisdictions to maintain their chemical, physical and biological integrity. No significant increase in stormwater runoff or pollutant loads from 2005/2006 numerical standards is permitted.

**NORMAL WATER LEVEL** – For a reservoir with a fixed overflow, means the lowest crest level of that overflow. For a reservoir whose outflow is controlled wholly or partly by movable gates, siphons or other means, it is the maximum level to which water may rise under normal operating conditions, exclusive of any provision for flood surcharge. For a closed depression wetland, it is the maximum level to which the water may rise under normal precipitation conditions exclusive of any provision for flood surcharge.

**NURP** – The Nationwide Urban Runoff Program developed by the Environmental Protection Agency to study stormwater runoff from urban development.

**ORDINARY HIGH WATER LEVEL** - as defined by the Minnesota Department of Natural Resources, means 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 predominantly aquatic to predominantly 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.

**PRE-DEVELOPMENT CONDITION** – The land use on a site that exists immediately prior to a proposed alteration. All pre-development Runoff Curve Numbers must reference the Minnesota Hydrology Guide.

**PUBLIC WATERS** – Any waters as defined in Minnesota Statutes, section 103G.005, subdivision 15.

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

**RETENTION** – The prevention of direct discharge of stormwater runoff into receiving water; examples include systems which discharge through percolation, exfiltration, and evaporation processes and which generally have residence times less than three days.

**RUNOFF** – Rainfall, snowmelt or irrigation water flowing over the ground surface.

**SEDIMENT** – The solid mineral or organic material that is in suspension, is being transported, or has been moved from its original location by erosion and has been deposited at another location.

**SEDIMENTATION** – The process or action of depositing sediment.

~~**SHORELAND** – Real property immediately adjacent to and abutting but not contained within the mean high water mark of any Shoreline.~~

~~**SHORELAND IMPACT PLAN** – A plan detailing current and future use of Shorelands and the potential impact of said uses; an assessment of current and future conditions and impact on those conditions for: vegetation and trees, soil and water, human and animal habitat, natural aesthetics and environmental quality.~~

~~**SHORELAND ZONE 1** – All real property located within and waterward of any Shoreline in the City of Gem Lake as determined by a federal, state, regional or local regulatory agency with the authority to make such determinations.~~

~~**SHORELAND ZONE 2** – All real property located within and landward fifty (50') feet of any Shoreline in the City of Gem Lake as determined by a federal, state, regional or local regulatory agency with the authority to make such determinations.~~

~~**SHORELAND ZONE 3** – All real property located within and landward fifty (50') feet to one hundred fifty (150') feet of any Shoreline in the City of Gem Lake as determined by a federal, state, regional or local regulatory agency with the authority to make such determinations.~~

**SHORELINE** - The ~~mean~~ ordinary high water level ~~mark~~ of the body of water known as Gem Lake and any lake, pond, or flowage in the City of Gem Lake as determined by a federal, state, regional or local regulatory agency with the authority to make such determinations, along with all wetlands attendant to each body of water.

**SOIL TREATMENT SYSTEM** – A system where sewage effluent is treated and disposed of into the soil by percolation and filtration, and includes trenches, seepage beds, drainfields, at-grade systems, and mound systems.

**STABILIZED** – Exposed soil is considered to be stabilized when it has been adequately covered through temporary measures (e.g. mulch, staked sod, riprap, erosion control blanket, or other material that prevents erosion from occurring), or permanent vegetation has been established over 70% of the surface.

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

**STORMWATER FACILITY** – Any facility including retention and detention ponds, wetlands, reservoirs, impoundments, infiltration practices, filtration practices, conveyance systems, and connecting infrastructure that are constructed for or serve the purpose of stormwater management.

**STORMWATER POLLUTION PREVENTION PLAN (SWPPP)** – A site-specific, written document that: identifies potential sources of stormwater pollution at the construction site; describes practices to reduce pollutants in stormwater discharges from the construction site; and identifies procedures the operator will implement to comply with the terms and conditions of a construction general permit.

