

NOACA

Regional Riparian Setback Legislation Review

June, 2012

**Northeast Ohio Areawide Coordinating Agency
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Cleveland, OH 44221**

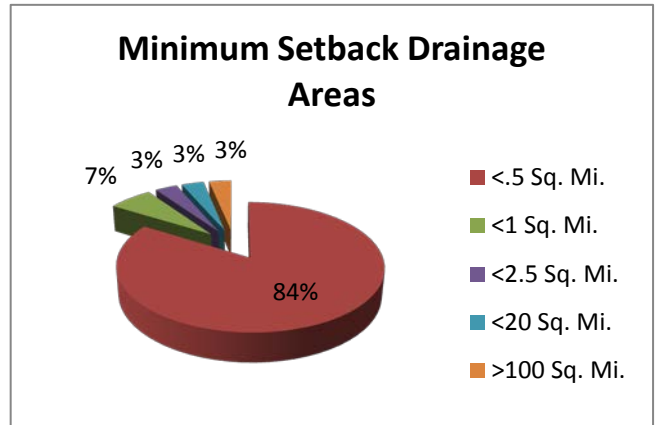
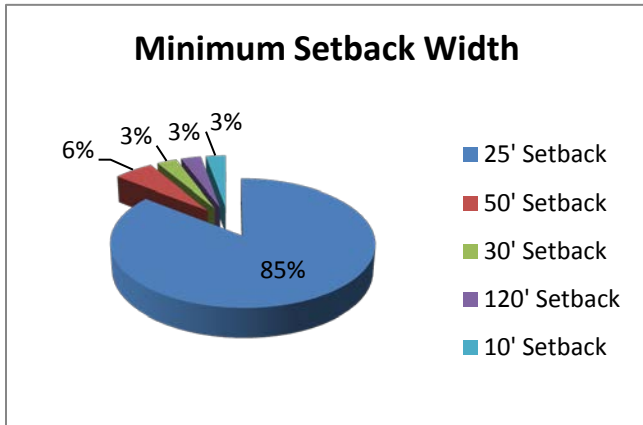
Riparian Review Findings

Northeast Ohio has been a leader in the establishment of riparian or stream setbacks, which control the placement of structures near streams. Most codes in northeast Ohio follow models that have been developed over the years by [NOACA](#), [Chagrin River Watershed Partners](#), and the [Ohio Department of Natural Resources](#). While many aspects of the local codes are similar, there is some variation based on local needs. This review examines the riparian setback codes of 36 communities across Cuyahoga, Geauga, Lake, Lorain, and Medina counties; these communities represent roughly a third of the municipalities and townships covered under an Ohio Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) permit in each county. The intent is to identify both commonalities and unique provisions in local codes that may be beneficial to other communities. By having the information in one place, communities that may be considering adopting or updating regulations will have an additional tool to aid in the decision-making process.

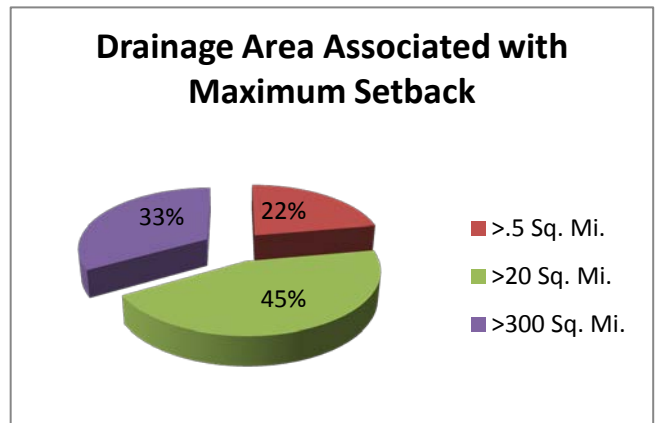
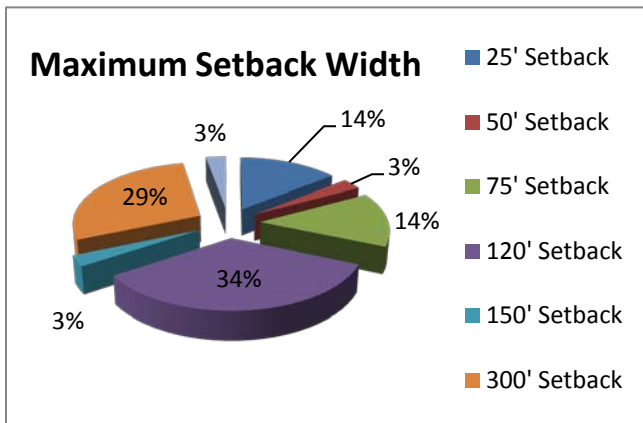
Over time virtually all stream channels migrate; when they move in a built environment, they have the potential to cause severe property damage. Setbacks identify a distance from streams that buildings should not encroach upon, thereby protecting the functions of the riparian corridor. When sized correctly and maintained in a vegetative state, stream setbacks minimize structural property damage by allowing the needed room or buffer for predictable stream processes to occur. By maintaining a protected corridor, setbacks help prevent erosion of stream banks, reduce flood heights, contribute to pollutant removal, and provide beneficial wildlife habitat.

