

Article

Evaluation of Paired Watershed Runoff Relationships since Recovery from a Major Hurricane on a Coastal Forest—A Basis for Examining Effects of *Pinus palustris* Restoration on Water Yield

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Supplementary Materials

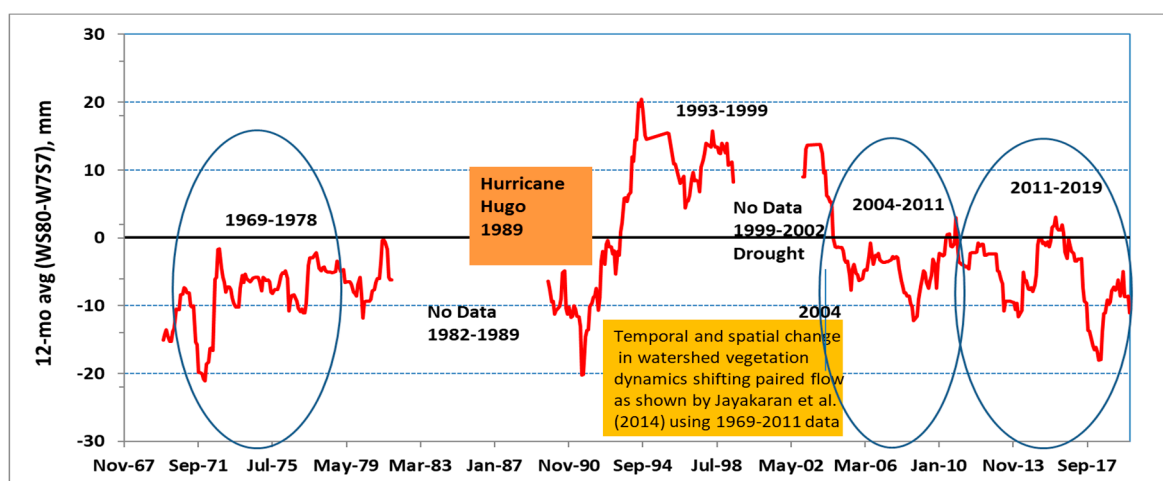


Figure S1. 12-month moving average of difference in monthly flow between WS80 and WS77 for 2011–2019 climatic conditions compared to those in 1969–78 and 2004–11 using whole long-term data with a large gap from 1982 to 1989.

Table S1 Chronology of activities that took place on the WS77 and WS80 watersheds.

Year	Watersheds		
	WS80	WS77	
1963		Y	Weir installed
1968	Y		Weir installed/Calibration starts
1976	Y	Y	Water Quality Monitoring/Calibration ends
1977–1981		Y	Prescribed burn 20% of WS77 each year
1981	Y	Y	Data collection discontinued
September 1989	Y	Y	Hurricane damage, 80% of mature trees killed
1990		Y	Salvage—Large dead stems removed
1993		Y	Regeneration on WS77 decreases flow
1999		Y	NDVI of WS77 = pre-hurricane
2001	Y		Reduced watershed size 206 to 160 ha
2001		Y	Mastication/Understory vegetation mowed
2003		Y	Growing season prescribed burn in >80% area
2003	Y		Pine basal area = pre-hurricane level area

2004	Y	Y	Streamflow = pre-hurricane level
2006		Y	Biomass thinning of understory
2007		Y	Whole tree thinning
2008		Y	Prescribed burn
2013		Y	Prescribed Burn
2016		Y	Prescribed Burn
2018		Y	Prescribed Burn

