

ARTICLE IX -- FLOOD PLAIN AND SHORELAND DISTRICTS: IX

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ARTICLE IX – FLOOD PLAIN AND SHORELAND DISTRICTS

Section 9.00 FLOOD PLAIN DISTRICT DESIGNATION:

Pertaining to all Flood Plain Districts including the Floodway (FW) District, FFA Flood Fringe District, FFB Flood Fringe District and the Flood Plain (FP) Districts are a set of regulations superimposed upon the other zoning districts, superseding existing underlying regulations only to the extent expressed in the flood plain provisions and having in effect, in all other respects, the regulations applicable to the underlying use district in which the land is situated.

The flood plain districts are identified upon the zoning map, which is hereby adopted by reference and declared to be part of this zoning ordinance. The Flood Insurance Study for Olmsted County, Minnesota and Incorporated Areas, prepared by the Federal Emergency Management Agency, including the Flood Boundary and Floodway Maps (FBFM) and Flood Insurance Rate Maps (FIRM) dated April 17, 1995 and the Flood Plain Area Study for the South Fork Zumbro River and Tributaries dated March 21, 1978 and accompanying maps dated October, 1977, and the Soil Survey of Olmsted County, Minnesota, prepared by the United States Department of Agriculture, Soil Conservation Service, dated 1980 and any amendment thereto, are adopted (by reference) and declared to be part of this ordinance. Should a conflict exist between these flood plain studies and other future state or federal flood plain study, the latest study and information pertaining to the floodway boundaries and regional flood heights shall apply.

The designation of the Floodway (FW) FFA Flood Fringe, and FFB Flood Fringe Districts are based on engineering and hydraulic studies consistent with flood plain management standards in Minnesota Regulations NR 86 and 87, and upon existing developed areas within the Township's flood plain area.

The designation of the Flood Plain District (FP) is based on alluvial soils which are water deposited soils representing the areas most often inundated by floodwaters. Any land containing the following soils which are subject to flooding, shall be deemed to be within the flood plain district.

MAP SYMBOL	SOIL NAME
16	Arenzville
19	Chaseburg
25	Becker
252	Marshan
289	Radford
298	Richwood
313	Spillville

MAP SYMBOL	SOIL NAME
463	Minnieska
465	Kalmarville
467	Sawmill
468	Otter
471	Root
477A	Littleton
486	Marchan
495	Zumbro
1846	Kato

Section 9.02 FLOODWAY DISTRICT (FW):

The purpose of the Floodway District is to assure retention of adequate space within the channel and adjoining flood plain to carry and discharge the regional flood and to restrict or prohibit uses which are dangerous to health or safety or result in economic loss in times of flood.

A. Permitted Uses: The following uses, which have a low flood damage potential and which do not obstruct flood flows, are permitted within the floodway district to the extent that they are not prohibited by the underlying zoning district or any other ordinance and provided they do not require structures, fill or storage of materials or equipment. In addition no use shall adversely affect the capacity of the channel or floodways of any tributary to the main stream, drainage ditch or any other drainage facility.

1. Agricultural uses such as: general farming, pasture, grazing, outdoor growing of nursery stock, horticulture, truck farming, forestry, sod farming, and wild crop harvesting, provided that such uses shall not include an animal feedlot.
2. Industrial-commercial uses such as: loading areas, parking area, and airport landing strips.
3. Private and public recreational uses such as: golf courses, driving ranges, picnic grounds, boat launching ramps, swimming area, parks wildlife and nature preserves, fishing areas, and recreational trails.
4. Residential uses such as: lawns, gardens, parking areas, and play areas.
5. Railroads, streets, bridges, utility transmission structures, pipelines, marinas, docks and water control structures required to obtain Department of Natural Resources permit.

6. Channel modifications requiring a DNR permit where there is no change in the flood profile.

B. Conditional Uses: The following uses which involve structures (temporary or permanent), fill or storage of materials or equipment. These uses may be permitted in the floodway district only after the issuance of a conditional use permit as provided in Section 4.02.

1. Structures accessory to open space or conditional uses, in accordance with Section 9.02 (C, 2).
2. Placement of fill.
3. Extraction of sand, gravel and other minerals.
4. Other railroads, streets, bridges, utility transmission lines and pipelines, not included as a permitted use in the previous section 9.02 (A, 5).
5. Storage yards for equipment, machinery or materials, in accordance with Section 9.02 (C, 4).
6. Levees, dikes, and floodwalls constructed to any height where the intent is to protect individual structures and levees or dikes where the intent is to protect agricultural crops for a frequency flood event equal to or less than the 10-year frequency flood event.

C. General Floodway Regulations: No structures (temporary or permanent); fill, including fill for roads and levees; deposit, obstruction, storage of materials or equipment; or other uses shall be allowed as a conditional use which, acting alone or in combination with existing or future uses, affects the capability of the floodway or increases flood heights. Consideration of the effects of a proposed use shall be an equal degree of encroachment extending for a significant reach on both sides of the stream. In addition, all floodway conditional uses shall be subject to the following regulations.

1. **Fill:**
 - a. Any fill in the floodway shall be no more than the minimum amount necessary to conduct the conditional use listed in Section 9.02 (B). Generally fill shall be limited to that needed to grade or landscape for that use and shall not in any way obstruct the flow of floodwaters.
 - b. Such fill or other materials shall be protected against erosion by riprap, vegetative cover or bulk heading.

- c. Spoil from dredging or sand and gravel operations shall not be deposited in the floodway unless it can be done in accordance with Section 9.02 (C, 1, a).

2. Structures: Accessory structures (temporary or permanent) permitted as conditional uses may be allowed provided that such structures are:

- a. Not designed for human habitation;
- b. Designed to have low flood damage potential;
- c. Constructed and placed on the building site so as to offer the minimum resistance to the flood or floodwaters;
- d. Structurally dry flood proofed, without the utilization of dams, dikes, or levees, in accordance with the State Building Code.
 - 1) Whenever possible, structures shall be constructed with the longitudinal axis parallel to the direction of flood flow; and
 - 2) So far as practicable, structures shall be placed approximately on the same flood flow lines as those adjoining structures.
- e. Accessory Structures shall be elevated on fill or structurally dry flood proofed in accordance with the FP-1 or FP-2 flood proofing classifications in the State Building Code. As an alternative, an accessory structure may be flood proofed to the FP-3 or FP-4 flood proofing classifications in the State Building Code provided the accessory structure constitutes a minimal investment, does not exceed 600 square feet in size, and for a detached garage, the detached garage must be used solely for parking of vehicles and limited storage.
- f. Service facilities such as electrical and heating equipment shall be elevated or flood proofed.

