

Opportunities for Functional Uplift



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Stream Functions Pyramid

A Guide for Assessing & Restoring Stream Functions » OVERVIEW

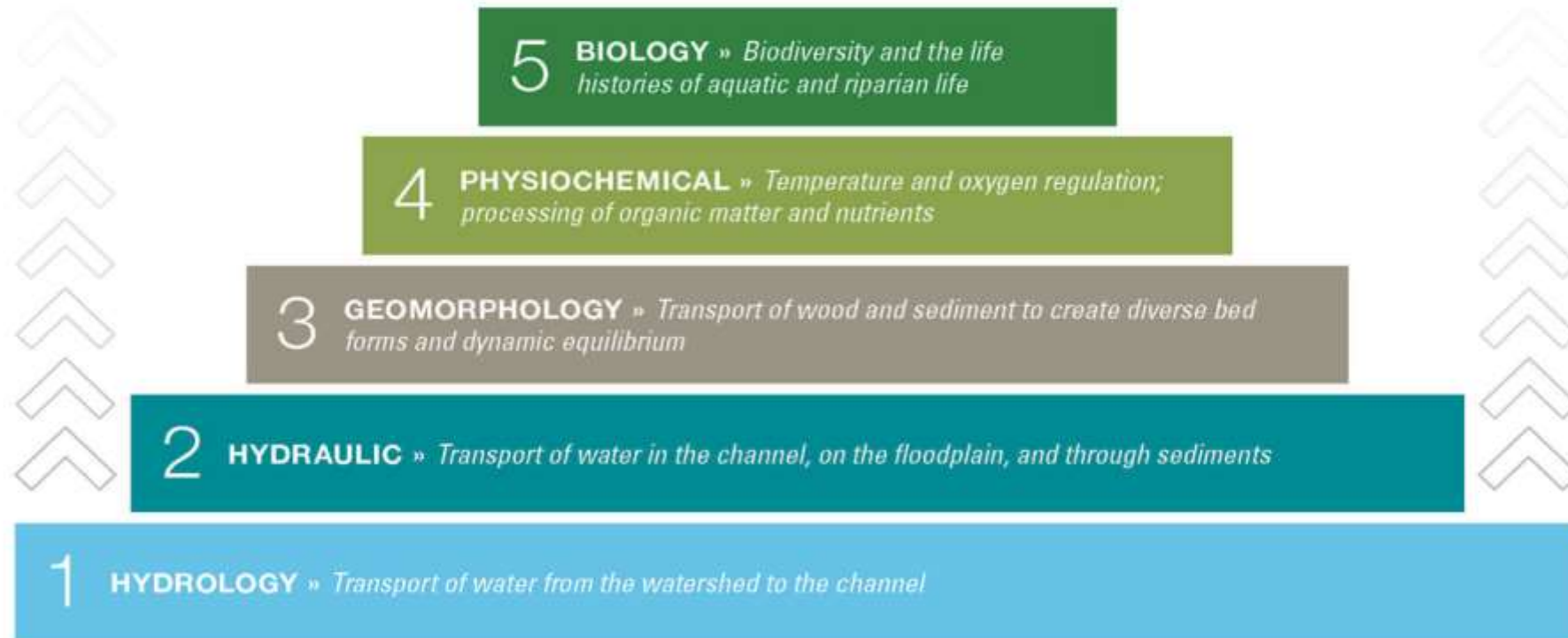


FIGURE 1

Peak attenuation + Increased time of concentration + Groundwater restoration + Enhanced wetland hydrology + Increased area and volume of aquatic resource + Increased contact time = Uplift



