

Wissahickon Mills Foundation (WMF)

A 501(c)(3) Public Charity



Presentation for Coastal Zone Management Grant



Dec. 3, 2025

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Wissahickon Mills Foundation & Philadelphia Canoe Club Missions

The objects of this Club shall be to:

- promote canoeing, kayaking, and related recreational paddlesports,
- serve members and the broader Philadelphia community,
- provide accredited **paddlesport education, instruction, and safety training**,
- organize paddling trips,
- continue an engaging social calendar to reinforce membership and community relationships,
- maintain a Club, preserve the Club House, and provide equipment to support these goals.

The purposes of the WMF are to:

- preserve & maintain the historic Robeson's Rolling Mill
- broaden the accessibility of **paddle sports education** to area residents from all walks of life by providing
  - affordable paddlesport courses & equipment
  - American Canoe Association (ACA) accredited instructors
  - safety knowledge & first aid equipment
  - courses on the Wissahickon Creek waterfront
  - reduced the costs of participation for low-income /paddlers/groups

In 2024, the American Canoe Association reported that the Club held **the most events (56)** and had **the most participants (732)** than all **300+ member clubs**. All events are managed by ACA-certified, unpaid PCC instructors.

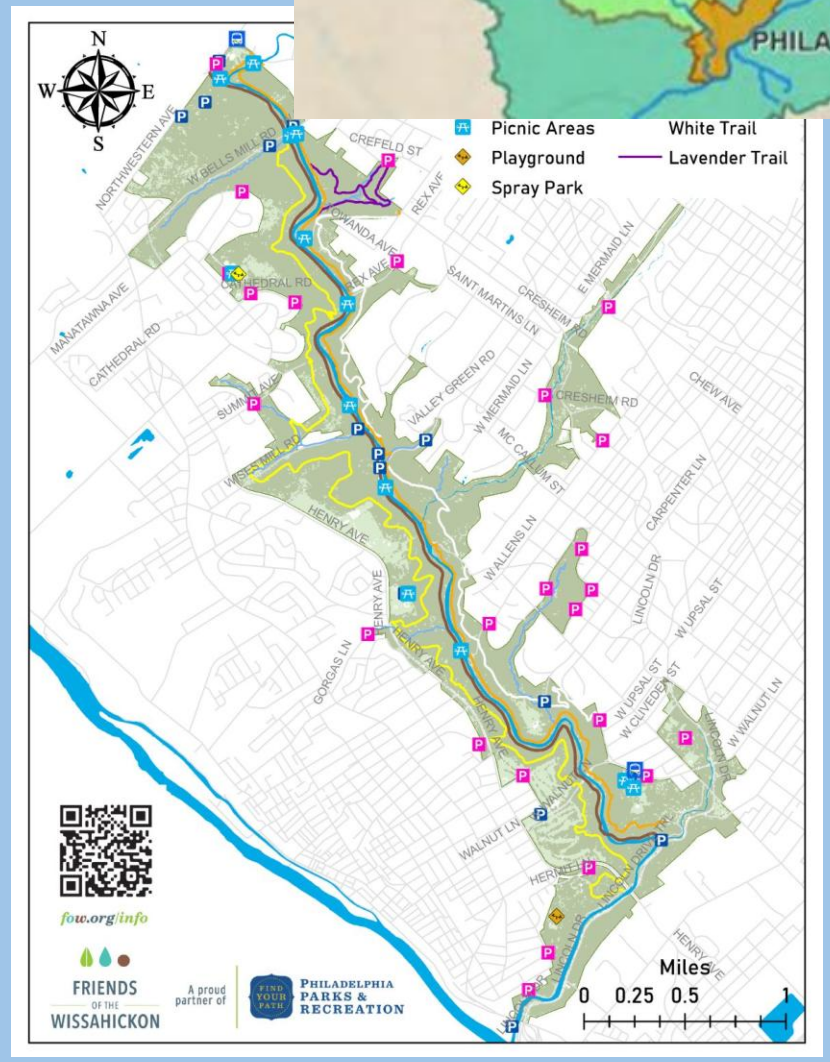
Why is the The Robeson Rolling Mill more vulnerable now?