3. Utilities, Railroad Tracks, Streets, and Bridges: Public utility facilities, roads, railroad tracks, and bridges within the floodway district shall be designed to minimize increases in flood elevations and shall be compatible with local comprehensive flood plain development plans. Protection to the flood protection elevation shall be provided where failure or interruption of those public facilities would result in danger to the public health or safety or

where such facilities are essential to the orderly functioning of the area. Where failures or interruption of services would not endanger life or health, a lesser degree of protection may be provided for minor or auxiliary roads, railroads, or utilities.

4. Storage of Material and Equipment:

- a. The storage or processing of materials that are in time of flood buoyant, flammable, explosive, toxic, or could be injurious to human, animal or plant life is prohibited.
- b. Storage of other material and equipment may be allowed if not subject to major damage by floods and firmly anchored to prevent floatation.

Storage of other materials or equipment may be allowed if readily removable from the area within the time available after a flood warning and in accordance with a plan approved by the Governing Body.

5. Garbage and Solid Waste Disposal: No conditional use permits for garbage and waste disposal sites shall be issued for floodway areas; provided further, there shall be no further encroachment upon the floodway at existing sites.

6. Structural Works for Flood Control: Structural works for flood control such as levees, dikes, flood walls, and reservoirs shall be allowed only upon issuance of a conditional use permit and the following standards:

- a. Any proposed structural work in the beds of public waters as defined in Minnesota Statutes, Chapter 105, which will change the course, current, or cross section of the waters shall be subject to the provisions of Minnesota Statutes, Chapter 105 and other applicable statutes.
- b. Obtain from the Army Corps of Engineers, when applicable, a permit under the Federal Water Pollution Control Act (commonly referred to as the Clean Waters Act) and any other necessary permits.
- c. A levee, dike, or floodwall constructed in the floodway shall not cause an increase to the 100-year or regional flood and the technical analysis must assume equal conveyance or storage loss on both sides of the stream.

- d. Where the flooding potential is to be reduced as the result of a flood control project, the Federal Emergency Management Agency shall be notified and data required for map revisions shall be submitted thereto.

Section 9.04 FFA FLOOD FRINGE DISTRICT:

The purpose of the flood fringe district is to guide development in currently developed areas in the flood fringe, consistent with the flood threat, in order to minimize loss of life and property, disruption of commerce and governmental services, extraordinary public expenditure for public protection and relief, and interruption of public transportation and communications, all of which adversely affect the public health, safety and general welfare; and to assure that the Township's lands are put to their most appropriate use.

- A. **Permitted Uses:** The following shall be permitted uses within the FFA flood Fringe district to the extent that they are not prohibited by any other portion of the zoning ordinance or by any other ordinance, and that such uses will not adversely affect the capacity of the channels of any tributary to the main stream, or any other drainage facility or system.

- 1. **Residential Uses:** New dwellings and additions shall be constructed on fill so that the lowest floor (including basement) is at or above the flood protection elevation. The finished fill elevation shall be no lower than one (1) foot below the flood protection elevation and shall extend at least fifteen (15) feet beyond the limits of any structure or building thereon.

No dwelling shall be permitted that does not have vehicular access and parking areas at or above the elevation two (2) feet below the flood protection elevation.

As an alternative to elevation on fill, accessory structures that constitute a minimal investment and that do not exceed 600 square feet for the outside dimension at ground level may be internally flood proofed in accordance with Section 9.02 (C,2).

- 2. **Residential Uses in the AO Zone:** New dwellings and additions shall be constructed on fill so that the lowest floor (including basement) is elevated above the highest adjacent grade at least as high as the depth number specified in feet on the Olmsted County Flood Insurance Rate Map.

- a. **Manufactured Homes and Manufactured Home Parks and placement of travel trailers and travel vehicles:**

The placement of new or replacement manufactured homes in existing manufactured home parks or on individual lots of records that are located in flood plain districts will be treated as a new structure and may be placed only if elevated in compliance with Section 9.04 of this Ordinance. If vehicular road access for preexisting manufactured home parks is not provided in accordance with Section 9.04, then replacement manufactured homes will not be allowed until the property owner(s) develops a flood warning emergency plan acceptable to the Governing Body.

- 1) All manufactured homes must be securely anchored to an adequately anchored foundation system that resists floatation, collapse and lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to the anchoring requirements of Section 10.44 of this ordinance.

3. Non Residential Uses: New structures and additions shall be elevated so that their first floor (including basement) is at or above the flood protection elevation. The finished fill elevation shall be no lower than one (1) foot below the flood protection elevation.

- a. Travel trailers and travel vehicles that do not meet the exemption criteria specified below shall be subject to the provisions of this ordinance and as specifically spelled out in Section 9.04 (3,b & c) below.

- 1) **Exception** – Travel trailers and travel vehicles are exempt from the provisions of this Ordinance, if they are placed in any of the areas listed in Section 9.04 (3,b) below and further they meet the following criteria:

- a) Have current licenses required for highway use.
- b) Any highway ready, meaning on wheels or the internal jacking system, are attached to the site by quick disconnection type utilities commonly used in campgrounds and trailer parks and travel trailer/vehicle has no permanent structural type additions attached to it.
- c) The travel trailer or travel vehicle and associated use must be permissible in any preexisting, underlying zoning district.

b. Area Exempted for Placement of Travel/Recreational Vehicles:

- 1) Individual lots or parcels of record.
- 2) Existing commercial recreational vehicle parks or campgrounds.
- 3) Existing condominium type associations.

