
CHAPTER 104
STREAM BUFFER PROTECTION AND MANAGEMENT

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104.01 PURPOSE.

1. The purpose of this chapter is to establish minimum requirements for the design of buffers to protect the streams, wetlands, and floodplains of Pleasant Hill; to protect the water quality of watercourses, reservoirs, lakes, and other significant water resources within Pleasant Hill; to protect Pleasant Hill's riparian and aquatic ecosystems; and to provide for the environmentally sound use of Pleasant Hill's land resources.

2. Buffers adjacent to stream systems provide numerous environmental protection and resource management benefits that can include the following:

- A. Restoring and maintaining the chemical, physical, and biological integrity of the water resources.
- B. Reducing pollutants delivered from urban stormwater.
- C. Reducing erosion and sediment entering the stream.
- D. Allow for stabilization of stream banks.
- E. Providing infiltration of stormwater runoff.
- F. Maintaining base flow of streams.
- G. Contributing the organic matter that is a source of food and energy for the aquatic ecosystem.
- H. Providing tree canopy to shade streams and promote desirable aquatic organisms.
- I. Providing riparian wildlife habitat.
- J. Furnishing scenic value and recreational opportunity.
- K. Protecting the public from flooding, property damage and loss.
- L. Providing sustainable, natural vegetation.

3. It is the desire of the City to protect and maintain the native vegetation in riparian and wetland areas by implementing specifications for the establishment and protection of vegetation along all stream systems within our jurisdictional authority.

104.02 DEFINITIONS.

1. "Active Channel" is the area of the stream channel that is subject to frequent flows (approximately once per one and a half years) and that includes the portion of the channel below the floodplain.

2. "Best Management Practices (BMP's)" means a schedule of activities, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. Common BMPs are described in the Iowa Stormwater Management Manual and SUDAS. The BMPs covered are not meant to be a comprehensive list of acceptable BMPs.

3. "Buffer" is a vegetative area, including trees, shrubs, and herbaceous vegetation, that exists or is established to protect a stream system, lake, or reservoir area. Alteration of this natural area is strictly limited.

4. "Native Vegetation" refers to vegetation originating naturally in this region of the state. Native vegetation is not to be confused with all existing vegetation.
5. "Streams" are perennial and intermittent watercourses identified through site inspection and United States Geological Survey (USGS) maps and further defined and categorized as follows:
 - A. Type I Streams are defined as perennial streams shown as solid blue lines on the United States Geological Survey seven and one-half minutes series topological map and have a drainage area of greater than 50 acres.
 - B. Type II Streams are defined as intermittent streams shown as dashed blue lines on the United States Geological Survey seven and one-half minutes series topological map and have a drainage area of greater than 50 acres.
 - C. Type III Streams are defined as intermittent streams or natural channels which are not shown on the United States Geological Survey seven and one-half minutes series topological map as either blue or dashed blue lines which have drainage areas of greater than 50 acres.
6. "Stream Bank" is the area between the stream channel and the break in the stream bank slope or the highest point of the stream channel.
7. "Stream Channel" is part of the watercourse either naturally or artificially created that contains an intermittent or perennial base flow of groundwater origin. Base flows of groundwater origin can be distinguished by any of the following physical indicators:
 - A. Hydrophytic vegetation, hydric soil, or other hydrologic indicators in the area(s) where groundwater enters the stream channel in the vicinity of the stream headwaters, channel bed, or channel banks.
 - B. Flowing water not directly related to a storm event.
 - C. Historical records of a local high groundwater table, such as well and stream gauge records.
8. "SUDAS" means the current Standard Urban Design and Specifications Manual, as locally amended, that specifies the stormwater guidelines and stormwater controls deemed by SUDAS to meet the goals of the U.S. Environmental Protection Agencies NPDES permit program administered by the Iowa Department of Natural Resources.
9. "Wetland" is defined as areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

104.03 APPLICABILITY.

This chapter shall apply to proposed improvements associated with all land development activity requiring a site plan, construction drawings, or subdivision on property containing a stream, near a stream, or drainage swale draining greater than 50 acres. These requirements are in addition to, and do not replace or supersede, any other applicable buffer requirements established by other regulatory avenues.