Geography and the unforeseen downside of upgrades to the Urban Infrastructure

Immediate confluence of two watersheds:

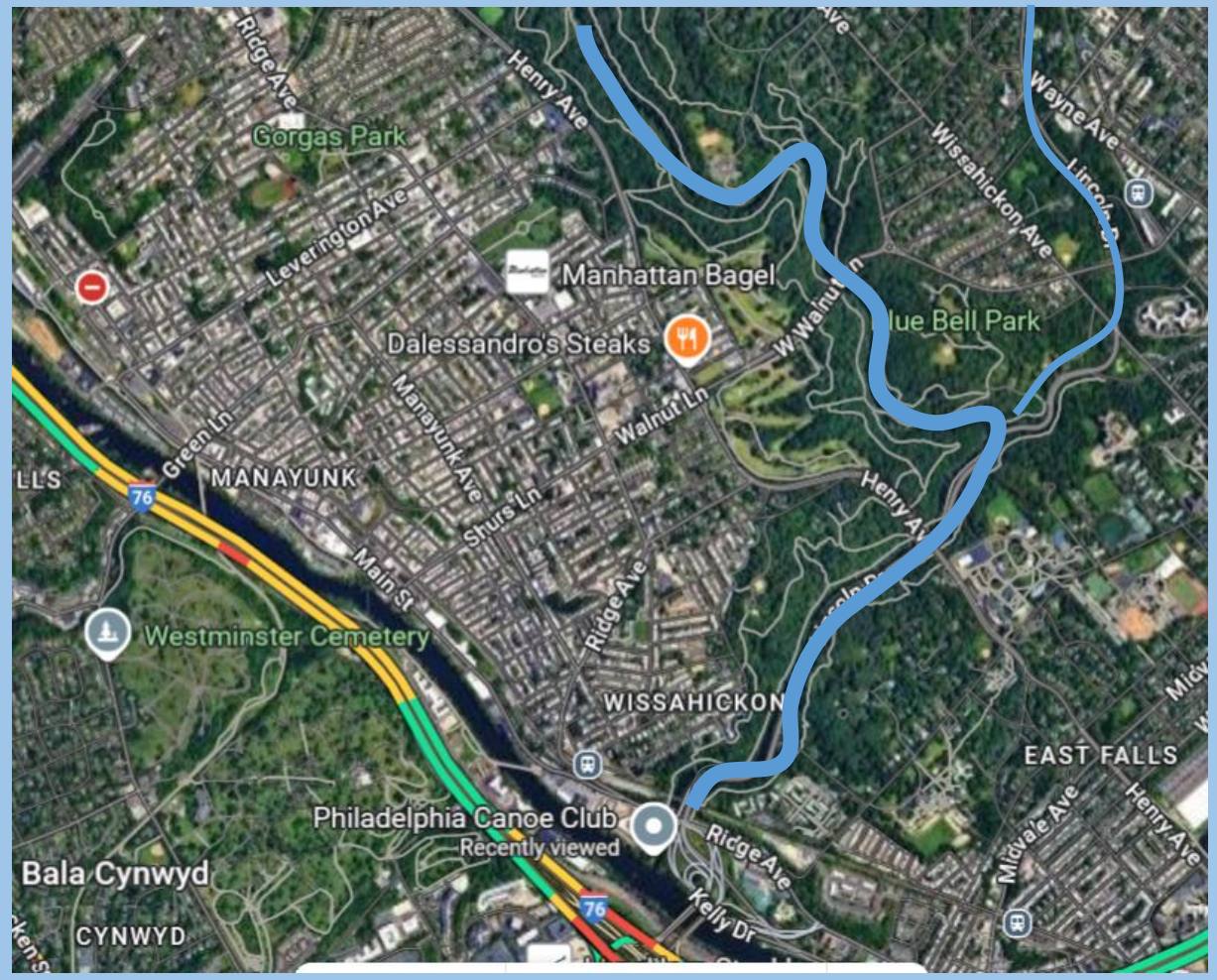
- Located within the last 10 miles of the 129-mile-long Schuylkill River (**2,000 sq. mile** watershed), and the 27-mile-long Wissahickon Creek (**64 sq. mile** watershed)
- The River **is a gorge** from Miquon to East Falls and from the City limits to the Ridge Avenue Bridge.