The majority of the codes reviewed determine setback width based on the drainage area of the stream above the proposed development: the larger the drainage area, the wider the setback from the stream. Typically drainage areas and associated setbacks are divided into several categories, ranging from less than half a square mile for headwater streams to greater than 300 square miles for our larger rivers. Most setbacks are measured the specified distance on both sides of the stream from the ordinary high watermark following the existing stream channel. Several communities in the study do not follow this model. The city of Wadsworth's setback is based on newer guidance provided by Ohio Department of Natural Resources (ODNR). In [ODNR's model](#), a stream belt width is established based on a formula that uses the drainage area and results in a belt width roughly 10 times the stream width. The belt width is then projected through the valley following the floodplain topography. The stream is not always centered in this belt width. Typically this approach allows more room for the stream to move over time and accounts for the migration of meander bends through the valley. One community does not assign a drainage area to the setback but instead assigns setbacks to certain streams. Definitions of stream channels and ordinary high watermarks are contained within the ordinances themselves.

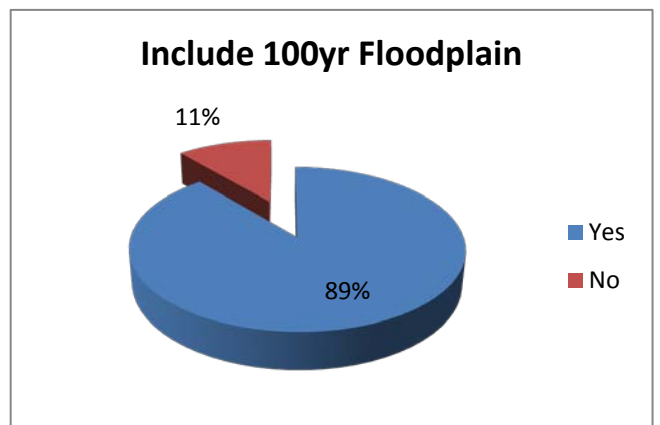
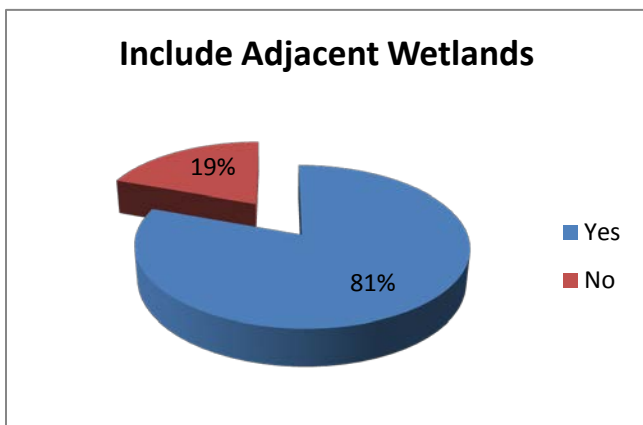
Of the 36 communities reviewed, a 25-foot setback on small streams with a drainage area of less than half a square mile was standard. These are typically the smallest-order streams that make up the headwaters of larger streams. Recently Ohio EPA has developed a Primary Headwater Stream Index ranking system. Two communities surveyed have taken advantage of this ranking system and require minimum 50-foot setbacks from Class III high-quality headwater streams. Class III streams are perennial in nature and are fed by groundwater sources that support a wide variety of aquatic life.



