CHAPTER 935.08

(e) Stream Corridor Protection Zone:

(1) Purpose: The City has determined that establishing a Stream Corridor Protection Zone along streams is necessary to protect structures from damage caused by natural erosion. Unless otherwise exempt, all development and redevelopment projects that include a portion of a Stream Corridor Protection Zone must minimize alterations of the stream, keep new structures out of the Stream Corridor Protection Zone, and maintain a riparian corridor along the stream to minimize streambank erosion and to protect stream habitat.

(2) Requirements: With the exception of roadside ditches (that carry only immediate right-of-way drainage) and approved roadway crossings, no open channels (natural or man-made) will be enclosed within a storm sewer when an area is developed. This policy will apply even when the open watercourse is located on a property line.

A. Exceptions may be granted by the Administrator for streams when the total tributary drainage area is less than 100 acres, however, this shall not absolve the developer from complying with all applicable state and federal regulations.

B. If exceptions are granted on any project, it will be with the requirement that any enclosure will convey flow from the entire tributary drainage area up to the 10-year recurrence interval. A flood routing flow path must be provided through the development site for all storms greater than the 10-year recurrence interval. This flood routing path must be clearly shown on the site development plans. The applicant shall provide stormwater calculations for the proposed enclosure and flood routing to the Municipality for approval. The enclosure shall not raise the flood elevation on upstream property owners.

(3) Stream Identification: Streams covered under this requirement include all streams shown on USGS 7.5 minute Quad maps as solid or dashed blue or purple lines or a surface watercourse (either man-made or natural), with a well-defined bed and bank and channel and that conveys in part or in whole stormwater discharge, and which confines and conducts continuous or periodic flowing water. This definition does not include roadside drainage-ways that convey only immediate right-of-way drainage nor does this definition include channels of a temporary nature formed as part of an approved construction activity and that will be removed at the conclusion of construction.

The Applicant shall identify and label all streams within the project site and/or receiving stormwater discharges from the project site on the master drainage plan (see Section 935.03(b)) submitted as part of the Stormwater Management Report. The Applicant shall provide information that supports the classification of the stream on/adjacent to their site. Such information may include, but not be limited to, copies from USGS Quad sheets, photographs, FEMA maps, or soils maps showing the location of a stream and delineation of upstream tributary area.

If the City determines that the submitted evidence is inconclusive, then they may require a site inspection and input from other sources of information including the City Engineer, the U.S. Army Corps of Engineers, Ohio EPA, ODNR, or the Franklin Soil and Water Conservation District. Final determination regarding whether the

watercourse or channel meets the classification of a stream for the purposes of this Chapter shall be at the discretion of the City Administrator or his/her designee.

(4) The Stream Corridor Protection Zone consists of the stream and the riparian area along the stream. Its purpose is to allow the natural, lateral movement of open water courses, provide sufficient area for flood conveyance, protect water quality and prevent structures from being impacted by natural streambank erosion. The Stream Corridor Protection Zone is established through designation of a riparian setback boundary that will be required on all natural streams and manmade open channels, as required under subsection 935.08(e)(2) and designated under subsection 935.08(e)(3). A Stream Corridor Protection Zone is not required for a roadside drainage ditch that carries only immediate adjacent right-of-way drainage.

(5) The Stream Corridor Protection Zone shall be created with the establishment of a riparian setback boundary on each side of the open channel. The total width between the setback boundaries shall be established using the following criteria, whichever is greater: ~~will be defined by the following equation or the FEMA designated floodway, whichever is wider.~~

~~SW=129 x DA0.43~~

A. The FEMA designated 100-year floodway, or

B. Using the equation below with a minimum of 50-feet (plus channel width; i.e., 25-ft each side of channel, measured from ordinary high water mark) to a maximum of 250-feet (plus channel width). The zone shall be centered on the stream valley generally located at the point where both zone boundaries intersect equal natural ground elevations on either side of the stream. Where topography is flat the zone shall be centered on centerline of the stream:

Stream Corridor Protection Zone, in feet of width[1] = $147(DA)^{0.38}$

Where DA = drainage area of the stream in square miles, or

C. 50-feet plus channel width (i.e., 25-ft each side of channel, measured from ordinary high water mark).

[1]Note: This equation is from Appendix 7 of the "Rainwater and Land Development Manual" by the Ohio Environmental Protection Agency based on regional curve analysis for various watercourses measured in the eastern region of the United States, in studies conducted by Ward (2001), Williams (1986) and Dunne and Leopold (1978).