Why is the Mill more vulnerable now?

- Floodplain eliminated by 1955 ramps for the City Avenue Bridges, mill ‘penned in’ for 300+ yards.
- Lincoln Drive flood runoff improvements increased CFS spikes that exacerbated the ‘penned in’ effect.



1820 CAD ‘Pictures’

Based on Frederick Graff’s 1823 drawings of the waterwheel,
current pictures,
aerial videos,
engineers' measurements of the Mill





Illustration Credit: Welsh CAD Artist John Brandrick: http://milldrawings.com/index.html.

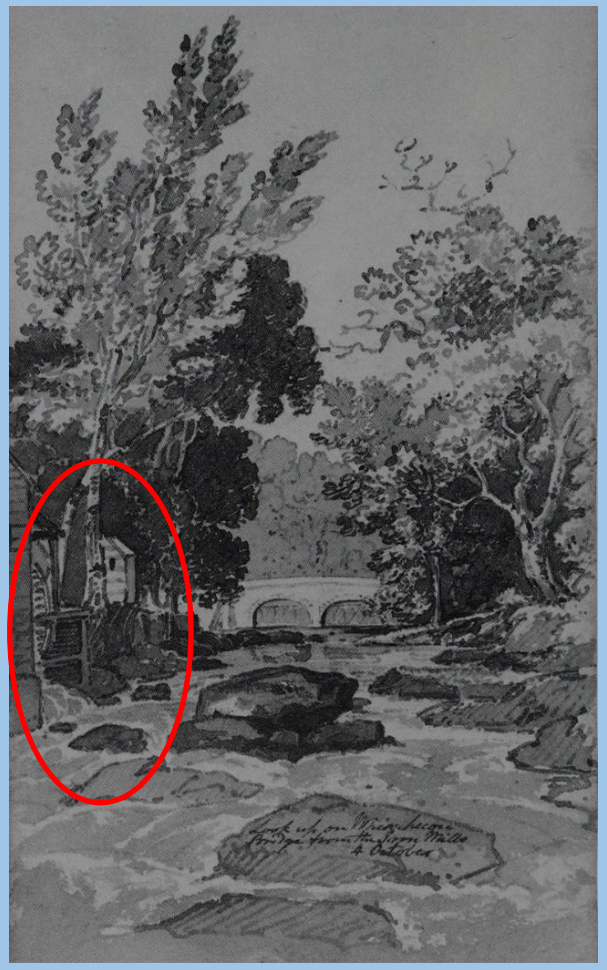
**Frederick Graff designed the Fairmount Dam, its Waterworks, and measured the Mill wheel after the rise in the River due to the dam caused the Robesons to file and win a claim for damages. The ‘Wheel pit’ is now a kitchen and small basement.