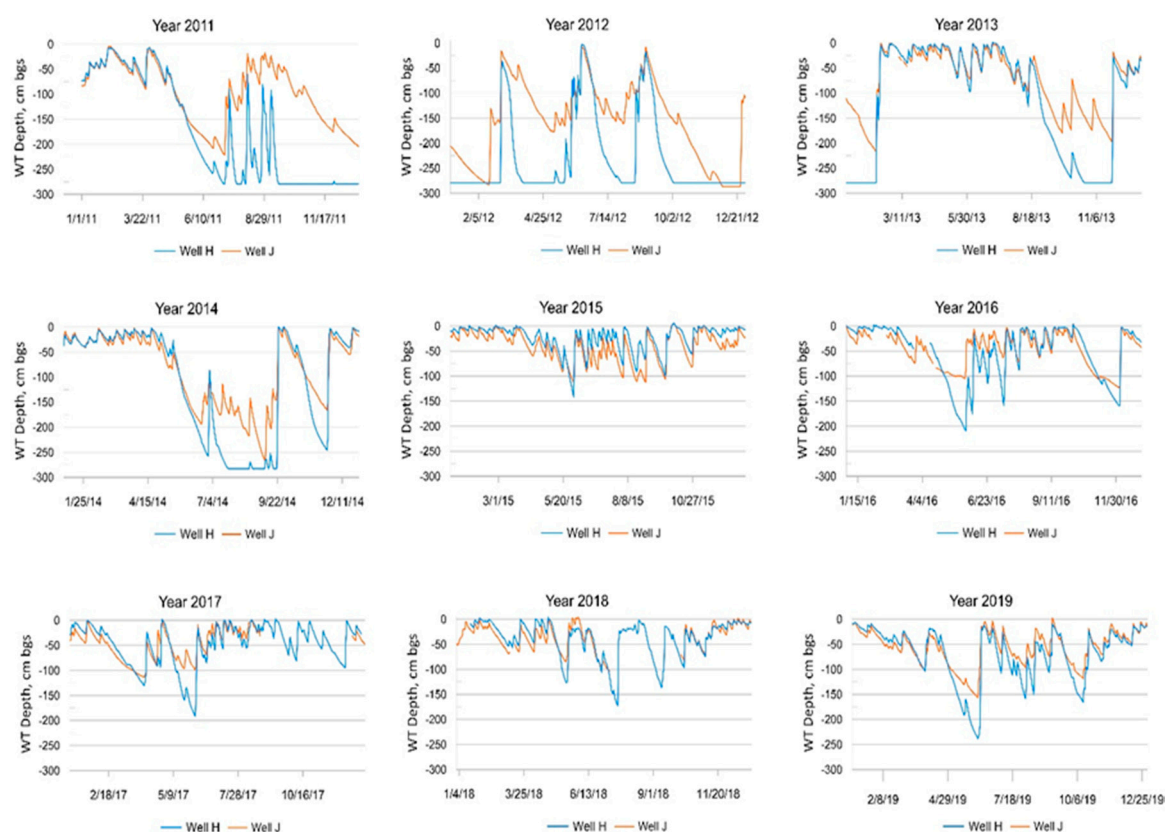


Figure S2. Measured daily water table depths on WS77 (Well J) and WS80 (Well H) watersheds for the years 2011 to 2019.

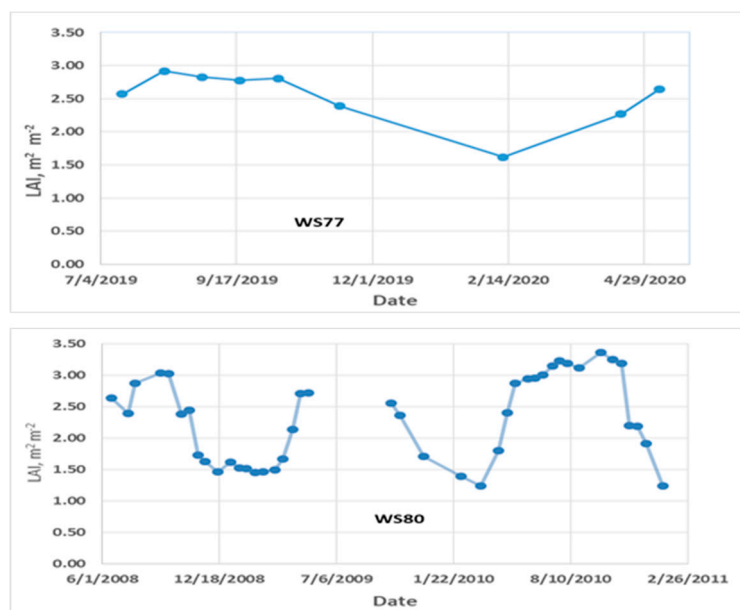


Figure S3. LiCOR-2000 measured watershed averaged LAI for WS77 (top) and WS80 (bottom) for the 2019-2020 and 2008-2011 periods, respectively

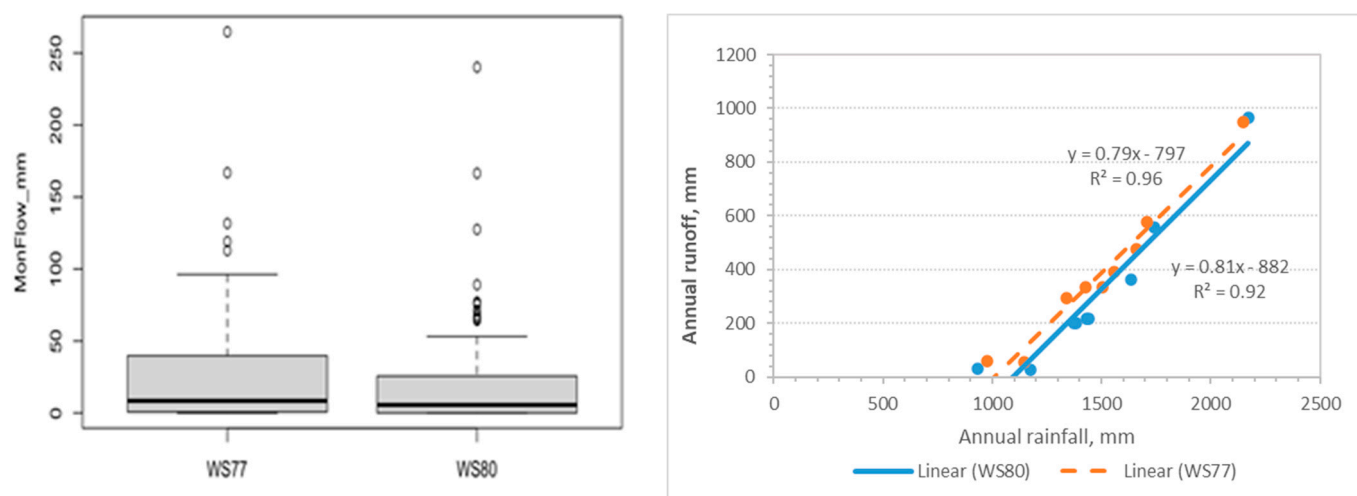


Figure S4. (a) Box plot with median and interquartile range of monthly flow (MonFlow) measured on WS77 and WS80 watersheds in 2011-2019 without October 2015 as an outlier, and (b) Annual rainfall versus annual runoff between paired watersheds for 2011-2019, showing larger storage on WS80 than on WS77.



Figure S5. Pictures of (a) operational prescribed burning and (b) post-burn land cover on WS77 treatment watershed.