

STREAM BUFFER GUIDE

The Orange County Unified Development Ordinance (UDO) contains standards related to streams and stream buffers within Orange County's jurisdiction. The purpose of these regulations is to protect County water resources by establishing minimum buffers adjacent to streams, rivers, water bodies and other water features and limiting development and other Land-Disturbing Activities within those buffers. These standards are in addition to state stream buffer regulations.

Jurisdictional Streams

Orange County buffers jurisdictional streams. Jurisdictional streams are also known as "blue line streams" and appear as a broken or solid blue line (or a purple line) on a USGS topographic map or soil survey. In addition, blue line streams are considered waters of the State. Jurisdictional streams are either intermittent or perennial. Ephemeral drainage is non-jurisdictional, and buffers are not required.

Stream Buffer Standards and Zones

Buffer is measured from top of bank perpendicular for the entire reach of the subject stream. Ponds, lakes and reservoirs connected to jurisdictional streams are buffered from the normal water level.

State Buffer Requirements

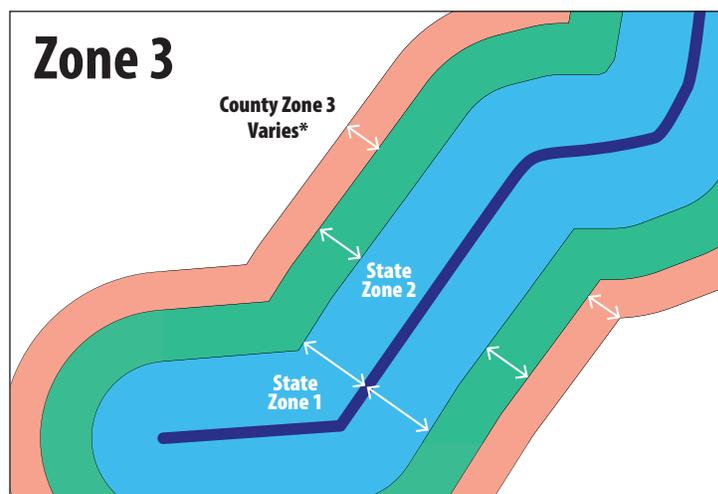
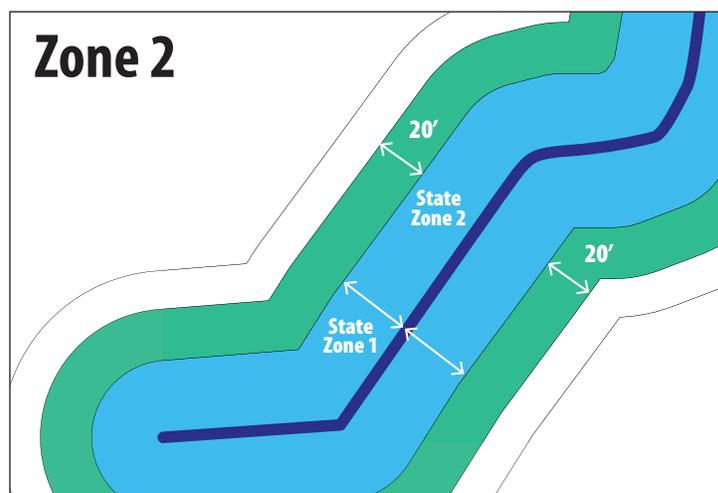
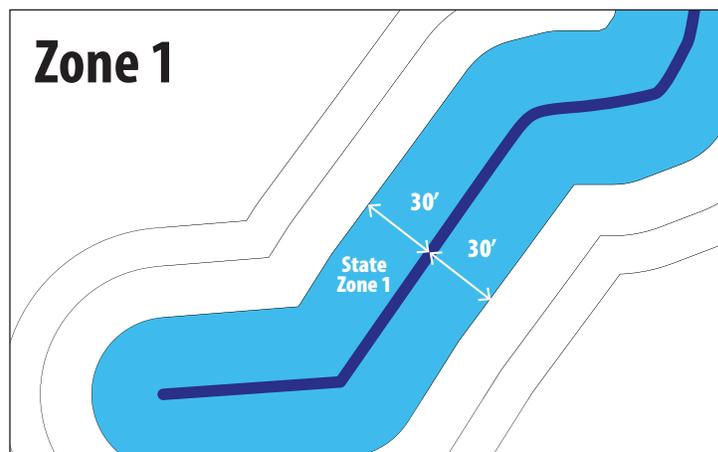
- Requires a 50 ft. minimum buffer.
- **Zone 1:** is the inner 30' measured from stream bank on both sides of stream (Natural vegetation).
- **Zone 2:** is 20' measured from outer extent of Zone 1 (Managed vegetation).