February 2018



October 2019

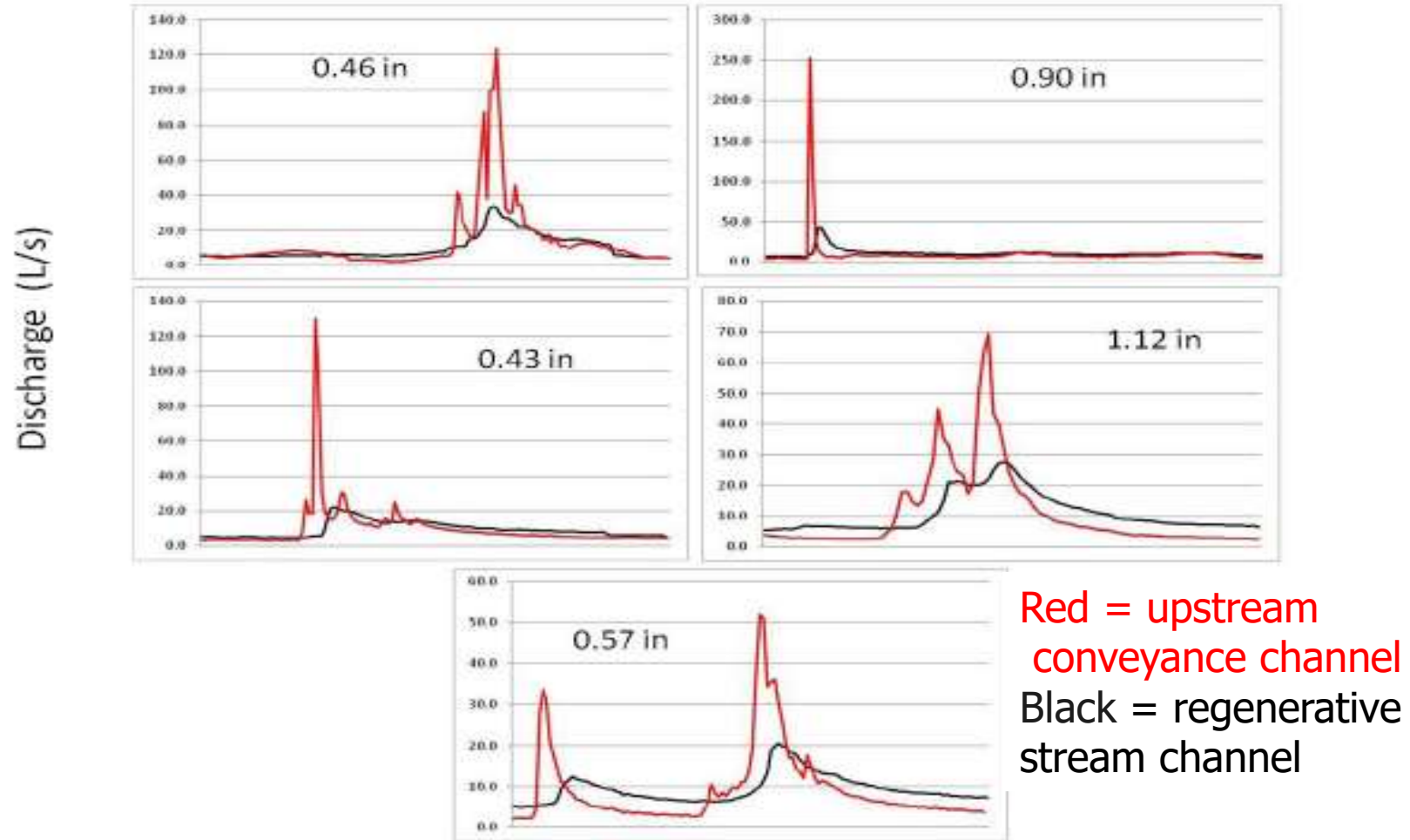
February 2018



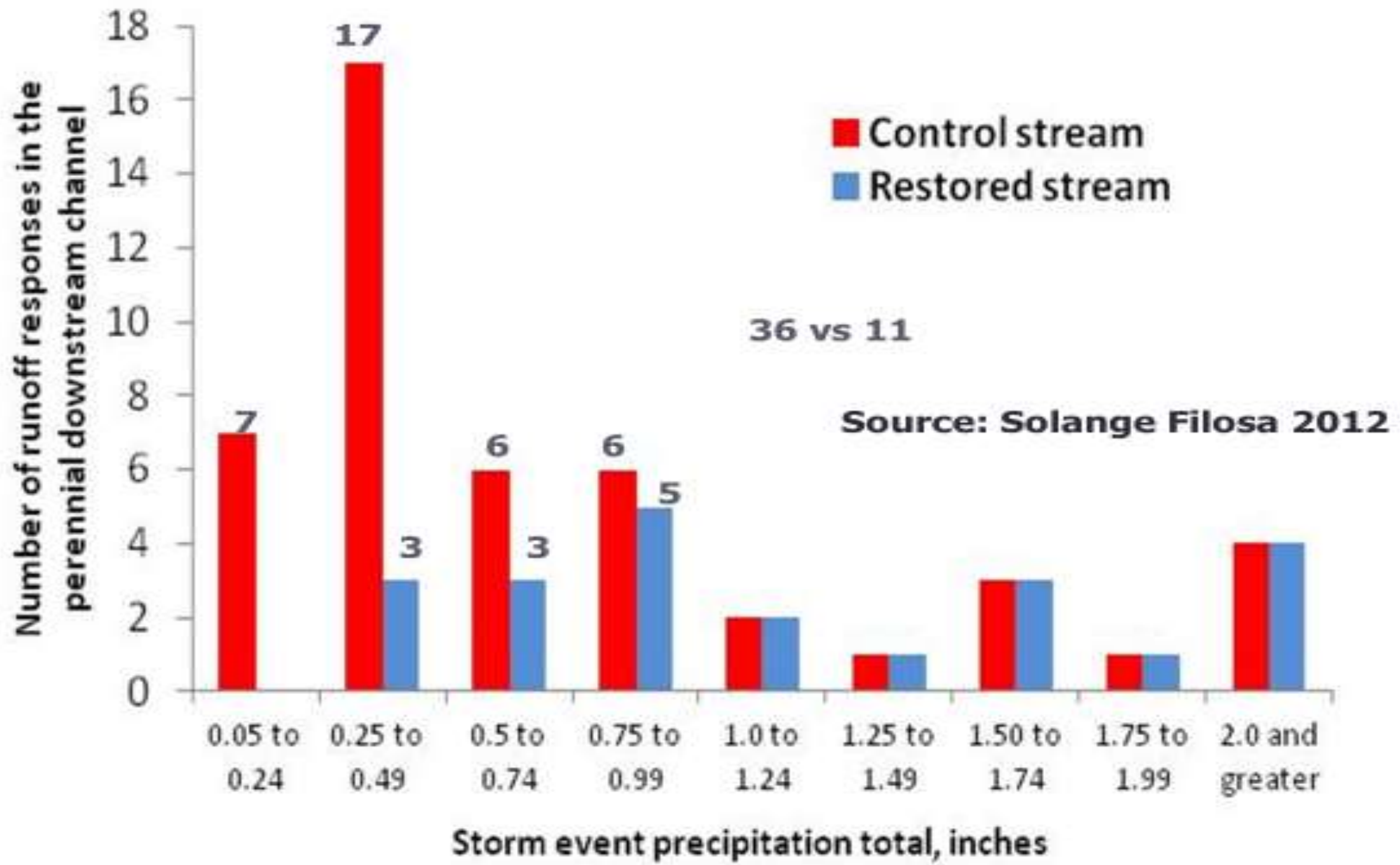
October 2019

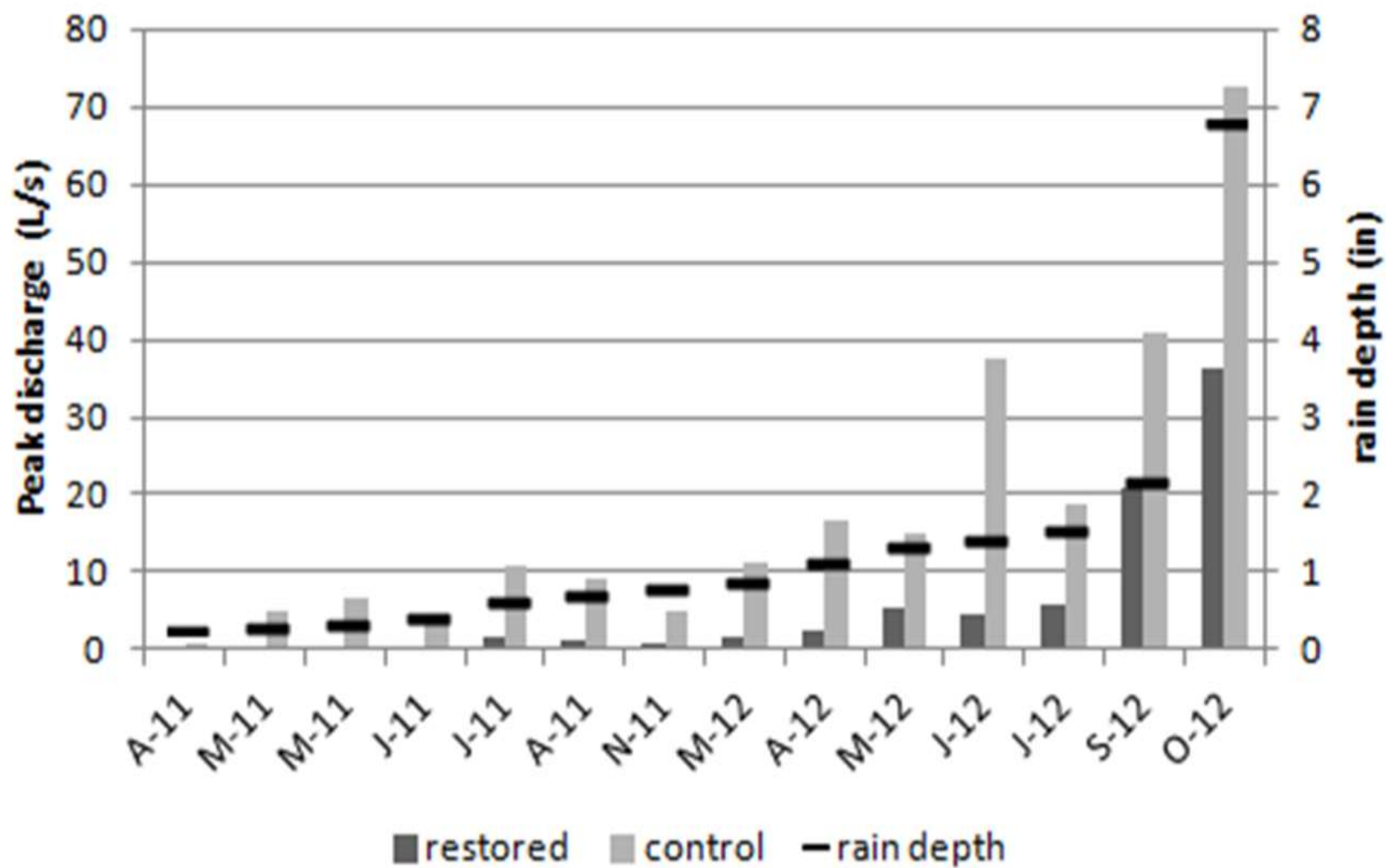


Hydrographs during individual storms WILELINOR

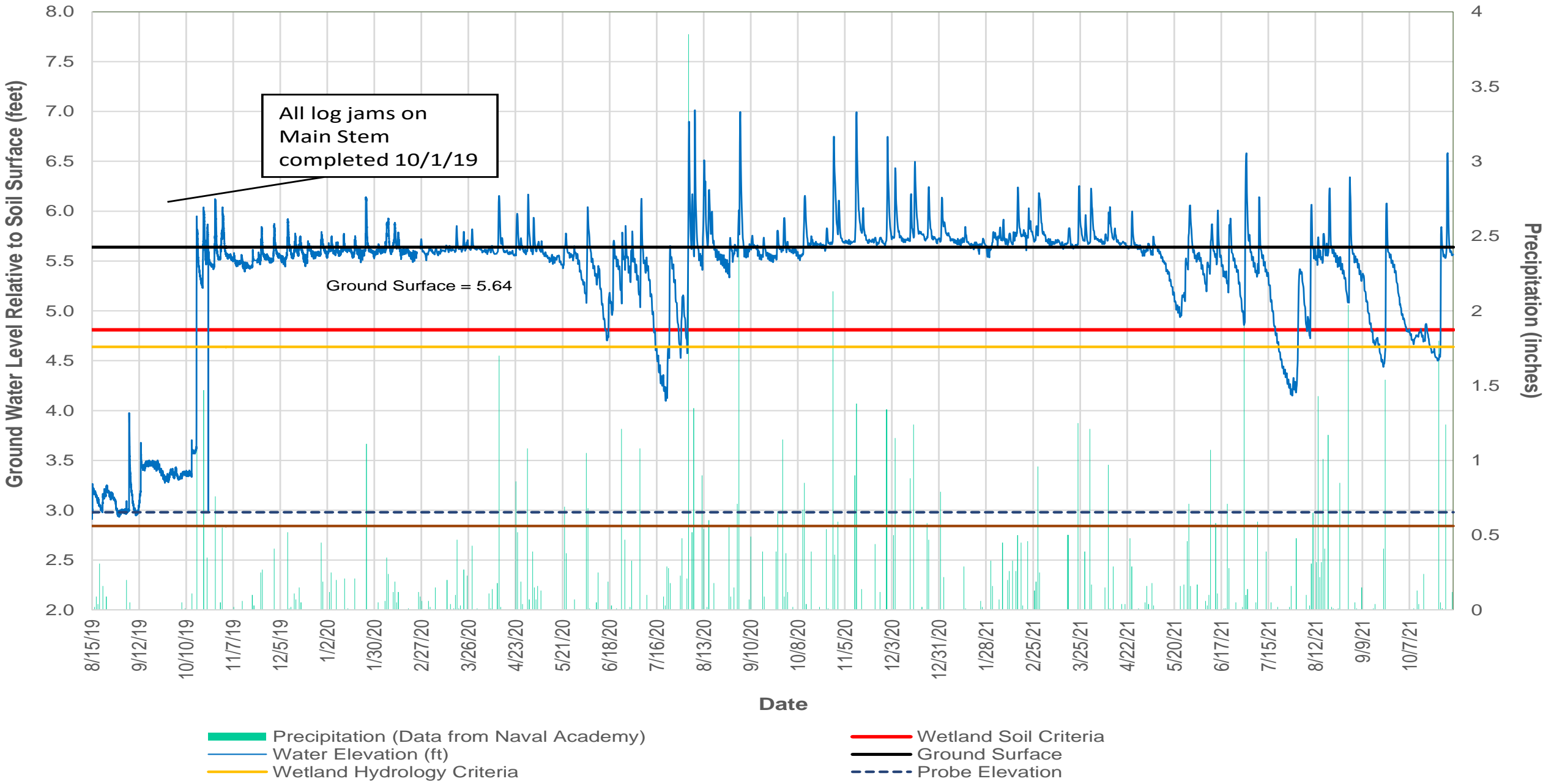


Source: Solange Filoso, University of Maryland





Elks Camp Barrett/Bacon Ridge Stream Restoration Project T1-GW1 Hydrograph From August 15, 2019 to November 2, 2021