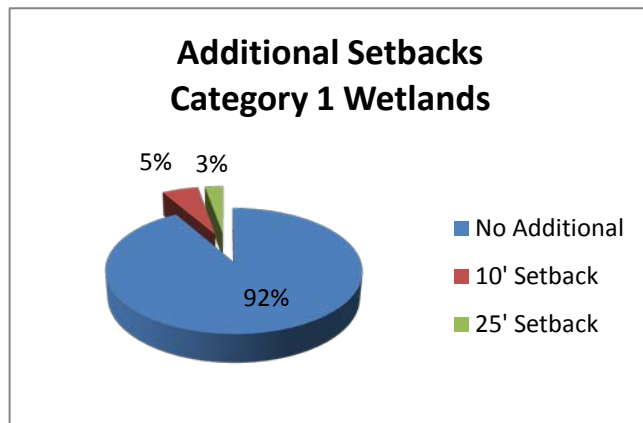
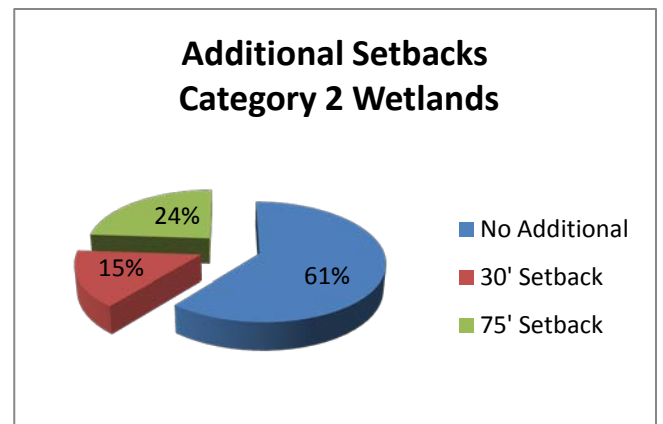
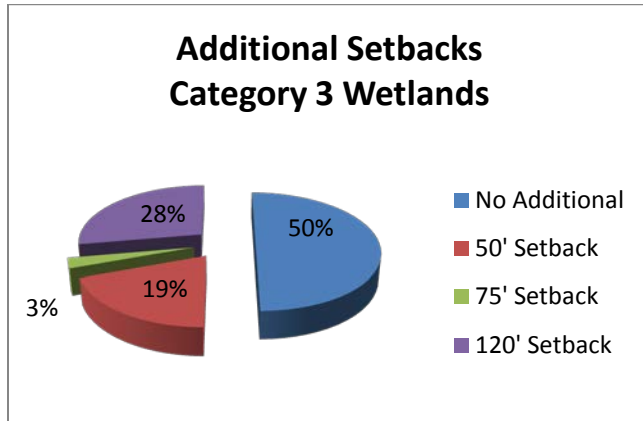
Maximum setback widths varied more than the minimum setback widths. This is to be expected as not all communities have larger rivers and therefore do not require the large setback associated with drainage areas larger than 300 square miles. The most common maximum setback width was 120 feet with a drainage area of greater than 20 square miles.



Another common feature among the ordinances was the inclusion of the 100-year floodplain and riparian wetlands in the setback. Eighty-nine percent of the communities extend the setback to include the floodplain, while 81 percent include riparian wetlands. Some communities have added setbacks onto the wetlands, depending on the category or quality of the wetland.



Wetland quality as defined by the Ohio EPA Qualitative Habitat Evaluation Index (QHEI) is broken down into three categories with 3 representing the highest-quality wetlands and 1 the lowest. Of the 36 communities, 50 percent gave Category 3 wetlands additional setback distances, while only 8 percent gave Category 1 wetlands any additional setbacks.