1816 Pictures – Capt. Joshua Watson



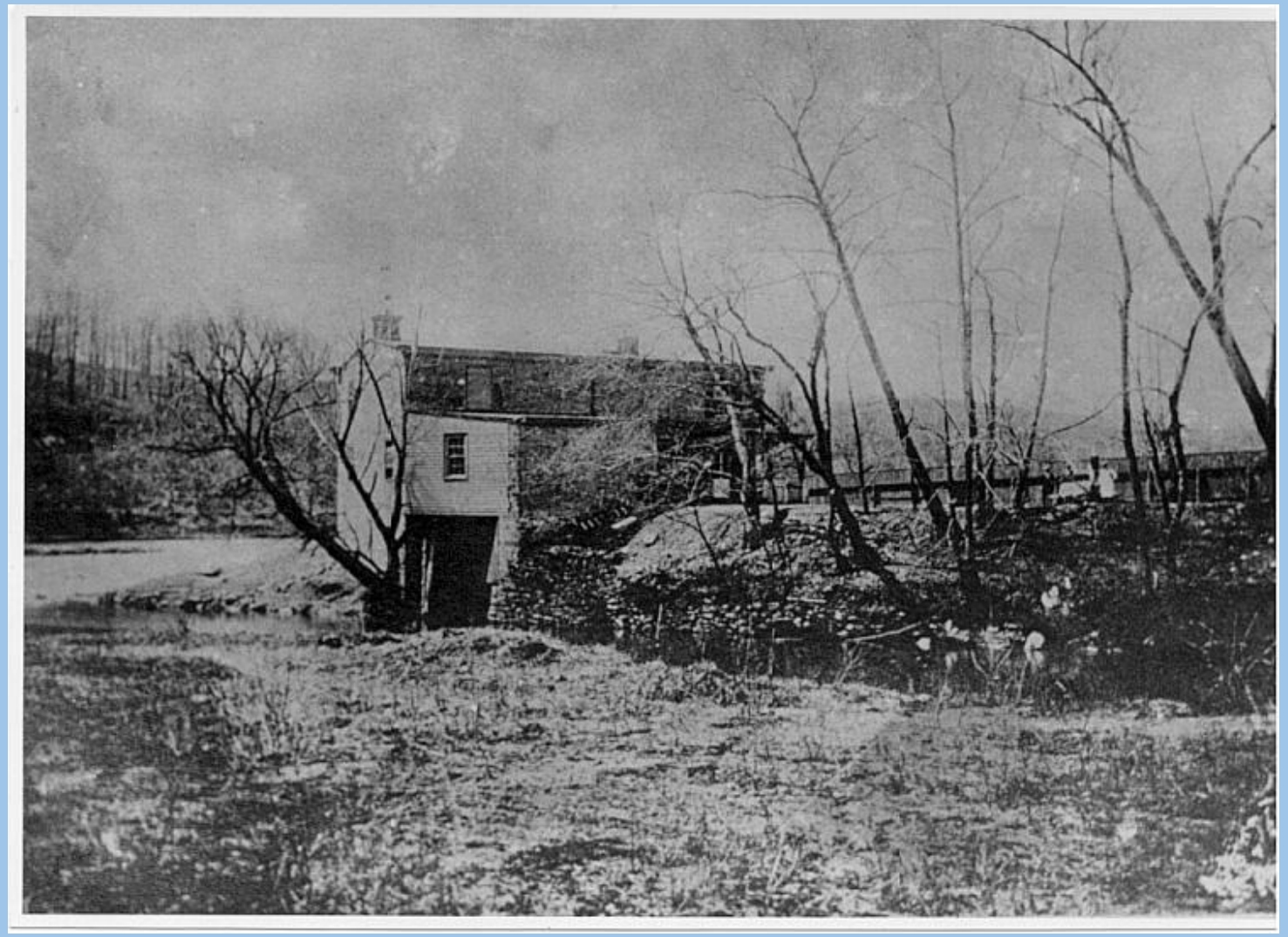
The Robeson Mills looking from the west bank of the Schuylkill River. Watercolor by Captain Joshua Watson, 1816. Source: The Barra Foundation, Inc.

Also Watson: The NE corner of the Robeson Rolling Mill and a bit of the waterwheel's paddles can be seen on the right with water flowing out the tail race.



1877 – View from the Floodplain that no longer exists

Photographer is lower than the mill, looking up at 3 members of the Schuylkill Fishing Co. (two in white aprons)



1913 & 1915 Photographs for perspective of low East Bank

1913 from PCC boat ramp view



1913 picture of pedestrian/horse bridge
1880 to 1930; Ridge Ave,
arched bridge is 75+ feet behind it.
Circuit Trail will rebuild pedestrian bridge
in 2026

1915 high water flood from west to east looking NE



1915 picture water level 13 feet above mean Creek level, floodplain on east bank had 2+ feet water;
east bank is now 24 to 36 feet high.