Lizard Hill Pounds of N and P Retention (+) and Export (-)				
Water Year	TN	TP	DIN	PO4
2011-2012	198.88	14.63	773.63	11.21
2012-2013	308.16	-40.10	1773.87	6.70
2013-2014	531.36	-8.17	190.64	0.13
2014-2015	19.65	4.09	881.28	9.56
2015-2016	830.73	-46.97	1066.76	10.37
2016-2017	1037.84	2.29	1458.09	24.91
2017-2018	408.31	-12.31	2109.83	19.90
2018-2019	2127.34	-735.28	3215.20	31.17

Main Tributary Beaver Dam



Backwater from Dam, December 2021



Overbank Flows, April 2022

Ecological Uplift

Species Observed After Construction

- Great blue heron
- Mallard and wood duck
- Red-tailed hawk
- Wild turkey
- Bald eagle
- Spring peeper
- Wood frog
- American toad
- Eastern ratsnake
- Snapping turtle
- Box turtle
- Copperhead snake
- Beaver
- White-tailed deer
- Fox
- Raccoon
- Red fin pickerel, fall fish



White-breasted Nuthatch



Yellow Perch Egg Mass

Forest Interior Dwelling Species ("FIDS") Observed

- Barred owl
- Red-shouldered hawk
- Northern parula
- Wood thrush
- Pileated woodpecker



Wood Thrush



Spawning perch eaten by river otter

Questions?

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