~~**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)** – means a plan for storm water 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 non-point pollution. For the purposes of this section, the SWPPP shall be the same SWPPP as developed as part of the NPDES permit program requirements administered by the Minnesota Pollution Control Agency.~~

**SUBWATERSHED** – A portion of land contributing runoff to a particular point of discharge.

**SURFACE WATER** – All streams, lakes, ponds, marshes, wetlands, reservoirs, spring, rivers, drainage systems, waterways, watercourses, and irrigation systems whether natural or artificial, public or private.

**TOTAL MAXIMUM DAILY LOAD (TMDL)** – A Total Maximum Daily Load, or TMDL, is a regulation designed to improve water quality by controlling the amount of a pollutant entering a water body.

**ULTIMATE CONDITIONS** – The physical, topographic, and hydrologic characteristics of a subwatershed upon completion of the maximum level of expected development.

**UTILIZE BASIN** – Documented stormwater management structures designated strictly for treating and retaining stormwater.

**WATERS OF THE STATE** – All stream, lakes, ponds, wetlands, 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. Streams include both intermittent and perennial.

**WETLAND** – Any wetland as defined in Minnesota Statutes, section 103G.005, subdivision 19.

~~**WETLANDS 1** – An area where water stands near, at or above the soil surface during a significant portion of most years, saturating the soil and supporting a predominantly aquatic form of vegetation, and which may have the following characteristics:~~

- ~~A) Vegetation belonging to the marsh (emergent aquatic), bog, fen, sedge meadow, shrub land, and northern lowland forest (conifer swamp) communities. (These communities correspond roughly to wetland types 1,2,3,4,6,7 and 8 described by the United States Fish and Wildlife Service, Circular 39, “Wetlands of the U.S.”)~~
- ~~B) Mineral soils with grey horizons of organic soils belonging to the Histosol order (peat and muck).~~
- ~~C) Soil which is water logged or covered with water at least three (3) months of the year.~~
- ~~D) Swamps, bogs, marshes, potholes, wet meadows, and sloughs are wetlands, and such property may be shallow water bodies, the waters of which are stagnant or actuated by very feeble currents, and may be at times sufficiently dry to permit tillage, but would require drainage to be made arable. The edge of a wetland is commonly that point where natural vegetation changes from predominantly aquatic to predominantly terrestrial.~~

~~**WETLANDS 2 (Section 22)** – is defined in Minn. R. 7050.0130, subp. 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 living 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. Wetlands must have the following attributes:~~

- ~~a) A predominance of hydric soils; and/or~~
- ~~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/or~~
- ~~c) Under normal circumstances support a prevalence of such vegetation.~~

**SECTION 2. AMENDMENT.** Delete Sections 16.10 (Land Reclamation), 16.11 (Mining), and 18.12 (Drainage and Lot Flooding) in their entirety.

**SECTION 3. AMENDMENT.** Delete the current Section 21 (Regulation of Gem Lake Waters, Wetlands and Shorelands) and replace with the following:

## **SECTION 21 – SHORELANDS AND WATERS**

### **21.1 General Provisions.**

2.1.1 Shoreland District. The land use regulations in this Section shall apply to any land in the City of Gem Lake located within a floodplain, within 1,000 feet of the ordinary high water mark of a public water or public waters wetland, including but not

limited to the body of water known as Gem Lake and its attendant wetlands, or within 300 feet of a stream or river. The regulations of this Section shall apply in addition to the provisions of the zoning district applicable to the property, the Flood Hazard ordinance of the city (No. 114), and other ordinances of the City.

2.1.2 Wetland Conservation Act. The City of Gem Lake has delegated its authority under the Minnesota Wetland Conservation Act of 1991 and attendant rules to the Vadnais Lake Area Watershed Management Association (VLAWMO). All requests for permits, review or approval required by the Wetland Conservation Act must be submitted to VLAWMO as the acting Local Government Unit.

2.1.3 Applied in Concert with Other Law. These regulations and requirements shall be in addition to those imposed by Federal and State law, regional and local water management regulations, and city ordinances, all of which shall jointly apply. Under joint application, the most restrictive requirements shall apply.