Based on the findings from this survey of 36 northeast Ohio communities, it appears that stream setback code requirements share many similarities in methods and procedures to determine setback widths. The earliest code adoption in the survey was 2002; since that time the field of stream hydrology has evolved to the point where predictions can be made concerning how a channel will change over time. A code designed to protect property from the effects of flooding and stream erosion should consult the most recent guidance available on the subject.

For Ohio, the guidance provided by the [Rainwater and Land Development Manual](#) represents the most recent methodology for determining setbacks. Ohio EPA has used a similar methodology in the [Olentangy River](#) and [Big Darby Creek](#) NPDES permits. At this time there is no state standard endorsed stream setback code. The ideal code is one that protects the health, safety, and welfare of a community and community needs based on the best science available.

Once setbacks are determined, there will always be the need for variances to allow for unavoidable impacts. Variances should be considered carefully and only issued in unavoidable situations, and the variance process should respect the protection that setbacks provide. If variances are easily granted, then the impact of having setbacks is limited. A project designer may be able to shift structural features to stay out of the critical stream setback area and minimize impact if the community allows flexibility with its other zoning setbacks. By varying side, front, or rear yard setbacks for structures, for example, it may be possible to move structures out of the stream setback.

Mitigation is another tool communities can use to allow variances within the setback. Mitigation of unavoidable impacts can be in the form of restoration or conservation of the stream and its corridor. The mitigation strategies currently in place divide the setback into zones and establish mitigation requirements for each zone: the closer to the stream, the more stringent the mitigation requirements are. Mitigation, with its added project costs, encourages designers to try to minimize impact to the stream setback and explore other alternatives. Ohio EPA has adopted a mitigation methodology in the Olentangy River NPDES Construction Permit.

Fairview Park was the only community in the survey that has a mitigation process written into the legislation to address requests for variances. The City of Parma also utilizes a mitigation process once a variance request reaches the Board of Zoning Appeals. Parma requires that those impacting the setback attempt to mitigate for those impacts on site; if that is not possible the second choice is to mitigate for impacts upstream of the site, lastly they will consider mitigation downstream of the site or within the same watershed. Another option exercised by the city is to allow monetary mitigation at the rate of 1.5 to 2 times the market value of the property plus administrative fees the money is then used by the city for the restoration or purchase of riparian areas.

As the understanding of our stream systems improve communities should revisit their setback legislation periodically to see if what was passed is working as intended to meet the goals of the legislation. Communities whose legislation is older than ten years may want to consider exploring the newer methodologies for determining setback widths and consider some type of mitigation process as a way to address variance requests.