c. Travel trailers and travel vehicles exempted in Section 9.04 (3,a) lose this exemption when development occurs on the parcel exceeding 500 dollars for a structural addition to the travel trailer/travel vehicle or an accessory structure such as a garage or a storage building. The travel/trailer vehicle and all additions and accessory structures will then be treated as a new structure and shall be subject to the elevation/flood proofing requirements and the use of land restrictions specified in Section 9.04 of this ordinance.

d. New commercial travel trailer or travel vehicle parks or campgrounds and new residential type subdivisions and condominium associations and the expansion of any existing similar use exceeding five (5) units or dwelling sites shall be subject to the following:

- 1) Any new or replacement travel trailer or travel vehicle will be allowed in the Flood Fringe districts provided said trailer or vehicle and its contents are placed on fill above the Regulatory Flood Protection Elevation and proper elevated road access to the site exists in accordance with Section 9.04 of this ordinance.
- 2) All new or replacement travel trailers or travel vehicle not meeting the criteria of (1) above may, as an alternative, be allowed as a conditional use if in accordance with the following provisions and the provisions of Section 4.02 of this ordinance. The applicant must submit an emergency plan for the safe evacuation of all vehicles and people during the 100 year flood. Said plan shall be prepared by a registered engineer or other qualified individual and shall demonstrate that adequate time and personnel exist to carry out the evacuation. All attendant sewage and water facilities for new or replacement travel trailers or other recreational vehicles must be protected or constructed so as

to not be impaired or contaminated during times of flooding in accordance with Section 9.04 (C,7) of this ordinance.

- 3) **Non-Residential Uses in the AO Zone:** New structures and additions shall be elevated so that their first floor (including basement) is elevated above the highest adjacent grade at least as high as the depth number specified in meet on the Olmsted County Flood Insurance Rate Maps, and together with attendant utility and sanitary facilities be completely flood-proofed in accordance with the state building code to the FP-1 and FP-2 classification.
4. **Waste Treatment, Waste Disposal and Flood Control Structures:** Such structures and uses shall be in accordance with Section 9.04 (C, 7 & 8) and Section 9.02 (C).
5. **Utilities, Railroad Tracks, Streets and Bridges:** Such structures and uses shall be in accordance with Section 9.04 (C, 4).
6. **Accessory Structures:** Such structures shall be constructed on fill so that the lowest floor is at or above the flood protection elevation provided that such structures are:
 - a. Not designed for human habitation;
 - b. Designed to have low flood damage potential;
 - c. Constructed and placed on the building site so as to offer the minimum resistance to the flood or floodwaters;
 - d. Structurally dry flood proofed, without the utilization of dams, dikes, or levees, in accordance with the State Building Code.
 - e. Service facilities such as electrical and heating equipment shall be elevated or flood proofed.
7. **Accessory Land Uses:** Accessory land uses such as storage yards and parking lots may be at elevations lower than the flood protection elevation; however, measures shall be taken to assure vehicular access to the property in time of floods in accordance with Section 9.04 (C, 2 &3).

- B. Conditional Uses:** Other uses are permitted only upon application to the Salem Township Zoning Administrator and the issuance of a conditional use permit as provided in Section 4.02 and subject to the following provisions:
- 1. Residential Uses:** When existing streets, utilities, or small lot sizes preclude the use of fill, other methods of elevating the first floor (including basement) above the flood protection elevation may be authorized provided that the dwelling is flood proofed to the FP-1 or FP-2 classification as defined by the State Building Code.
 - 2. Non Residential Uses:** Structures that are not elevated at or above the flood protection elevation as referenced by Section 9.04 (A). Permitted uses, shall achieve structurally dry flood proofing, without the utilization of dams, dikes or levees, to the FP-1 or FP-2 classification as defined by the State Building Code.
- C. General Flood Fringe Regulations:** All uses within this district are subject to the following regulations:
- 1. Manufacturing and Industrial Uses:** Manufacturing and industrial buildings, structures and appurtenant works shall be protected to the flood protection elevation. Measures shall be taken to minimize interference with normal plant operations, especially for streams having prolonged flood durations. Certain accessory land uses, such as yards and parking lots, maybe at lower elevations.
 - 2. Storage of materials:** Materials that in time of flooding are buoyant, flammable, explosive, toxic or materials that have significant flood damage potential, or could be injurious to human, animal, or plant life shall be stored at or above the flood protection level, flood proofed, or protected by structural measures consistent with the standards set forth herein. Furthermore, storage of materials which are likely to cause pollution of waters are defined in Minnesota Statutes, Section 115.01, if subject to flooding, are prohibited unless adequate safeguards approved by the Minnesota Pollution Control Agency are provided.
 - 3. Accessory Land Uses:** Accessory land uses for non-residential uses, such as storage yards, and parking lots that are at elevations below the flood protection elevation and are subject to flood velocities greater than four (4) feet per second or would be inundated to a depth greater than two (2) feet, shall not be permitted without a flood warning system that provides adequate time for evacuation of the area.

- 4. Utilities, Railroad Tracks, Streets, and Bridges:** Public utility facilities, roads, railroad tracks, and bridges within the flood fringe district shall be designed to minimize increases in flood elevations and shall be compatible with local comprehensive flood plain development plans. Protection to the flood protection elevation shall be provided where failure or interruption of those public facilities would result in danger to the public health or safety or where such facilities are essential to the orderly functioning of the area. Where failures or interruption of services would not endanger life or health, a lesser degree of protection may be provided for minor or auxiliary roads, railroads, or utilities.
- 5. Design and Certification:** The structure's design and as-built condition must be certified by a registered professional engineer or architect as being in compliance with the general design standards of the State Building Code, and specifically, that all electrical, heating, ventilation, plumbing, and air conditioning facilities must be at or above the Regulatory Flood Protection elevation or be designed to prevent flood water from entering or accumulating within these components during times of flooding. In addition, a registered land surveyor must certify the lowest floor elevations of the structure.
- 6. Fill:** Any fill shall be compacted and the slopes shall be protected by rip rap or vegetative covering.
- 7. Waste Treatment and Waste Disposal:**

 - a. No new construction, addition or modification to existing treatment facilities shall be permitted within the flood fringe unless emergency plans and procedures for action to be taken in the event of flooding are prepared, filed with, and approved by the Minnesota Pollution Control Agency. The emergency plans and procedures must provide for measures to prevent introduction of any pollutant or toxic material into the floodwaters.
 - b. There shall be no disposal of garbage or solid waste materials within the flood fringe areas except upon issuance of a permit approved by the Minnesota Pollution Control Agency and subject to the requirements of Section 9.02 (C, 5).
- 8. Flood Control Works:** Flood control works shall be subject to the provisions of Section 9.02 (C, 6) and the following provisions.