Orange County Buffer Requirements

- More restrictive buffers than the State.
- **Zone 3:** The extra buffer is determined from sub-watershed, slope, and ground cover. Buffer width is calculated based on Section 6.13.3, Calculating Width of Stream Buffer, of the UDO.
- Hydrologically connected ponds and lakes are buffered with the stream buffer width.
- Reservoirs are buffered 150'.
- Zoning Report indicates the up-to-date buffer information.

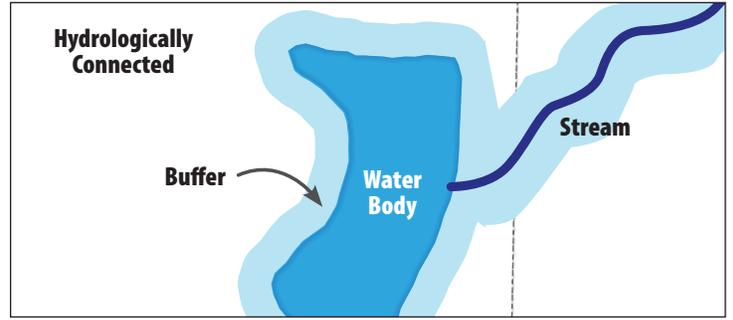
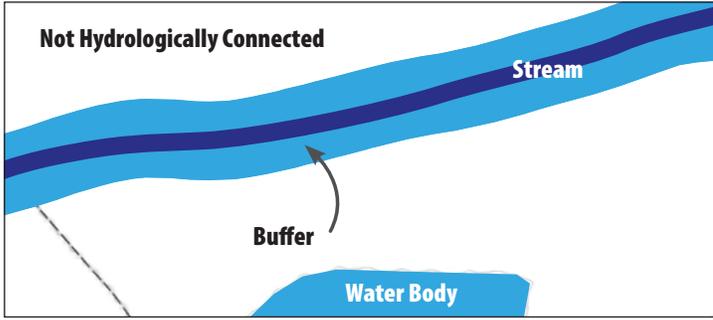
Jurisdictional Stream Maps

- **Orange County Geographic Information System (GIS)**
<https://gis.orangecountync.gov/orangengis/default.htm>
- **Neuse**
 - Most recent version of the publish manuscript of the soil survey map that shows stream layers prepared by NRCS of the USDA
- **Jordan**
 - Most recent version of the soil survey map prepared by NRCS of the USDA
 - Acceptable Soil Surveys Maps Interpretative Ruling: The "most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture" referenced in 15A NCAC 2B .0233 and .0259 means the most recent paper-bound versions of the NCRS soil surveys, or copies thereof.



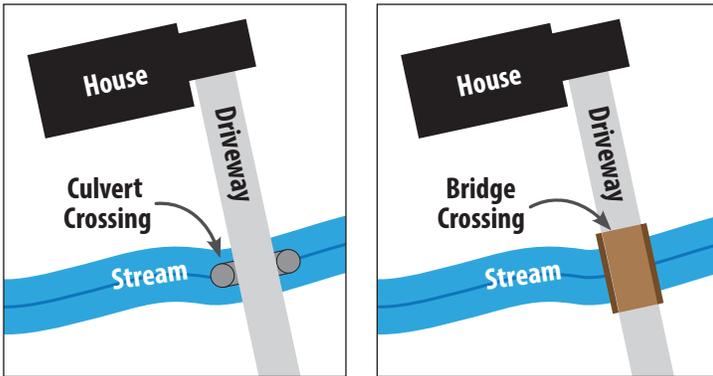
*Buffer width may vary based on watershed, slope, and groundcover.