104.04 STREAM BUFFER DESIGN.

1. A stream buffer for a stream system shall consist of a native vegetative strip of land extending along both sides of a stream and its adjacent wetlands, floodplain, or slopes. The stream buffer width shall be adjusted to include contiguous sensitive areas, such as steep slopes or erodible soils, where development or disturbance may adversely affect water quality, streams, wetlands, or other water bodies.
2. The required base width for all buffers shall be determined based on the type of stream being protected, as specified in TABLE I of this chapter below:

TABLE I. Required Minimum Stream Buffer Width	
Stream Type	Required Width (each side)
Type I	100 feet
Type II	50 feet

3. Stream buffer width shall be modified if there are steep slopes which are above the ordinary high water mark and within the required stream buffer width and drain into the stream system. In those cases, the buffer width will be adjusted according to the guidance in TABLE II below:

Percent Slope	Additional Width of Buffer
0-14%	No Change
15%-25%	Add 25 feet
Greater than 25%	Add 50 feet

4. The stream buffer width may be relaxed and buffer permitted to become narrower at some points so long as the average width of the stream buffer meets the minimum requirement specified in Table 1 and Table 2. This averaging of the buffer may be used to allow for the presence of an existing structure or to recover a lost lot. The City of Pleasant Hill may consider other buffer design modifications in unique cases of topography or other hardship provided that the project can meet the goals outlined in the purpose and intent of this chapter.

A. At no point in the averaged stream buffer width may development activities come within 50 feet of Type I streams, 25 feet of Type II streams and 15 feet of Type III streams, these distances could be altered due to floodplain and wetland location, slope, and environmentally sensitive areas.

B. Additional footage for maintenance access outlined in subsection 5 of this section must still be incorporated outside the averaged buffer distances.

5. After the buffer distance has been determined an additional distance shall be provided for maintenance access, this additional distance is outlined in TABLE III below:

Stream Type	Additional Width of Buffer	Sides of Buffer
Type I	20 feet	Both
Type II	20 feet	Both
Type III	15-20 feet	One Side

6. The buffer shall begin at the edge of the waterway for Type I and at the centerline of the channel for Type II and III waterways. The edge of the waterway is the outer wet edge of the channel during base flow or where the edge of vegetation occurs.

7. A stream buffer shall not be required for the portions of a stream that are less than 150 feet in length due to the stream having been previously enclosed within a pipe or box structure.

8. Impervious surfaces, septic systems and all associated equipment are prohibited within the buffer.

9. Dominant vegetation shall consist of existing or seeded/planted native trees, shrubs, perennial grasses and forbs suited to the soil and hydrology of the site and the intended purpose. No single species shall make up more than 50% of the total number of species planted. Turf grass (lawn) is not permitted.

10. Overland flow through the stream buffer area will be maintained as sheet flow.

104.05 BUFFER MANAGEMENT AND MAINTENANCE.

1. The stream buffer, including wetlands and floodplains, shall be managed to enhance and maximize the unique value of these

resources. Management includes specific limitations on alteration of the natural conditions of these resources.

2. The City of Pleasant Hill will be responsible for the management and maintenance of the stream buffer, including wetlands and floodplains, of Type I & II streams.
3. Type III stream management and maintenance shall be subject to drainage area and development goals. If management and maintenance of the Type III stream buffer is private, then a management plan shall be developed by the owner. The requirements for a stream buffer management plan are outlined in Section 104.06.
4. A deed to the City shall be given for all required stream buffers as part of the final plat or site plan approval process.
5. Temporary access easements may need to be developed during the site plan or subdivision process, if the buffer is not yet contiguous to another point of access.
6. The following structures, practices, and activities are permitted in the stream buffer, with specific design or maintenance features, subject to the review of the City of Pleasant Hill:
 - A. Roads, bridges, paths, and utilities:
 - the right-of-way should be the minimum width needed to allow for maintenance access and installation.
 - the angle of the crossing shall be as close to perpendicular as feasible to the stream or buffer in order to minimize clearing requirements.
 - B. Stream restoration projects, facilities and activities approved by the City of Pleasant Hill are permitted within the buffer.
 - C. Water quality monitoring and stream gauging are permitted within the stream buffer, as approved by the City of Pleasant Hill.
7. The following practices and activities are prohibited within the buffer, except with approval by the City of Pleasant Hill:
 - A. Clearing of existing vegetation.
 - B. Grading, stripping, or other soil disturbing practices.
 - C. Filling or dumping.
 - D. Draining the buffer area by ditching, underdrains, or other systems.
 - E. Use, storage, or application of pesticides, except for the spot spraying of noxious weeds or nonnative species consistent with recommendations of the Polk County Soil and Water Conservation District.
8. All plans prepared for recording and all right-of-way plans shall clearly:
 - A. Show the extent of any stream buffer on the subject property.
 - B. Label the stream buffer.
 - C. Provide a note to reference any stream buffer stating: "There shall be no clearing, grading, construction or disturbance of vegetation except as permitted by the City of Pleasant Hill."
9. The dedication of a stream buffer area in any form to the City of Pleasant Hill shall not be interpreted to mean that this automatically conveys to the general public the right of access to this area.