2021 Ida – another Picture Worth 1,000 Words

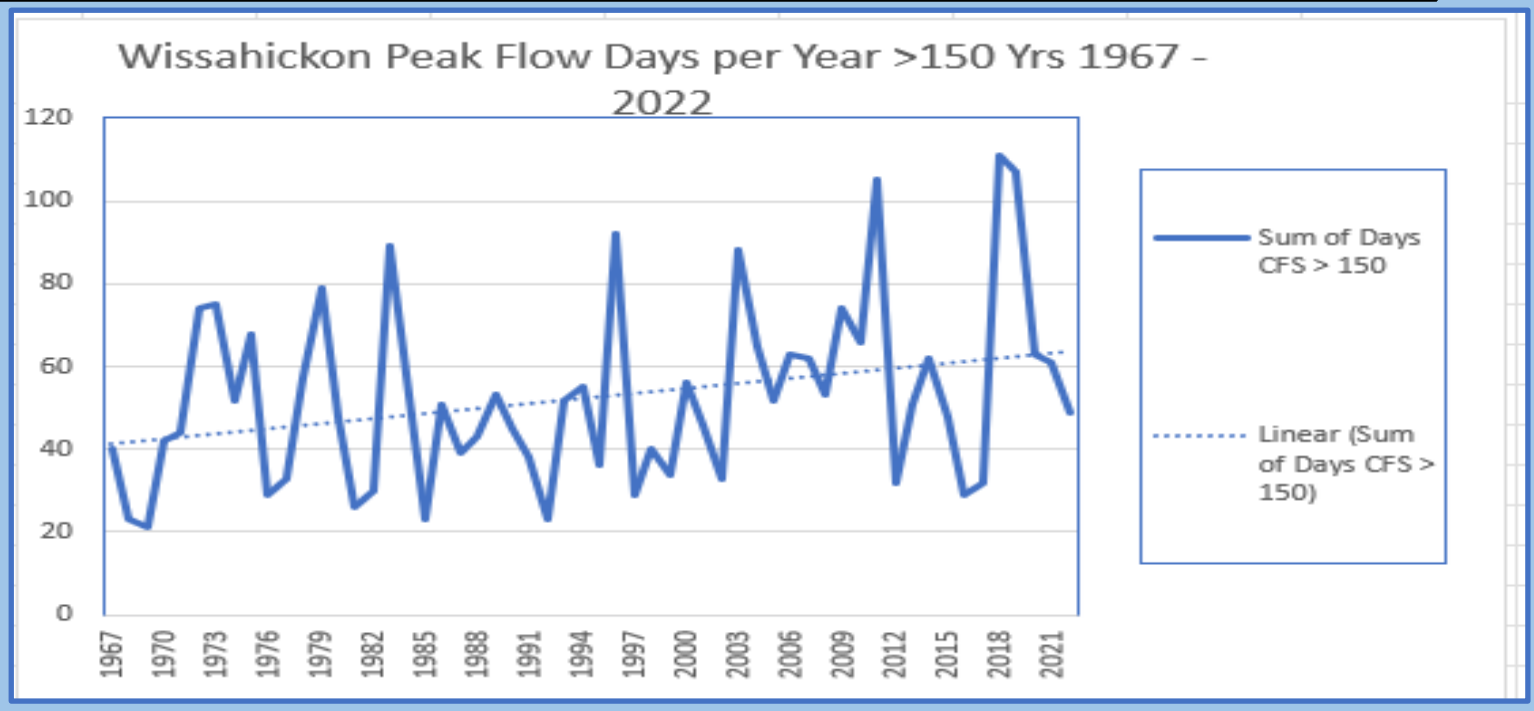


Changing Flood Heights & Frequency and Creek Flow Intensity Peaks at Creek and River Confluence

1902 - 1955 pre-City Avenue Bridge Ramps	1956 - 1955 after Ramps **pen-in the Creek**	1996 - 2025 post-Upstream Urbanization & Road Flooding mitigation
Flooding: Into 1st Floor every **~20 to 25** Years	**Flooding**: Into 1st Floor every **~8 to 13** Years and flood heights increased 2 - 3 feet.	
-	1966* - 1996	1996 - 2025
	Creek Intensity: Baseline	**Peak Flow Intensity**: up 50%