## 21.2 Shoreland Use Controls.

21.2.1 Policy. Intact, vegetated and stable shorelines and streambanks provide valuable functions to Gem Lake and other water resources in the City including prevention of erosion, reinforcement of soils through root structure, trapping of nutrients and sediments, and provision of fish and wildlife habitat. Gem Lake is a Natural Environment lake under the criteria established by the Department of Natural Resources.

21.2.2 Minimum Lot Size and Setback Requirements. All lots created and structures erected in a shoreland district following the enactment of this Section must meet the criteria established in the underlying zoning district. No variance shall be granted, or other approval given, which allows the creation of a lot in a shoreland district that is less than 80,000 square feet in area (measured above the ordinary high water mark of the water body), or less than 200 feet in width. No structure, other than water-oriented accessory structures managed by this Section, shall be placed within 150 feet of the ordinary high water mark of the water body. The maximum lot coverage by buildings and impervious surfaces is 25%.

21.2.3 Accessory Structures and Facilities. All accessory structures and facilities, except those that are water-oriented, must meet or exceed structure setback standards. If allowed by local government controls, each residential lot may have one water-oriented accessory structure or facility located closer to public waters than the structure setback if all of the following standards are met:

- a. The structure or facility must not exceed ten feet in height, exclusive of safety rails, and cannot occupy an area greater than 250 square feet. Detached decks must not exceed eight feet above grade at any point.
- b. The setback of the structure or facility from the ordinary high water level must be at least ten feet.



c. The structure or facility must be treated to reduce visibility as viewed from public waters and adjacent shorelands by vegetation, topography, increased setbacks, color, or other means acceptable to the local unit of government, assuming summer, leaf-on conditions.

d. The roof may be used as a deck with safety rails, but must not be enclosed or used as a storage area.

e. The structure or facility must not be designed or used for human habitation and must not contain water supply or sewage treatment facilities.

f. Any accessory structures or facilities not meeting the above criteria, or any additional accessory structures or facilities must meet or exceed structure setback standards.

21.2.4 Stairways, lifts, and landings. Stairways and lifts are the preferred alternative to major topographic alterations for achieving access up and down bluffs and steep slopes to shore areas. Stairways and lifts must meet the following design requirements:

a. Stairways and lifts must not exceed four feet in width.

b. Landings for stairways and lifts must not exceed 32 square feet in area.

c. Canopies or roofs are not allowed on stairways, lifts, or landings.

d. Stairways, lifts, and landings may be either constructed above the ground on posts or pilings, or placed into the ground, provided they are designed and built in a manner that ensures control of soil erosion.

e. Stairways, lifts, and landings must be located in the most visually inconspicuous portions of lots, as viewed from the surface of the public water assuming summer, leaf-on conditions, whenever practical.

f. Facilities such as ramps, lifts, or mobility paths for persons with physical disabilities are also allowed for achieving access to shore areas, provided that the dimensional and performance standards of (a) to (e) are complied with.

21.2.5. Decks. Except as provided in section 21.2.3, decks must meet the structure setback standards. Decks to be added to structures existing on the date the shoreland structure setbacks were established by ordinance may be allowed without a variance, if all of the following criteria and standards are met:

a. thorough evaluation of the property and structure reveals no reasonable location for a deck meeting or exceeding the existing ordinary high water level setback of the structure;

b. the deck encroachment toward the ordinary high water level does not exceed 15 percent of the existing shoreline setback of the structure from the ordinary high water level or does not encroach closer than 30 feet, whichever is more restrictive; and

c. the deck is constructed primarily of wood, and is not roofed or screened.

21.2.6 Driveways and parking areas. Driveways and parking areas must meet all applicable structure setbacks, and must be designed to take advantage of natural vegetation and topography to achieve maximum screening from view from the water body. Access ramps and approach roads are not allowed in the structure setback area surrounding Gem Lake.