 - a. The minimum height and design of any dikes, levees, floodwalls, or similar structural works shall be based upon the flood profile on the

regional flood confined between the structures. The minimum height and design of structural works shall be at least three (3) feet above the elevation of the regional flood as confined by structures, or at the elevation of the standard project flood, whichever is greater.

- b. Modifications and additions to existing structural works shall assure that the work will provide a means of decreasing the flood damage potential in the area.
- c. Detailed plans shall be submitted to the Salem Township Zoning Administrator for any new developments placed on the flood plain landward from dikes and levees. The plans must provide for ponding areas or other measures to protect against flooding from internal drainage.
- d. Where the flooding potential is to be reduced as a result of a flood control project, the Federal Emergency Management Agency shall be notified and data required for a map revision shall be submitted thereto.

Section 9.06 FFB FLOOD FRINGLE DISTRICT:

The purpose of the flood fringe district is established to guide development in generally undeveloped areas in the flood plain, in such a manner as to reduce the loss of flood storage volume in the flood plain, in order to avoid increase in downstream flood levels and velocities; to minimize loss of life and property, disruption of commerce and governmental services, extraordinary public expenditures for public protection and communications, all of which adversely affect the public health, safety and general welfare; and to assure that the Township's lands are put to their most appropriate use.

- A. **Permitted Uses:** The following uses have low flood damage potential and do not obstruct flood flows. These uses are permitted in the flood fringe district to the extent that the underlying zoning district or any other ordinance does not prohibit them and provided they do not require structures, fill or storage of materials or equipment. In addition, no use shall adversely affect the capacity of the channel or floodways of any tributary to the main stream, drainage ditch or any other drainage facility. The following uses are permitted in this district and also subject to Section 9.04 (C) and 9.05 (C), General Regulations:
 - 1. **Agricultural Uses:** Agricultural uses such as general farming, pasture, grazing, outdoor growing of nursery stock, horticulture, truck farming, forestry, sod farming, and wild crop harvesting, but not including a feedlot of thirty (30) animal units or more.

2. **Industrial-Commercial Uses:** Industrial-Commercial uses such as loading areas, parking areas and airport landing strips.
 3. **Private and Public Recreational Uses:** Private and public recreational uses such as golf courses, driving ranges, picnic grounds, boat launching ramps, swimming areas, parks, wildlife and nature preserves, fishing areas, and recreational trails.
 4. **Residential Uses:** Residential uses such as lawns, gardens, parking areas, and play areas.
- B. Conditional Uses:** Other uses are permitted only upon application to the Salem Township Zoning Administrator and the issuance of a conditional use permit as provided in Section 4.02 and subject to the following provisions:
1. Uses permitted in Section 9.04 (A) Permitted Uses, and in Section 9.04 (B) Conditional Uses (both included in the FFA Flood Fringe District) subject to provisions set forth in Section 9.04 (C) except where superseded by the provisions set forth in Section 9.06 (C).
- C. General Flood Fringe Regulations:** The deposition of any fill or spoil from dredging or sand and gravel operations, the construction of any structure, or the grading or paving of any areas shall require certification by a registered professional engineer or hydrologist that the following conditions have been met:
1. Fill deposited in the flood fringe area shall be no more than the minimum amount necessary to conduct the use.
 2. Minimal loss of capacity for surface storage of floodwaters shall result from the activity, not to exceed loss of one (1%) percent per lot.
 3. The effect of such activities in the FFB flood fringe district shall not result in an increase in erosion potential on the site after such activities are completed.

Section 9.08 FLOOD PLAIN DISTRICT (FP):

The purpose of the flood plain district is to guide development in the flood plain consistent with the flood threat, in order to minimize loss of life and property, disruption of commerce and governmental services, extraordinary public expenditure for public protection and relief, and interruption of transportation and communications, all of which adversely affect the public health, safety and general welfare; and to assure that the Township's lands are put to their most appropriate use. Floodplain developments shall not adversely affect the hydraulic

capacity of the channel and adjoining flood plain of any tributary watercourse or drainage system where a floodway or other encroachment limit has not been specified on the Official Zoning Map.

A. Permitted Uses: The following uses have a low flood damage potential and which do not obstruct flood flows are permitted within the flood plain district to the extent that they are not prohibited by the underlying zoning district or any other ordinance and provided they do not require structures, fill or storage of materials or equipment. In addition, no use shall adversely affect the capacity of the channel or floodways of any tributary to the main stream, drainage ditch or any other drainage facility.

1. **Agricultural Uses:** Agricultural uses such as general farming, pasture, grazing, outdoor growing of nursery stock, horticulture, truck farming, forestry, sod farming, and wild crop harvesting, but not including a feedlot of thirty (30) animal units or more.
2. **Industrial-Commercial Uses:** Industrial-Commercial uses such as loading areas, parking areas and airport landing strips.
3. **Private and Public Recreational Uses:** Private and public recreational uses such as golf courses, driving ranges, picnic grounds, boat launching ramps, swimming areas, parks, wildlife and nature preserves, fishing areas, and recreational trails.
4. **Residential Uses:** Residential uses such as lawns, gardens, parking areas, and play areas.
5. **Wildlife sanctuary, woodland preserve and arboretum.**
6. **Railroads, streets, bridges, utility transmission structures, pipeline, marinas, docks and water control structures required to obtain Department of Natural Resources permit.**

B. Conditional Uses: The following uses which involve fill or storage of materials or equipment may be permitted in the flood plain district only after the issuance of a conditional use permit as provided in Section 4.02 of this zoning ordinance, which applies to all flood plain conditional uses:

1. **Placement of fill, except when fill is used as part of an approved soil conservation service drainage control structure.**
2. **Extraction of sand, gravel and other minerals.**

3. Other railroads,, streets, bridges, utility transmission lines and pipelines not included as a permitted use in the previous Section 9.08 (A.6).
4. Storage yards for equipment, machinery and materials.
5. Other uses similar in nature to uses described in 9.08 (A), Permitted Uses, or 9.08 (B) Conditional Uses.