Waterbody Buffers



Impacts to the Stream Buffer Area

With proposed impacts i.e., disturbance to a buffer. A Buffer Authorization Certificate (BAC) needs to be applied for and issued via Orange County for proposed buffer impact to occur. Generally, the buffer impact is assessed as whether there is a practical alternative.



If impact to the 50' State buffer is proposed the table of uses needs to be referenced for determination of whether the proposed impact is exempt, allowable, or allowable with mitigation. See Table of Uses 15A NCAC 02b .0267 & 15A NCAC 02b .0714 (<https://www.orangecountync.gov/3054/Erosion-Control-and-Stormwater-Management>).

With proposed impacts to a stream, for a crossing, a Pre-Authorization Construction Notification (PCN) needs to be applied for via the United States Army Corps of Engineers (USACE). If the United States Army Corps of Engineers (USACE) determines a 404 permit is required, a corresponding Division of Water Quality (DEQ) 401 permit is required. Orange County needs a copy of the determination. A Buffer Authorization Certificate (BAC) needs to be applied for and issued via Orange County for proposed impact to occur.

A variance can be applied for demonstrating a hardship. The variance request needs to be submitted to the Planning Director with final approval determined by the Orange County Board of Adjustment.

Orange County Applications and Permits Related to Streams and Stream Buffers

The following applications can be found on the Orange County website (<https://www.orangecountync.gov/3030/Applications-Forms-and-Submittal-Infoma>)

- Surface Waters Identification (SWID) - The presence of a stream buffer can impact land uses and land disturbing activities such as driveways and building locations. Anyone who wishes to dispute a mapped jurisdictional stream may request staff to evaluate the stream. Staff uses methodologies and criteria developed by the North Carolina Division of Water Quality to determine if the stream feature shown on the map is subject to buffer requirements.
- Buffer Authorization Certificate (BAC) - Needs to be applied for and issued via Orange County for proposed buffer impact to occur.

Floodplain Information

Always check to determine if a floodplain is present on the subject property. If present, the buffer is measured from the outer most extent of the subject Special Flood Hazard Area (SFHA) 100-year floodplain outside of the municipalities.

Additional Information

- Diffuse/Dispersed flow is required in the buffer: Diffuse/dispersed flow refers to overland water flow that is spread out over the landscape, rather than concentrated in a defined channel or pipe.
- Timbering for non-development activities, the following statutes apply:
 - Cape Fear River Basin NC General Statute 15A NCAC 02B .0267 (Line Item 14, Requirements Specific to Forest Harvesting) <http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20b/15a%20ncac%2002b%20.0267.pdf>
 - Neuse River Basin NC General Statute 15A NCAC 02B .0612 <http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20b/15a%20ncac%2002b%20.0612.pdf>
- Reference Orange County Development Ordinance - 4.2 Watershed Protection, redevelopment without further encroachment into buffer. Existing lot key dates for various watersheds lot creation 1994, 1997, 1999 non-conforming, determine if setback conditions in this section are met to allow stream buffer encroachment into Zone three to allow development of lot.
- 4.2.9 Water Supply / Sewage Disposal: See setbacks chart.

Frequently Asked Questions

Are water wells allowed in the stream buffer area?

Per 15A NCAC .025 .0714, water well are allowed in the buffer area.

Are septic fields allowed in the stream buffer area?

Per 15A NCAC .025 .0714, septic fields are not allowed in the buffer area.

Are fences allowed in the stream buffer area?

Fences are allowed provided that disturbance is minimized and installation does not result in removal of trees as defined in 15A NCAC 02B .0267.

Can a property owner build a small bridge or walkway over a stream?

Any crossings impacting the stream needs to have a United States Army Corps of Engineers (USACE) review and subsequent authorization sent to Orange County with an application for a Buffer Authorization Certificate (BAC).

What is required to build a road or bridge across a stream?

A Pre-Authorization Construction Notification (PCN) application will need to be submitted to the United States Army Corps of Engineers (USACE) - Wilmington District (3331 Heritage Trade Drive, Suite 105 Wake Forest, NC 27587) for the scope of work. The USACE response letter needs to be sent to Orange County along with a Buffer Authorization Certificate (BAC) application. In addition, a Land Disturbance Permit (LDP) may be required based on the watershed and amount of disturbance.

If the subject work is also in a SFHA 100-year floodplain a Floodplain Development Permit is also required.