21.2.7 Shoreline alteration. Alterations of vegetation and topography in a shoreland district is controlled to prevent erosion into public waters, fix nutrients, preserve shoreland aesthetics, preserve historic values, prevent bank slumping, and protect wildlife habitat.

a. Removal or alteration of vegetation is limited to the amount necessary to construct an approved structure, and to maintain the health of the vegetation, provided that no such removal or alteration shall substantially reduce the screening of structures, vehicles and other facilities as viewed from the water. This provision shall not restrict the removal of trees, limbs or branches that are dead, diseased, or pose safety hazards, or the removal of buckthorn and similar invasive species identified by the Minnesota Department of Natural Resources.

b. Any application for new construction in a shoreland district must include a Tree and Vegetation Preservation Plan which, in addition to the requirements of Ordinance No. 66, includes an inventory of all vegetation affected by the construction and a plan for preservation, relocation, or replacement of the vegetation.

b. Use of fertilizer and pesticides in a shoreland district must be done in such a way as to minimize runoff into the water body.

c. No grading, filling, or other topographical alteration shall be allowed within 50 feet of the ordinary high water mark of the water body, with the exception that the Zoning Administrator may approve the installation of clean beach-type sand in this area, in accordance with DNR regulations, after review of an installation plan.

d. Any grading or filling anywhere else in a shoreland area involving movement of more than 50 cubic yards of material requires a grading and filling permit. If the grading or filling is to take place in a wetland, VLAWMO review and approval must be obtained before the City can issue a permit. In addition to any other requirements, grading and filling activity in shoreland areas must also meet

the following criteria:

1. Alterations must be designed and conducted in a manner that ensures only the smallest amount of bare ground is exposed for the shortest time possible.
2. Mulches or similar materials must be used, where necessary, for temporary bare soil coverage, and a permanent vegetation cover must be established as soon as possible.
3. Methods to minimize soil erosion and to trap sediments before they reach any surface water feature must be used.
4. Altered areas must be stabilized to acceptable erosion control standards. The use of bioengineering is encouraged as an alternative to engineered stabilization techniques. Retaining walls are to be used only when there is no adequate stabilization alternative.
5. Fill or excavated material must not be placed in a manner that creates an unstable slope.
6. Any alterations below the ordinary high water level of the water body must be approved by the Department of Natural Resources.

21.2.8 Nonconforming uses. In addition to the regulations of this ordinance applicable to nonconforming uses generally, in a Shoreland district the following shall apply:

- a. An extension, enlargement or alteration of an existing lawful non-conforming structure or facility may be permitted on the side of the structure or facility facing away from the water body.
- b. An improvement to an existing lawful non-conforming structure or facility may be allowed to extend parallel to the shoreline when the improvement is otherwise in compliance with the dimensional and setback requirements of this Ordinance.
- c. Exterior decks attached to an existing lawful non-conforming structure which do not extend any roof or foundation may be permitted to extend parallel to the shoreline and shall be constructed to be visually inconspicuous when viewed from the water (under summer leaf-on conditions).
- d. Reconstruction of an existing historic structure, any appurtenances thereto, and the grounds shall be allowed to preserve its historic character if the structure or site is recognized as a historic site on the National Register of Historic Places.

### 21.3 Use of Gem Lake.

21.3.1 No Motorized Use. Gem Lake shall not be used by any motorized craft or traffic including, but not limited to, motorized boats, snowmobiles, all-terrain vehicles (ATVs) excluding equipment used for cleaning, plowing snow or other occasional maintenance uses.

21.3.2 No Wet Storage Of Boats. Boats shall not be moored in Gem Lake for more than forty eight (48) hours at any one time. Regular storage of boats shall be on the shore of and not in Gem Lake with same properly secured and stored out of view from neighboring properties and Gem Lake while not in use.

#### 21.3.3 Docks.

a. Docks are seasonal and temporary in nature and, therefore, shall not be permanently affixed to the shore or lake bottom of Gem Lake.

b. Docks shall not be greater than four (4'0") feet in width, two (2'0") feet in height above the water and twenty (20'0") feet in length from the lake shore.

c. Docks shall not be covered with any roof structure, awnings or any other type of enclosure.

d. Only one (1) dock shall be allowed for each parcel of real property adjoining the waterline.