C. General Flood Plain Regulations: No structures (temporary or permanent); fill, including fill for roads and levees; deposit, obstruction, storage of materials or equipment; or other uses shall be allowed as conditional uses which, acting alone or in combination with existing or future uses, unduly affects the capacity of the floodway or unduly increases flood heights. Consideration of the effects of a proposed use shall be based on a reasonable assumption that there will be an equal degree of encroachment extending for a significant reach on both sides of the stream. In addition, all flood plains conditional uses shall be subject to the following regulations:

1. Fill:

- a. Any fill deposited in the flood plain shall be no more than the minimum amount necessary to conduct a conditional use and shall not in any way obstruct the flow of floodwaters.
- b. Such fill or other materials shall be protected against erosion by riprap, vegetative cover or bulk heading.
- c. Spoil from dredging or sand and gravel operations shall not be deposited in the flood plain unless it can be done in accordance with Section 9.08 (C, 1, a).

2. Utilities, Railroad Tracks, Streets, and Bridges: Public utility facilities, roads, railroad tracks, and bridges within the flood plain district shall be designed to minimize increases in flood elevations and shall be compatible with local comprehensive flood plain development plans. Protection to the flood protection elevation shall be provided where failure or interruption of these public facilities would result in danger to the public health or safety or where such facilities are essential to the orderly functioning of the area. Where failures or interruption of services would not endanger life or health, a lesser degree of protection may be provided for minor or auxiliary roads, railroads or utilities.

3. Storage of Material and Equipment:

- a. The storage or processing of materials that are, in time of flooding buoyant, flammable, explosive, toxic or could be injurious to human, animal, or plant life is prohibited.
 - b. Storage of other material or equipment may be allowed if not subject to major damage by floods and firmly anchored to prevent floatation.
- 4. Garbage and Solid Waste Disposal:** No conditional use permits for garbage and waste disposal sites shall be issued for floodway areas; provided further, there shall be no further encroachment upon the floodway at existing sites.
- 5. Structural Works for Flood Control:** Structural works for flood control such as levees, dikes, floodwalls, and reservoirs shall be allowed only upon issuance of a conditional use permit and the following standards:
- a. Any propose structural work in the beds of public waters as defined in Minnesota Statutes Chapter 105 which will change the course, current, or cross-section of the waters shall be subject to the provisions of Minnesota Statutes Chapter 105 and other applicable statutes.
 - b. Obtain from the Army Corps of Engineers, when applicable, a permit for under the Federal Water Pollution Control Act (commonly referred to as the Clean Water Act), and any other necessary permits.
 - c. Where the flooding potential is to be reduced as the result of a flood control project, the Federal Emergency Management Agency shall be notified and data required for a map revision shall be submitted thereto.

Section 9.10 SHORELAND DISTRICT:

A. POLICY:

- 1. The uncontrolled use of shorelands of Salem Township, Minnesota, affects the public health, safety and general welfare not only by contributing to pollution of public waters, but also by impairing the local tax base. Therefore, it is in the best interest of the public health, safety and welfare to provide for the wise subdivision, use and development of shorelands of public waters. The Legislature of Minnesota has delegated responsibility to local governments of the state to regulate the subdivision, use and development of shorelands of public waters and thus preserve and enhance

the quality of surface waters, conserve the economic and natural environmental values of shorelands, and provide for the wise use of waters and related land resources. This responsibility is hereby recognized by Salem Township.

B. SHORELAND CLASSIFICATION SYSTEM: The public waters of Salem Township have been classified below consistent with the criteria found in Minnesota Regulations, Part 6120.3300 and the Protected Waters Inventory Map for Olmsted County, Minnesota.

1. The shoreland for the water bodies listed below shall be as defined in Section 2.02 and as shown on the Official Zoning Map.

LAKES

	Protected Waters Inventory I.D.#
a. Natural Environment Lakes:	
None	
b. Recreational Development Lakes:	
None	
c. General Development Lakes:	
None	

RIVERS AND STREAMS

a. Remote Rivers:
None
b. Forested Rivers:
None

c: Transition Rivers:

NAME	FROM			TO		
	SECTION	TOWN	RANGE	SECTION	TOWN	RANGE
NONE						

d: AGRICULTURAL RIVERS:

NAME	FROM			TO		
	SECTION	TOWN	RANGE	SECTION	TOWN	RANGE
NONE						

e. TRIBUTARY STREAMS:

All protected watercourses in Salem Township shown on the Protected Waters Inventory Map for Olmsted County, a copy of which is hereby adopted by reference, not given a classification in items a-d above shall be classified as Tributary Streams.

NAME	FROM			TO		
	SECTION	TOWN	RANGE	SECTION	TOWN	RANGE
Salem Creek (SC)	19	106	15	24	106	15
Unnamed to SC	18	106	15	16	106	15

C. PHYSICAL LIMITATIONS:

1. Lot Area and Width Regulations:

- a. Each unsewered lot shall have a lot area of not less than two (2) acres, except when additional lot area is required by the Olmsted County Planning Department to meet the well and septic requirements. In addition, the following lot width requirements must be met:

LOT WIDTH REQUIREMENTS (IN FEET)	RIPARIAN LOT WIDTH	NON-RIPARIAN LOT WIDTH
Natural Environment Lake	200	200
Recreational Development Lake	150	150
General Development Lake	100	150

- b. Each lot in areas served by a public or centralized sewage collection and treatment system shall have a lot area and width of not less than the following:

Natural Environment Lake

DWELLING TYPE	RIPARIAN LOT		NON-RIPARIAN LOT	
	AREA (SQUARE FEET)	WIDTH (FEET)	AREA (SQUARE FEET)	WIDTH (FEET)
Single	40,000	125	20,000	125
Duplex	70,000	225	35,000	220
Triplex	100,000	325	52,000	315
Quad	130,000	425	65,000	410

Recreational Development Lake

DWELLING TYPE	RIPARIAN LOT		NON-RIPARIAN LOT	
	AREA (SQUARE FEET)	WIDTH (FEET)	AREA (SQUARE FEET)	WIDTH (FEET)
Single	20,000	75	15,000	75
Duplex	35,000	135	26,000	135
Triplex	50,000	195	38,000	190
Quad	65,000	255	49,000	245

GENERAL DEVELOPMENT LAKE

DWELLING TYPE	RIPARIAN LOT		NON-RIPARIAN LOT	
	AREA (SQUARE FEET)	WIDTH (FEET)	AREA (SQUARE FEET)	WIDTH (FEET)
Single	15,000	75	10,000	75
Duplex	26,000	135	17,500	135
Triplex	38,000	195	25,000	190
Quad	49,000	255	32,500	245

- c. River/Stream segments must meet the underlying zoning district lot area requirements. In addition, the following lot width standards must be met.