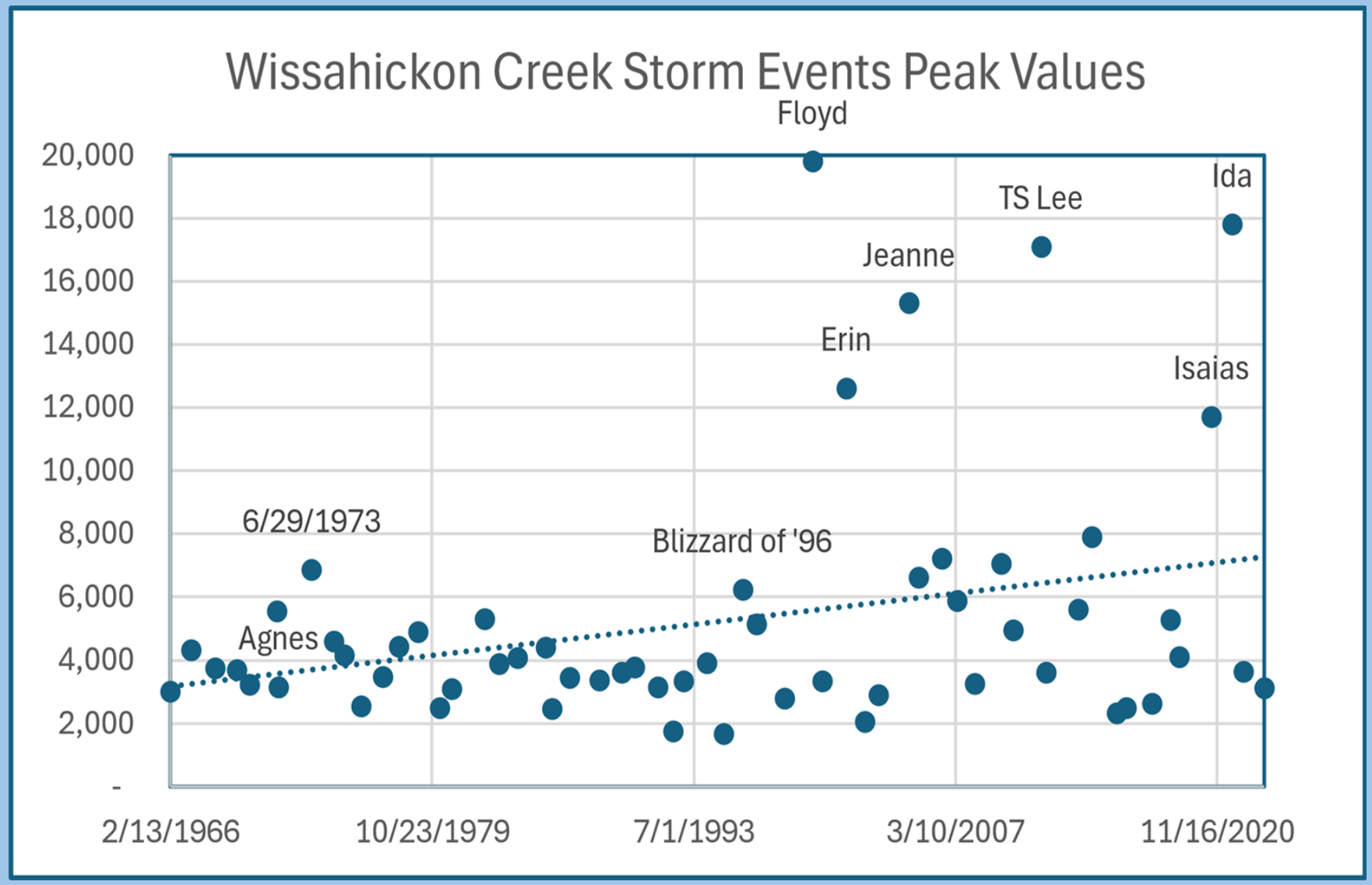
*1966 USGS Creek monitor was installed.
Graph: Sum Days flow > 150 CFS

Impact: More intense Scouring of the Creek bank and Flooding into the Basement & Wheelpit.



Wissahickon Peak Flow Intensity Trendline 1966-2023

Data support the hypothesis that Hurricane Floyd triggered <u>permanent</u> geomorphic changes to the creek: **channel incision** & **deepening,** and **streambank erosion**



Completed & Active Flood Resilience Projects

Raised $85,000 in 2022-2024 to replace mortar lost to scouring Retaining Wall; project completed in Fall of 2024.



Hurricane Ida destroyed a ramp column and revealed other damage. The bottom 3–4 feet of the 60-foot wall had major gaps that required a cofferdam to access and PWD & City Planning Commission permission to fill with shotcrete.

The 2024 invasive, complete inspection of the Porch revealed that flooding/water damage since 1929 had rusted away the beam-bearing plates.



The 2023 non-invasive inspection noted a possible problem.
The Professional Engineer's (PE) inspection revealed damage that has tripled the overall Porch repair estimates, including inflation, to $209,000.