#### 21.3.4 Swimming Rafts.

a. Swimming rafts are seasonal and temporary in nature and therefore shall not be permanently affixed to the lake bottom.

b. Swimming rafts shall not exceed one hundred (100 s.f.) square feet in total area and shall not be more than two (2'0) feet higher than the water surface.

c. Swimming rafts shall not be located more than fifty (50') feet from the lakeshore.

d. Swimming rafts shall not be covered with a roof structure, awning or any other type of enclosure.

e. Only one (1) raft shall be allowed for each parcel of real property adjoining the waterline.

f. Swimming rafts shall not be moored in Gem Lake for more than forty eight (48) hours at any one time. Regular storage of swimming rafts shall be on the shore, properly secured and stored out of view from the water and from neighboring properties.

21.3.5 Water Appropriation. No person shall appropriate water from Gem Lake without first obtaining an permit from VLAWMO.

**SECTION 4. AMENDMENT.** Delete the current Section 22 (Soil Erosion and Sedimentation Controls and Storm Water Management) and replace with the following:

## **SECTION 22 – SOIL EROSION CONTROL AND STORMWATER MANAGEMENT**

Section 22.1 Erosion and Sediment Control.

22.1.1 Policy Statement. It is the policy of the City of Gem Lake to require the preparation and implementation of erosion and sediment control plans to control runoff and erosion, to retain or control sediment on land during land disturbing activities, and to prevent the degradation of resources and the loss or damage of property due to erosion and sedimentation.

22.1.2 Regulation. No person shall commence land disturbing activities, unless granted a variance, without first obtaining a permit from the City that incorporates and approves an erosion and sediment control plan for the activity, development or redevelopment. The proposed activity will not result in an increase in sediment off the site during construction and post-construction activities and be in conformance with the MPCA General Permit Construction for Activities, and as amended.

22.1.3 Criteria. Erosion and sediment control plans and the land disturbing activity shall comply with the following criteria:

- a. Erosion and sediment control measures shall be consistent with BMPs, and shall be sufficient to retain sediment on-site.
- b. Erosion and sediment control measures shall meet the standard for the General Permit Authorization to Discharge Stormwater Associated With Construction Activity Under the National Pollutant Discharge Elimination System/State Disposal System Permit Program Permit MNR100001 (NPDES General Construction Permit) issued by the Minnesota Pollution Control Agency, August 1 2008, as amended; except where more specific requirements are provided in paragraphs 3(c) and 3(d) of this Section below.
- c. The permittee or applicant must ensure final stabilization of the site in accordance with the NPDES General Construction Permit requirements. The site will be considered as having achieved final stabilization following submission of Notice of Termination by the permittee or applicant, and inspection and approval by the City.
- d. All on-site stormwater conveyance channels shall be designed and constructed to withstand the expected velocity of flow from a 10-year frequency storm without erosion.

22.1.4 Exception. No permit or erosion control plan shall be required under this Section for the following land disturbing activities:

- a. Minor land disturbing activities such as home gardens, repairs and maintenance work.
- b. Construction, installation and maintenance of individual sewage treatment systems (ISTS) other than those on steep slopes, on riparian lots within a Shoreland District or in a bluff impact zone.
- c. Installation of any fence, sign, telephone or electric poles, or other kinds of posts or poles.
- d. Emergency activity necessary to protect life or prevent substantial harm to persons or property.
- e. Minor wetland impacts that have received a “certificate of exemption or no loss” determination by the LGU (VLAWMO or RWMWD) administering the Wetland Conservation Act, as amended.
- f. 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 surfaced roadway.

All land disturbing activities not required by this Section to obtain a permit or have an approved erosion and sediment control plan shall nevertheless be conducted in full compliance with this Section.

## Section 22.2 Stormwater Management.

22.2.1 Policy Statement. It is the policy of the City to:

- a. Manage new development and drainage alternations by requiring each development or land disturbing activity to manage its stormwater effectively, either on or off-site.
- b. Promote and encourage a reduction in runoff rates, encourage infiltration and promote groundwater recharge.
- c. Maximize groundwater recharge as a means of maintaining drinking water supplies, preserving base flows in streams, and limiting discharges of stormwater to downstream receiving waters.
- d. Assure that property owners control the rate and volume of stormwater runoff originating from their property so that surface water and groundwater quantity and quality is protected or improved, soil erosion is minimized, and flooding

potential is reduced.

e. Protect and improve natural resources within the watershed to prevent further degradation.

