

Living in a Floodplain: A Citizen's Guide

A person living within a **floodplain**¹ often enjoys the luxuries associated with waterfront living, including a beautiful view and a close proximity to recreational activities, wildlife, and the outdoors. However, there is a responsibility that also comes with living in a floodplain—a responsibility to educate and protect yourself and those living with you.

Development projects in floodplains, like Carl Dranoff's Venice Lofts development and the proposed Dan Nedcusin's Venice One development, are becoming increasingly prevalent, due to the lucrative nature of waterfront developments. As a result, Friends of the Manayunk Canal saw the need to create a resource to educate our neighborhood and beyond on responsible living within a floodplain.

Friends of the Manayunk Canal recognizes that there are benefits to living in a floodplain, but these benefits are commonly understood and well advertised by the developers. Dranoff's Venice Lofts webpage repeatedly refers to the fact that the residences will be "within steps of the Manayunk Canal, its paved bike path" with its fishing, boating, and running opportunities. But as is often the case, the risks are left unsaid.² Dranoff's Venice Lofts website has a section dedicated to "news" about the development; it presently contains just one article, which as anticipated addresses only the positive benefits of urban redevelopment.³

While it remains to be seen what the Venice One website will contain, coverage has already begun to highlight only the positive benefits of this project and ignore its dangers. The Philadelphia chapter of the American Institute for Architects granted the Venice One design a Merit Award, stating that the development "will revitalize an abandoned, overgrown industrial site...with an environmentally sensitive and architecturally dynamic design," despite its location in a floodplain.

Potential and future residents of Venice Lofts and Venice One are entitled to know that not only was there opposition to residential development in this location but also that there are **potentially life threatening flood-related risks** associated with living on Venice Island. For more information about the fight in the Pennsylvania courts and local opposition to irresponsible developments on Venice Island, check out the Friends of the Manayunk Canal website "develop"ing news section at www.manayunkcanal.org.

As the below photographs illustrate, Venice Lofts and Venice One will be built the strip of land, approximately 300 feet wide, sandwiched between the Manayunk Canal and the Schuylkill River. This island is made of material dredged during the creation of the adjoining canal. Manayunk, the Schuylkill River's low-lying neighbor, has been historically prone to flooding. As the peak discharge chart shows, 2 of the top 10 **peak flow discharges**⁴ were measured within the last ten years!

Making matters even more dangerous, this particular stretch of land is located not only within the floodplain, but within the floodway. The **floodway** is the section of the floodplain that carries the greatest amount of floodwaters during a flood event. Therefore, anything within a floodway during a flood event, including Venice Lofts, Venice One and their residents, will be endangered by floodwaters of greater depth and velocity than anywhere else within the floodplain.

Additionally, floodways are delineated, so that even if the rest of the floodplain were unable to carry floodwater, the capacity of the floodway alone could convey the water. Thus, development within a floodway that obstructs or impedes the flow of floodwater should be prohibited, as it would result in displacing floodwater, and the damage associated with it, beyond the usual limits of the floodplain. For detailed information on floodplains and floodplain management, please see "A Primer on Floodplains and Floodplain Management: A Guide to Protecting Manayunk" by Wendy Lathrop, Professional Land Surveyor and Certified Floodplain Manager, or contact Friends of the Manayunk Canal at fmc@manayunkcanal.org.

¹ Floodplains are the areas along rivers or streams (or ocean coasts) "that have been or may be expected to be inundated by floodwaters in a 100-year frequency flood." (PA Administrative Code Title 25, Ch.105, Section 105.1)

² For links to articles and court cases speaking to the risks of floodplain development, visit <http://12.164.81.72/oldsite/news.htm>.

³ http://www.veniceloftscondo.com/news/news_03272005.php

⁴ Peak flow discharges are recorded by the USGS annually and denote the flood event with the greatest volume of water moving at the fastest velocity each year.



Photo: Realty Capital Advisors, http://www.globalrealtycapital.com/pages/venice_lofts.php

Rankings of Peak Discharge on the Schuylkill River at Fairmount Dam Gaging Station (1869-2004)

Rankings of Peak Discharge	Peak Discharge (cfs)	Gage Height (ft)*	Date
1	135,000	17.00	10/04/1869
2	103,000	14.65	06/23/1972
3	98,000	14.80	03/01/1902
4	96,200	14.7	08/24/1933
5	94,600	14.57	06/02/1946
6	92,500	14.10	09/17/1999
7	90,100	14.32	08/19/1955
8	89,800	14.32	11/25/1950
9	82,000	14.10	07/09/1935
10	79,000	13.36	01/19/1996

*The datum of the gage is 5.74 feet above mean sea level. The gage heights are given in feet above gage datum elevation.

Source: Peak Stream Flow for Pennsylvania, USGS 01474500 Schuylkill River at Philadelphia, Pennsylvania, http://nwis.waterdata.usgs.gov/pa/nwis/peak?site_no=01474500&agency_cd=USGS&format=html