Active Flood Resilience Projects

Make an LSA grant application for Porch Repairs and a PHMC Planning Grant for repairs to the Wheelpit.



The ‘Wheel pit’ housed the water wheel located on the north side; it has special engineering needs due to Nappe Vibrations from the Ridge Ave. Dam.

Fundraise ~$20,000 to replace missing interior mortar on the PE’s report, mostly basements.



Special lime mortar will be used for interior DIY work; future exterior work will go through the City Planning Commission process.

CZM request:

Documentation of flood history & vulnerabilities

1. Compile flood records: USGS data & mill records
2. Assess mill infrastructure conditions
3. Document mill flood management and adaptation practices
4. Establish baseline info for detailed engineering & resilience planning

**likely shorter than 18 months planned in proposal requesting $18,000 from CZM with WMF providing an additional $18,000.

Regional Connections



A River Reconnected:

Expanding the community accessing our waterways

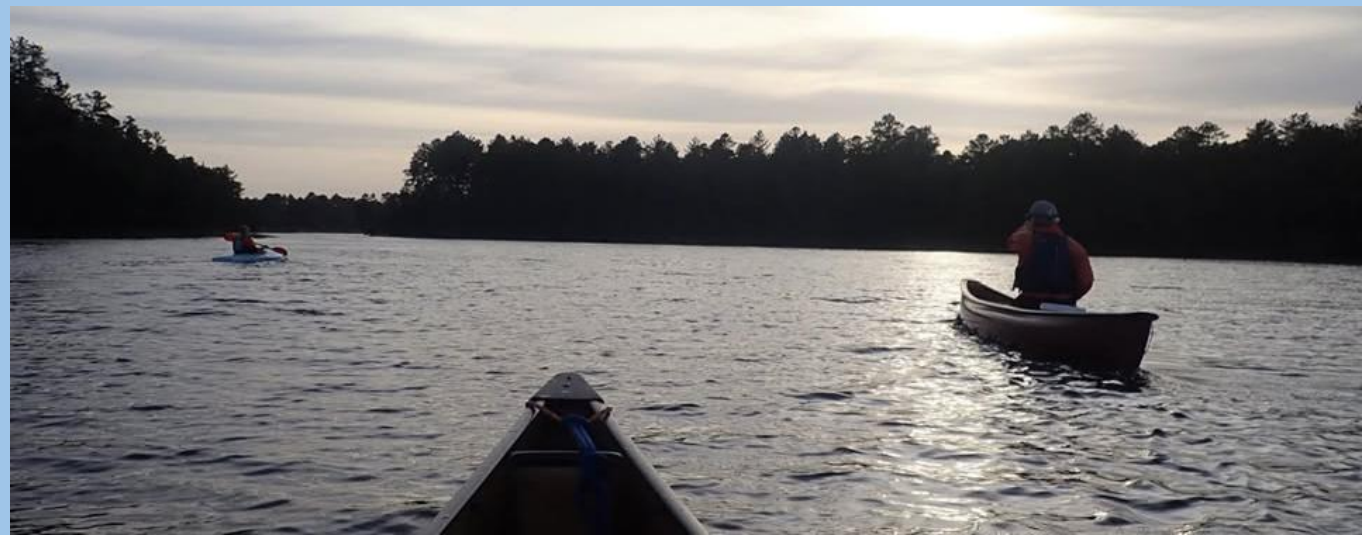
Example for other historic buildings in the floodplain

Stewardship of the property for Philadelphia Parks & Rec

Schuylkill Water Trail location & Sojourn stop

Schuylkill Trail of the Circuit Trails

Flood resilience in the region



Appendix - History

Fairmount Park Commission Archive: Robert Armstrong, 2005, then at the Fairmount Park Commission, wrote a paper that says research that "Nowhere in the sources is there a mention of the destruction of Mill #1, therefore it is safe to assume that it is the same building." Mill #1 is a reference to the Robeson Rolling Mill / PCC Clubhouse in Douglas Macfarlan's 1949 typescript, *The Wissahickon Mills*. **History PCC Clubhouse R Armstrong.pdf** *(one-page, available on PCC website)*

Thank you!