#### 22.2.2 Regulation

a. Rate Control. The proposed activity will not increase the peak stormwater runoff rate from the site, under pre-development conditions, for anything less than a 24-hour precipitation event with a return frequency of 1- or 2-, 10- and 100-years. The applicant must comply with the requirements of the MPCA's General Permit for Construction Activities.

b. Volume Control. Stormwater runoff volume retention shall be achieved onsite in the amount equivalent to the runoff generated from one-half inch of runoff over the impervious surfaces of the development or as specified under Section 8.0. Volume control credits can be used to control up to one-half (0.5) inch of runoff as described under Section 22.2.5.

#### c. Water Quality

Stormwater management must comply with the requirements of the MPCA's General Permit for Construction Activities and guidelines set forth in total maximum daily load studies and sustainable lake management plans. No direct (untreated) discharges of stormwater to natural or improved waterbodies are allowed.

#### d. Waste Disposal to Waters

Stormwater management must not result in the discharge of any regulated substance, hazardous or biological waste, or petroleum product, whether treated or untreated, to best management practice devices that may have a deleterious effect upon water of the state (surface and groundwater), unless the discharge is in compliance with Federal, State and local regulations.

#### 22.2.3 Criteria. Stormwater management plans shall comply with the following criteria:

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 the proposed activities, development or redevelopment within the watershed shall:

1. Not exceed existing runoff rates for the 1 or 2-year, 10-year and 100-year critical duration storm events;
2. Not accelerate on or off-site water course erosion, downstream nuisance, flooding or damage as demonstrated by the applicant; and
3. Runoff rates may be restricted to less than the existing rates when necessary for the protection of public health, safety and general welfare.

c. Stormwater facilities must provide:

1. An identified overflow spillway and downstream route sufficiently stabilized to convey a 100-year critical storm event;
2. Pond outlets designed to prevent short circuiting of the flow from pond inputs to the outlet;
3. A minimum depth for ponds of three (3) feet and conform to the design specifications of the Stormwater Manual, 2005.
4. An outlet skimmer to prevent migration of floatables and oils for the 2-year event; and
5. Access for future maintenance that is free of plantings and impediments.

d. Regional ponds and practices can be used to provide for stormwater management based on the following criteria:

1. Regional ponds are required to be designed based on ultimate conditions for the contributing subwatershed.
2. Regional ponds are required to be constructed and operational prior to constructing imperviousness within the contributing drainage area.

e. Design of all Best Management Practices (BMPs) will be consistent with the Minnesota Stormwater Manual, 2005, and as amended and the MPCA General Permit for Construction Activities, 2008, and as amended.

f. When using infiltration for volume control, infiltration volumes and facility sizes shall be calculated using the appropriate hydrological soil group classification and infiltration rate, and shall be capable of infiltrating the required volume within 72 hours or as specified in the MPCA General Permit for Construction Activities.

g. In evaluating the infiltration capacity of a constructed BMP under post-development conditions, the infiltration rates in the Minnesota Stormwater Manual should be used. Select the design infiltration based on the least permeable soil horizon within the first five (5) feet below the bottom elevation of the proposed infiltration facility. Site-specific infiltration measurements completed by a licensed professional (as described in the Minnesota Stormwater Manual, November 2005, and as amended) may be used in place of the values in the Minnesota Stormwater Manual, and as approved by the City.

h. All stormwater retention practices designed to meet the volume control regulation must provide pretreatment of stormwater runoff prior to infiltrating into the groundwater system or discharging downstream. Pretreatment methods must comply with the Minnesota Stormwater Manual, 2005, and as amended, for the proposed practice. All highly recommended and recommended design criteria must be met, unless specifically waived by the Technical Commission of VLAWMO or RWMWD, as appropriate.



i. To the maximum extent practicable, volume control shall be fully met onsite (Section 2, Subsection 2b). Site conditions may make infiltration undesirable or impossible. The applicant must make soil corrections and/or investigate other locations on the site for feasible infiltration locations. Infiltration practices are not allowed:

1. For runoff from fueling and vehicle maintenance areas;
2. Within hydrologic soil group D type soils;
3. Within some Wellhead Protection Areas (Review Wellhead Protection Plans for additional guidance);
4. Within 50 feet of a septic tank or drain field;
5. On areas with less than three (3) feet vertical separation from the bottom of the infiltration system to the elevation of seasonal high groundwater or top of bedrock.