~~Where:~~

~~SW= Setback width measured in feet, being the total width of the protection setback at a stream channel cross-section, centered on the channel centerline.~~

~~DA= Drainage area in square miles~~

~~Note: This equation was developed and recommended by Ohio Department of Natural Resources (ODNR) based on regional curve analysis for various watercourses~~

~~measured in the eastern united States region and on studies conducted by Ward (2001), Williams (1986) and Leopold (1978).~~

~~The minimum Setback Width is 50 feet plus channel width (i.e., 25-feet on each side of the channel, measured from the ordinary highwater mark).~~

The Stream Corridor Protection Zone shall consist of three subzones as follows:

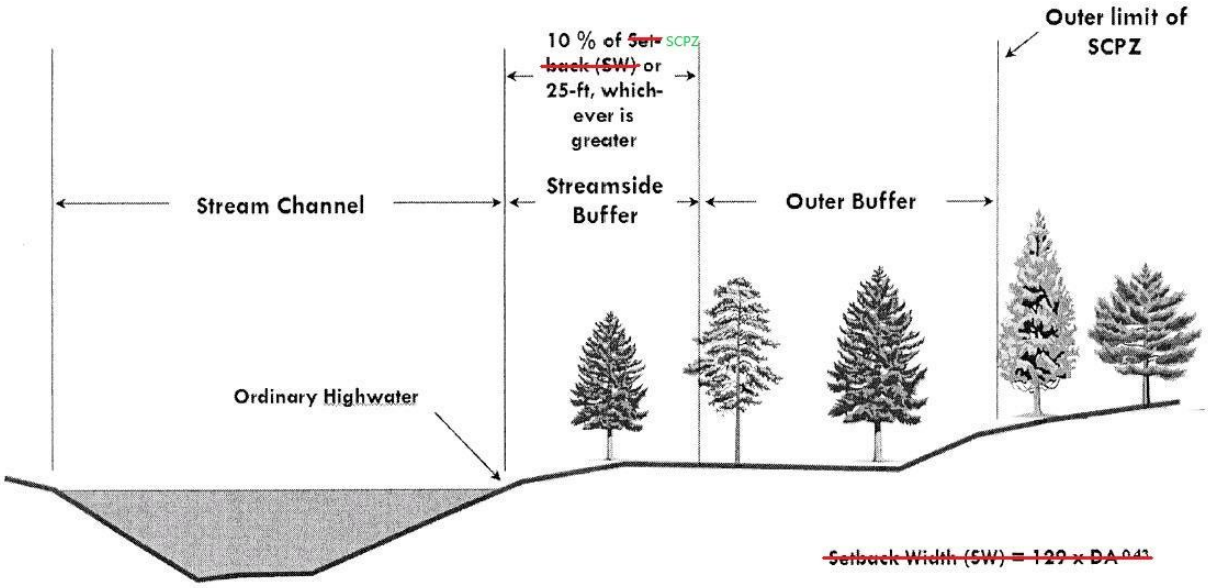
Subzone 1 - The Stream Channel: This is the main channel of the stream the banks of which are formed on either side of the stream centerline by the ordinary highwater mark, which is a field determination based feature.

Subzone 2 - The Streamside Buffer: exists on each side of the stream channel and has a cross-sectional width equivalent to 10 % of the ~~Setback width (SW)~~ Stream Corridor Protection Zone (SCPZ) as determined above ~~with the above-referenced equation~~, but no less than 25-feet from the ordinary highwater mark. The outer edge of the streamside buffer (on either side of the stream channel) is measured from the ordinary highwater mark.

Subzone 3 - The Outer Buffer: exists on each side of the stream channel. The inner edge is contiguous to the streamside buffer boundary and the outer edge establishes the outer boundary of the Stream Corridor Protection Zone.

Figure 2 displays the typical subzones within the Stream Corridor Protection Zone.

Figure 2 (showing only channel and one side of the SCPZ, for clarity)



SUBZONES of STREAM
CORRIDOR PROTECTION ZONE (SCPZ)

The position of the outer boundary of the Stream Corridor Protection Zone may be modified at the Administrator's discretion to more accurately reflect local conditions such as to include known areas of environmental sensitivity in close proximity to channels banks, to include sensitive steep slopes adjacent to a channel edge or to exclude high terrain that is adjacent to a stream valley. Any proposed modifications to

the Stream Corridor Protection Zone boundary shall be based on technical guidelines that are available in the office of the City Administrator.

The Stream Corridor Protection Zone must be clearly shown on site development plans.