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Community Name	Phase II Community (yes, no)	Year Ordinance Adopted	Ordinance Number	Minimum Setback Width (ft.)	Associated Drainage Area (sq.mi.)	Maximum Setback Width (ft.)	Associated Drainage Area (sq.mi.)	Include the 100yr Floodplain	Adjacent Wetlands Included in Min. Setback	Cat. 3 Wetland Additional Setback (ft.)	Cat.2 Wetland Additional Setback (ft.)	Cat. 1 Wetland Additional Setback (ft.)	Appeal/Variance Process in place	Notes
CUYAHOGA CO.														
Bay Village	yes	2011	Building Code Chapt. 1308	25	<.5	25	>.5	yes	yes	0	0	0	yes	
Beachwood	yes	2008	Plan & Zone Code Chapt. 1157	25	<.5	75	>.5	yes	yes	50	30	0	yes	
Berea	yes	2006	Codified Ord. Chapt. 320C	25	<.5	300	>300	yes	yes	120	75	0	yes	
Broadview Hts.	yes	2007	Building Code Chapt. 1334	50	<.5	300	>300	yes	yes	120	75	0	yes	
Brook Park	yes	2008	Public Service Code 920	50	<.5	300	>300	yes	yes	120	75	0	yes	
Chagrin Falls	yes	1997/2002	Building Code Chapt. 1353	120	on all	streams	>10' wide	yes	yes	0	0	0	yes	
Euclid	yes	2007	Codified Ord, Chap 150-2007	25	<.5	120	>20	no	yes	120	75	0	yes	
Fairview Park	yes	2008	Bldg. Standards Chap 1339	25	<20	50	>20	yes	yes	120	75	0	yes	Mitigation Clause
Independence	portions	2003	Building Code Chapt. 1354	25	<.5	300	>300	yes	yes	120	75	0	yes	
Middleburg Hts.	yes	2008	Middleburg Hts. Chap.1363	25	<.5	120	>20	yes	yes	120	75	0	yes	not online
Moreland Hills	yes	2006	Plan & Zone Code Chapt. 1131	25	<.5	300	>300	floodway	no	0	0	0	yes	
North Royalton	yes	2005	Building Code Chapt. 1492	25	<.5	300	>300	yes	yes	120	75	0	yes	
Olmsted Falls	yes	2007	Building Code Chapt. 1470	25	<.5	300	>300	yes	yes	0	0	0	yes	
Orange Village	yes	2006	Plan & Zone Code Chapt. 1176	25	<.5	75	>.5	yes	yes	0	0	0	yes	
Parma	yes	2003	Plan & Zone Code Chapt. 1109-1111	25	<.5	75	>.5	yes	yes	75	75	75	yes	
Pepper Pike	yes	2008	Stormwater Code 1540	25	<.5	300	>300	yes	yes	0	0	0	yes	
Richmond Hts.	yes	2007	Plan & Zone Code Chapt. 1197	25	<.5	300	>300	yes	yes	120	75	0	yes	
South Euclid	yes	2008	Plan & Zone Code Chapt. 780	25	<.5	75	>.5	yes	yes	50	30	0	yes	
Woodmere	yes	2005	Plan & Zone Code Chapt. 1187	25	<.5	NA	NA	yes	yes	0	0	0	yes	
GEAUGA CO.														
Auburn Twp.	no	2005	Zoning Res. Article 3.06	25	<.5	120	>20	yes	yes	50	30	0	yes	
Bainbridge Twp.	portions	2004	Zoning Res. Chap 160	25	<.5	120	>20	yes	yes	0	0	0	yes	
Thompson	no	2008	Zoning Code Article XV	25	<.5	75	20	yes	yes	50	30	0	yes	
LAKE CO.														
Kirtland	portions	2002	Plan & Zone Code Chapt. 1294	25	<.5	120	>20	yes	yes	0	0	0	yes	
Lake County	portions	2009	Sub Reg Art.IV Sec. D	25	<2.5	120	>50	yes	no	0	0	0	yes	
Leroy Twp.	portions	2009	Section 31 Zonning Regs	25	<1	120	>20	yes	yes	50	30	10	yes	50 feet Class III HWS
Madison Twp	portions	2011	Section 123 Zoning Regs	25	<1	120	>20	yes	yes	50	30	10	yes	50 feet Class III HWS
Mentor	yes	2010	Plan & Zone Code Chapt. 1115.09	25	>100 ac.	25	>100 ac.	no	no	0	0	0	yes	
Mentor-on-the-Lake	yes	2010	Plan & Zone Code Chapt. 1286	25	<.5	120	>20	yes	0	0	0	0	yes	
Perry Twp	portions		Section 405 Zoning Reg	30	Named**	150	Grand River	yes	no	0	0	0	yes	
LORAIN CO.														
Amherst	portions	2007	Public Utility Chapt. 916	25	NA	25	NA	no	no	0	0	0	no	
Avon Lake	portions	2007	Public Utilities Chapt. 1060	25	NA	25	NA	no	no	0	0	0	no	
Lorain	yes	2004	Building Code Chap 1533	25	<.5	300	>300	yes	yes	120	75	0	yes	
Sheffield Lake	yes	2011	Public Service Code 944	25	<.5	25	>.5	yes	yes	0	0	0	yes	
MEDINA CO.														
Brunswick	yes	2006	Plan & Zoning Chapt. 1238	25	<.5	120	>20	yes	yes	0	0	0	yes	
Hinckley Twp.	portions	2007	Zoning Code Sec. 18	25	<.5	120	>20	yes	yes	50	30	0	yes	
Wadsworth	yes	2008	Zoning Code 154.5	10' Min	150' Max	Follows	ODNR Guidance	yes	yes	120	75	25	yes	

** Red Mill, Red, Arcola Creek