DWELLING TYPE	REMOTE	FORESTED	TRANSITION	AGRICULTURAL	URBAN TRIBUTARY (UNSEWERED)	URBAN TRIBUTARY (SEWERED)
Single	300'	200'	250'	150'	100'	75'
Duplex	450'	300'	375'	225'	150'	115'
Triplex	600'	400'	500'	300'	200'	150'
Quad	750'	500'	625'	375'	250'	190'

2. Additional Special Provisions:

- a. Lots intended as controlled accesses to public waters or as a recreation areas for use by owners of non-riparian lots may be platted as outlets. These lots do not need to meet the applicable lot area requirements; however, they must meet the minimum lot width standards set forth in this ordinance.

D. PLACEMENT, DESIGN, AND HEIGHT OF STRUCTURES:

- 1. **Placement of Structures on Lots:** When more than one setback applies to a site, structures and facilities must be located to meet all setbacks. Where structures exist on the adjoining lots on both sides of a proposed building site, structure setbacks may be altered without a variance to conform to the adjoining setbacks from the ordinary high water level, provided the proposed building site is not located in a shore impact zone or in a bluff impact zone. Structures shall be located as follows:

- a. **Structure and On-Site Sewage System Setbacks (in feet) from Ordinary High Water Level*:**

CLASS OF PUBLIC WATER	STRUCTURES		SEWAGE TREATMENT SYSTEMS
	UNSEWERED	SEWERED	
LAKES			
Natural Environment	150'	150'	150'
Recreational Development	100'	75'	75'
General Development	75'	50'	50'
RIVERS			
Remote	200'	200'	150'
Forested & Transition	150'	150'	100'
Agricultural, Urban & Tributary	100'	50'	75'

*One water oriented accessory structure designed in accordance with the provisions of Section 9.10 (D, 1,a) of this ordinance may be set back a minimum distance of ten (10) feet from the ordinary high water level.

- b. **Additional Structure Setbacks:** The following additional structure setbacks apply, regardless of the classification of the waterbody.

SETBACK FROM:	SETBACK (IN FEET)
Top of Bluff	30'
Unplatted Cemetery	50'

- c. **Bluff Impact Zones:** Structures and accessory facilities, except stairways and landings, must not be placed within bluff impact zones.

2. Design Criteria for Structures:

- a. **High Water Elevations:** Structures must be placed in accordance with any floodplain regulations applicable to the site. Where these controls do not exist, the elevation to which the lowest floor, including basement, is placed or flood-proofed must be determined as follows:
 - 1) For lakes, by placing the lowest floor level at least three (3) feet above the highest known water level, or three (3) feet above the ordinary high water level whichever is higher;
 - 2) For rivers and streams, by placing the lowest floor at least three (3) feet above the flood of record, if data is available. If data is not available, by placing the lowest floor at least three (3) feet above the ordinary high water level, or by conducting a technical evaluation to determine effects of proposed construction upon flood stages and flood flows and to establish a flood protection elevation. Under all three approaches, a qualified engineer or hydrologist consistent with parts 6120.5000 to 6120.6200 governing the management of flood plain areas must do technical evaluations. If more than one approach is used, the highest flood protection elevation determined must be used for placing structures and other facilities; and
 - 3) Water oriented accessory structures may have the lowest floor placed lower than the elevation determined in this item if the structure is constructed of flood resistant materials to the elevation, electrical and mechanical equipment is placed above the elevation, and if long duration flooding is anticipated, the structure is built to withstand ice action and wind driven wave and debris.

- b. Water oriented accessory structures:** Each lot may have one water oriented accessory structure not meeting the normal structure setback in Section 9.10 (D, 1, a) of this ordinance if this water oriented accessory structure complies with the following provisions:
- 1) The structure or facility must not exceed ten (10) feet in height, exclusive of safety rails, and cannot occupy an area greater than 250 square feet. Detached decks must not exceed eight (8) feet above grade at any point;
 - 2) The setback of the structure or facility from the ordinary high water level must be at least ten (10) feet;
 - 3) The structure or facility must be treated to reduce visibility as viewed from public waters and adjacent shorelands by vegetation, topography, increased setbacks or color, assuming summer, leaf on conditions;
 - 4) The roof may be used as a deck with safety rails, but must not be enclosed or used as a storage area;
 - 5) The structure or facility must not be designed or used for human habitation and must not contain water supply or sewage treatment facilities; and
 - 6) As an alternative for general development and recreational development water bodies, water oriented accessory structures used solely for watercraft storage, and including storage of related boating and water oriented sporting equipment, may occupy an area up to 400 square feet provided the maximum width of the structure is twenty (20) feet as measured parallel to the configuration of the shoreline.
- c. Stairways, Lifts, and Landings:** Stairways and lifts are the preferred alternative to the major topographic alterations for achieving access up or down bluffs and steep slopes to shore areas. Stairways and lifts must meet the following design requirements:
- 1) Stairways and lifts must not exceed four (4) feet in width on residential lots. Wider stairways may be used for commercial properties or public open space recreational properties;
 - 2) Landing for stairways and lifts on residential lots must not exceed 32 square feet in area. Landings larger than 32 square feet may be used

for commercial properties or public open space recreational properties;

- 3) Canopies or roofs are not allowed on stairways, lifts, or landings;
- 4) 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;
- 5) 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; and
- 6) Facilities such as ramps, lifts, or mobility paths for physically handicapped persons are also allowed for achieving access to shore areas, provided that the dimensional and performance standards of sub-terms (1) to (5) are complied with in addition to the requirements of Minnesota Regulations, Chapter 1340.