If the applicant claims that infiltration is not feasible or allowed onsite, the applicant must provide supporting documentation and follow Section 2, Subsection 4.

22.2.4 Alternative Compliance Sequencing. For sites where infiltration practices are determined infeasible as described in Section 22.2.3(i), the following Alternative Compliance Sequencing steps shall be taken in the order shown:

- a. Use of alternative volume control practices as described in the Minnesota Stormwater Manual, 2005, and as amended, sized according to Section 22.2.2(b).
- b. Use of on-site filtration practices and biofiltration using an impermeable liner and under drain, sized to filter a volume of runoff according to Section 22.2.2(b).
- c. Use of off-site volume control practices sized according to Section 22.2.2(b). Off-site volume control practices can be used to provide for stormwater management based on the following criteria:
  1. Off-site practices shall be constructed within the same drainage area or subwatershed as the project site.
  2. Off-site practices are required to be constructed and operational prior to constructing imperviousness within the contributing drainage area.
- d. Use of wet sediment basins sized per the standard described within the MPCA General Permit for Construction Activities, 2008, and as amended.

22.2.5 Volume Control Credits.

- a. Volume control credits will be awarded as described in the Minnesota Stormwater Manual, 2005, and as amended.
- b. Volume control credits must be determined based on the methods outlined within Chapter 11 of the Minnesota Stormwater Manual, 2005, and as amended, for the Adjusted Water Quality Volume.

1. The water quality volume (Vwq) shall be calculated by multiplying one (1) inch of runoff over the proposed impervious surface.
2. Applied credits cannot exceed a Vwq greater than 1/2 inch of runoff over the proposed impervious area.
3. All recommended and highly recommended conditions must be met, unless specifically waived by VLAWMO staff and the Technical Commission.
4. For Drainage to Stream, Wetland, or Shoreland Buffer Credits, the credits will apply to areas outside of the minimum buffer requirement as prescribed within these Policies.
5. Grass Channel Credits can be applied to the roadway portion of the proposed site when grass channels have been designed with water quality adaptations such as water quality berms.

#### 22.2.6 Maintenance and Easement.

- a. Stormwater management easements shall be provided by the applicant for (1) access for facility inspections and maintenance and (2) preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including the overflow route.
- b. Land used by stormwater management facilities shall be preserved by dedication and/or perpetual easement to the City, when required by the City. These easements shall cover those portions of the property which are adjacent to the facility and which lie below the 100-year flood elevation.
- c. A maintenance agreement shall be recorded with the County as part of the City development approval process. Minimum requirements for the maintenance agreement include:
  1. A list of the responsible party(s) (City and facility owner/manager);
  2. Contact information;
  3. A formalized maintenance schedule, with scheduled activities;
  4. A "Failure to Perform" provision laying out remedial actions if the responsible party does not perform as expected;
  5. Maintenance debris handling plans; and
  6. Emergency response (environmental, spill, safety).
- d. Maintenance is required for all stormwater practices constructed in compliance with these Policies. The City will conduct periodic inspection of stormwater practices. A minimum of 20% of all stormwater facilities shall be inspected annually by the City. The City shall provide to the VLAWMO annual inspection reports detailing inspection activities and proof of maintenance where required.
- e. When land used by stormwater management facilities is public land or public right-of-way, easements under this section will not be required, and a written agreement between the City and applicant may be executed in lieu of the recorded

maintenance agreement.

**SECTION 5. SEVERABILITY.** Should any section, subdivision, clause or other provision of this Ordinance be held to be invalid in 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 6. EFFECTIVE DATE.** This Ordinance shall take effect and be in force from and after its passage and publication.

Dated: \_\_\_\_\_, 2012

\_\_\_\_\_  
Robert Uzpen – Mayor

\_\_\_\_\_  
William Short - Clerk

Summary of Ordinance 125 approved by City Council and published in the White Bear Press on \_\_\_\_\_, 2012.