104.06 STREAM BUFFER MANAGEMENT PLAN.

1. A plan approved by the City of Pleasant Hill is required for all Type III streams where the ownership is private.
2. The plan shall contain an informative, conceptual, and schematic representation of the proposed development activity by means of maps, graphs, charts, or other written or drawn documents so as to enable an informed decision regarding the proposed development activity.
3. The plan shall contain the following specific information:
 - A. A location or vicinity map to include maximum two feet contour intervals and scale of no greater than one inch equals 100 feet.
 - B. Field delineated streams, springs, seeps, bodies of water, wetlands, and waterway buffer.

C. A buffer plan shall be submitted in conjunction with the required grading plan for any development, and the buffer should be clearly delineated on the final grading plan.

D. Boundary markers will be installed by the applicant prior to commencing clearing and grading operations. Markers will be placed at the outside edge of the buffer prior to the start of any activity adjacent to the buffer. Markers shall be clearly visible and shall be spaced at a maximum of 100 feet. The markers may be joined by marking tape or fencing.

4. The plan shall be developed by an Iowa licensed Professional Engineer, Iowa licensed Landscape Architect, or representative from the Polk Soil & Water Conservation District.

5. The plan shall outline the maintenance procedures established by the owner, to ensure the proper management of the stream buffer.

6. If a maintenance procedure consists of a controlled burn, an approved burn plan for the native areas shall also be included in the management plan. The burn plan shall be approved by the City and Polk County Air Quality prior to any burning activities. If, at a later date, the owner of the management plan decides to use controlled burning as a management tool, they may develop a burn plan and seek City approval.

104.07 ENFORCEMENT.

1. The Community Development Director or his/her designee is authorized and empowered to enforce the requirements of this chapter in accordance with the procedures of this section.

2. If, upon inspection or investigation, the Director or his/her designee is of the opinion that any person has violated any provision of this chapter, he/she shall with reasonable promptness issue a notice of the violations identified while conducting an inspection or investigation. Each notice shall be in writing and shall describe the nature of the violation, including a reference to the provision within this chapter that has been violated. In addition, the notice shall set a reasonable time for the abatement and correction of the violation.

3. If the property owner fails to take corrective action, following notice prescribed for the service of civil process by the Iowa Rules of Civil Procedure, the City may do so by its own crews or by persons under its hire and assess against the property owner the City's cost therefore. The cost shall include the salaries and benefits earned by the City employees during such corrective action, a charge for City machinery used and such other costs and expenses as the City actually incurred. To the extent allowed by Iowa law, such costs and expenses may be assessed against the property owner and collected in the same manner as a property tax.

4. Unless another penalty is expressly provided by this chapter for any particular provision or section, any person violating any provision of this chapter or any rule or regulation adopted herein by reference shall be subject to a civil penalty as set forth in the Schedule of Civil Penalties in Chapter 4 of this Code of Ordinances.

5. Each day that a municipal infraction occurs and/or is permitted to exist constitutes a separate offense.

104.08 EXEMPTIONS.

Exemption of these activities does not constitute an exemption of any other activity proposed on a property:

1. Any existing use that does not change use, zoning district or size is exempt from requirements but shall meet the requirements for compliance for any new development requiring a site plan or subdivision.

2. A perpendicular stream crossing by a driveway, street, or utility lines.

3. A street or driveway where buffer intrusion is the only option to provide access to a property.

4. Paved and unpaved trails and paths for public use.

5. Public water supply intake or public wastewater outfall structures.

6. Public access facilities that must be on the water including boat ramps, docks, foot trails leading directly to the river, fishing platforms and overlooks.

7. Utility lines and easements running parallel with the stream, except that all easements (permanent and construction) and clearing and grading shall recognize the sensitivity of the streams and use Best Management Practices to limit and repair the disturbance within the buffer area. This includes such impervious cover necessary for the operation and maintenance of the utility, including but not limited to manholes, vents and valve structures.

8. Land development activities within a dedicated street right-of-way existing as of the effective date of this chapter.

9. Minor land disturbing for the intent of emergency erosion control and bank stabilization activities (i.e. for the purposes of corrective maintenance; measures for health, safety and welfare; post storm; or other disaster relief) if City of Pleasant Hill is notified about the activity and the disturbance area is less than 5,000 square feet.

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