- d. **Significant Historic Sites:** No structure may be placed on a significant historic site in a manner that affects the value of the site unless adequate information about the site has been removed and documented in a public repository.
- e. **Steep Slopes:** The Salem Township Zoning Administrator must evaluate possible soil erosion impacts and development visibility from public waters before issuing a permit for construction of sewage treatment systems, roads, driveways, structures, or other improvements on steep slopes. When determined necessary, conditions must be attached to issued permits to prevent erosion and to preserve existing vegetation screening of structures, vehicles, and other facilities as viewed from the surface of public waters, assuming summer leaf on vegetation.

E. SHORELAND ALTERATIONS:

Vegetation Alterations:

1. Vegetation alteration necessary for the construction of structures and sewage treatment systems and the construction of roads and parking areas regulated by Section (9, 10, F) of this ordinance are exempt from the vegetation alteration standards that follow.

2. **Removal of alteration of vegetation, except for agricultural and forest management uses as regulated in Sections (9, 10, H) is allowed subject to the following standards:**
 - a. **Intensive vegetation clearing within the shore and bluff impact zones and on steep slopes is not allowed. Intensive vegetation clearing for forestland conversion to another use outside of these areas is allowable as a conditional use if an erosion control and sedimentation plan is developed and approved by the soil and water conservation district in which the property is located.**
 - b. **In shore and bluff impact zones and on steep slopes, limited clearing of trees and shrubs and cutting, pruning, and trimming of trees is allowed to provide a view to the water from the principal dwelling site and to accommodate the placement of stairways and landings, picnic areas, access paths, livestock watering areas, beach and watercraft access areas, and permitted water oriented accessory structures or facilities provided that:**
 - 1) **The screening of structures, vehicles, or other facilities as viewed from the water, assuming summer leaf on conditions, is not substantially reduced;**
 - 2) **Along rivers, existing shading of water surfaces is preserved, and**
 - 3) **The above provisions are not applicable to the removal of tree limbs, or branches that are dead, diseased, or pose safety hazards.**

Topographic Alterations/ Grading and Filling

1. **Grading and filling and excavations necessary for the construction of structures, sewage treatment systems, and driveways under validly issued construction permits for these facilities do not require the issuance of a separate grading and filling permit. However, the grading and filling standards in this section must be incorporated into the issuance of permits for construction of the above mentioned items.**
2. **Public roads and parking areas are regulated by Section (9, 10, F) of this ordinance.**
3. **Notwithstanding items 1 and 2 above, a grading and filling permit will be required for:**
 - a. **The movement of more than ten (10) cubic yards of material on steep slopes and shore and bluff impact zones; and**
 - b. **The movement of more than fifty (50) cubic yards of material outside of the steep slopes and shore and bluff impact zones.**
4. **The following considerations and conditions must be adhered to during the issuance of construction permits, grading and filling permits, conditional use permits, variances and subdivision approvals:**

- a. Grading or filling within any wetland area must meet the applicable requirements of the Minnesota Wetlands Conservation Act.
 - b. 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;
 - c. 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;
 - d. Methods to minimize erosion and to trap sediments before they reach any surface water feature must be used;
 - e. Altered areas must be stabilized to acceptable erosion control standards consistent with Section 10.20 of the Salem Township Zoning Ordinance.
 - f. Fill or excavated material must not be placed in a manner that creates an unstable slope;
 - g. Plans to place fill or excavated material on steep slopes must be reviewed by qualified professionals for continued slope stability and must not create finished slopes of 30 percent or greater;
 - h. Fill or excavated materials must not be placed in bluff impact zones;
 - i. Any alterations below the ordinary high water level of public waters must first be authorized by the Commissioner under Minnesota Statutes, Section 105.42;
 - j. Alterations of topography must only be allowed if they are accessory to permitted or conditional uses and do not adversely affect adjacent or nearby properties; and
 - k. Placement of natural rock riprap, including associated grading of the shoreline and placement of a filter blanket is permitted if the finished slope does not exceed three (3) feet horizontal to one (1) foot vertical, the landward extent of the riprap is within ten (10) feet of the ordinary high water level, and the height of the riprap above the ordinary high water level does not exceed three (3) feet.
5. **Connections to Public Waters:** Excavations where the intended purpose is connection to a public water, such as boat slips, canals, lagoons, and harbors, must be controlled by local shoreland controls. Permission for excavations may be given only after the Commissioner has approved the proposed connection to public waters.

F. PLACEMENT AND DESIGN OF ROAD, DRIVEWAYS, AND PARKING AREAS

1. Public and private roads and parking areas must be designed to take advantage of natural vegetation and topography to achieve maximum screening from view from public waters. Construction of roads and parking areas must be designed and constructed to minimize and control erosion to public waters consistent with the provisions of Section 10.20 of this ordinance.
2. Roads, driveways, and parking areas must meet structure setbacks and must not be placed within bluff and shore impact zones, when other reasonable and feasible placement alternatives exist. If no alternatives exist, they may be placed within these areas, and must be designed to minimize adverse impacts.
3. Public and private watercraft access ramps, approach roads, and access related parking areas may be placed within shore impact zones provided the vegetative screening and erosion control conditions of this ordinance are met.

G. STORMWATER MANAGEMENT:

1. General Standards

- a. When possible, existing natural drainageways, wetlands, and vegetated soil surfaces must be used to convey, store, filter, and retain storm water runoff before discharge to public waters.
- b. Development must be planned and conducted in a manner that will minimize the extent of disturbed areas, runoff velocities, erosion potential, and reduce and delay runoff volumes. Disturbed areas must be stabilized and protected as soon as possible.
- c. When development density, topographic features, and soil and vegetation conditions are not sufficient to adequately handle storm water runoff using natural features and vegetation, various types of constructed facilities such as dikes, diversion, settling basins and ponds may be used. Preference must be given to designs using surface drainage, vegetation, and infiltration rather than buried pipes and manmade materials and facilities.

2. Specific Standards

- a. Impervious surface coverage of lots must not exceed 25 percent of the lot area.
- b. When constructed facilities are used for storm water management, documentation must be provided by a qualified individual that they are

designed and installed consistent with the local soil and water conservation district guidelines.

- c. New constructed storm water outfalls to public waters must provide for filtering or settling of suspended solids and skimming of surface debris before discharge.

H. SPECIAL PROVISIONS FOR COMMERCIAL, INDUSTRIAL, PUBLIC, SEMIPUBLIC AND AGRICULTURAL USES:

1. Standards for Commercial, Industrial, Public, and Semipublic Uses:

- a. Surface water oriented commercial uses and industrial, public or semipublic uses with similar needs to have access to and use of public waters may be located on lots or parcels with frontage on public waters. Those uses with water-oriented needs must meet the following standards:

- 1) In addition to meeting the impervious coverage limits, setbacks, and other zoning district standards in this ordinance, the uses must be designed to incorporate topographic and vegetative screening of parking areas and structures;

- 2.) Uses that require short term watercraft mooring for patrons must centralize these facilities and design them to avoid obstructions of navigation and to be the minimum size necessary to meet the need; and

- 3. Uses that depend on patrons arriving by watercraft may use signs and lighting to convey needed information to the public, subject to the following general standards:

- a) No advertising signs or supporting facilities for signs may be placed in or upon public waters. Signs conveying information or safety messages may be placed in or on public waters by a public authority or under a permit issued by the County Sheriff;

- b) Signs may be placed when necessary, within the shore impact zone if they are designed and sized to be the minimum necessary to convey needed information. They must only convey the location and name of the establishment and the general types of goods or services available. The signs must not contain other detailed information such as product brands and prices, must not be

located higher than ten (10) feet above the ground, and must not exceed 32 square feet in size. If illuminated by artificial lights, the lights must be shielded or directed to prevent illumination out across public waters; and

- c) Other outside lighting may be located within the shore impact zone or over public waters if it is used primarily to illuminate potential safety hazards and is shielded or otherwise directed to prevent direct illumination out across public waters. This does not preclude use of navigational lights.
- 4) Uses without water oriented needs must be located on lots or parcels without public waters frontage, or, if located on lots or parcels with public waters frontage, must either be set back double the normal ordinary high water setback or be substantially screened from view from the water by vegetation or topography, assuming summer, leaf on conditions.

2. Agricultural Use Standards

- a. General farming and related activities are permitted if steep slopes and shore and bluff impact zones are maintained in permanent vegetation or operated under an approved conservation plan from the local soil and water conservation district. The shore impact zone for parcels with permitted agricultural land uses is equal to a line parallel to and 50 feet from the ordinary high water level.
- b. Animal feedlots must meet the following standards:
 - 1) New feedlots must not be located in the shoreland of watercourses or in bluff impact zones and must meet a minimum setback of 300 feet from the ordinary high water level of all public waters basins; and
 - 2) Modifications or expansions to existing feedlots that are located within 300 feet of the ordinary high water level or within a bluff impact zone are allowed if they do not further encroach into the existing high water level setback or encroach on bluff impact zones.

I. WATER SUPPLY AND SEWAGE TREATMENT

1. **Water Supply:** The water supply shall meet all applicable requirements of the Olmsted County Water Well and Water Supply Ordinance and amendments thereto.
2. **Sewage Treatment:** Any premises used for human occupancy must be provided with an adequate method of treating the sewage, which is generated on the premises. Treatment shall be provided as follows:
 - a. Publicly owned sewage treatment systems shall be used where available.
 - b. All new individual sewage treatment systems, including repairs or additions to existing systems shall meet or exceed the requirements of Olmsted County Public Health Regulation #41, and amendments thereto (sewage and wastewater treatment regulation).
 - c. A new individual sewage treatment system, including repairs or additions to existing systems, shall be set back from the ordinary high water level in accordance with the setbacks contained in Section 9.10 (D) of this ordinance.
 - d. Nonconforming individual sewage treatment systems shall be regulated and upgraded in accordance with Section 1.29 (C) of this ordinance.

J. LAND SUITABILITY

1. Each lot created through subdivision must be suitable in its natural state for the proposed use with minimum alteration. Suitability analysis by the local unit of government shall consider susceptibility to flooding, existence of wetlands, soil and rock formations with severe limitations for development, severe erosion potential, steep topography, inadequate water supply or sewage treatment capabilities, near shore aquatic conditions unsuitable for water based recreation, important fish and wildlife habitat, presence of significant historic sites, or any other feature of the natural land likely to be harmful to the health, safety or welfare of future residents of the subdivision.
2. Subdivisions must conform to all official controls of the community. A subdivision will not be approved where a later variance from one or more standards in the official controls would be needed to use the lots for their intended purpose.
3. Sufficient information must be submitted by the applicant for the local unit of government to make a determination of land suitability. The information should include at a minimum:

- a. The surface water features required in Minnesota Statutes, Section 505.02, Subdivision 1, to be shown on plats, obtained from the United States Geological Survey quadrangle topographic maps or more accurate sources;
- b. Extent of anticipated vegetation and topographic alterations; near shore aquatic conditions, including depths, types of bottom sediments, and aquatic vegetation; and proposed methods for controlling storm water runoff and erosion, both during and after construction activities.
- c. Location of 100 year flood plain areas and floodway districts from existing adopted maps or data; and
- d. A line or contour representing the ordinary high water level, the “toe” and “top” of bluffs, and the minimum building setback distances from the top of the bluff and the lake or stream.

K. NOTIFICATIONS TO THE DEPARTMENT OF NATURAL RESOURCES

- 1. Copies of all notices of any public hearings to consider variances, amendments, or conditional uses under local shoreland management controls must be sent to the Commissioner or the Commissioner’s designated representative and postmarked at least ten (10) days before the hearings. Notices of hearings to consider proposed subdivisions/plats must include copies of the subdivision/plat.
- 2. A copy of approved amendments and subdivisions/ plats, and final decisions granting variances or conditional uses under local shoreland management controls must be sent to the Commissioner or the Commissioner’s designated representative and postmarked with ten (10) days of final action.