

Supplementary Material

Fletcher, T., Touchan, R., Lepley, K., Rouini, N., Bloye, R., Tremarelli, T.S., Peña, K., Meko, D.M., 2019. Two reconstructions of August–July precipitation for central northern Arizona from tree rings. *Tree-Ring Research* 75(2):116-126.

Table S1. Site information for the four tree-ring localities.

Site Name	Site Code	Species*	Elevation (m)	Latitude (degree)	Longitude (degree)	Time Span	Total no. of Years	No. of Trees	No. of Cores	Collector#
Red Butte	REB	PIED	2012	35.82	-112.07	1415-2005	591	48	96	A, B
Slate Mountain	SLM	PIPO	2194	35.50	-111.83	1590-2005	416	32	57	A, B
Robinson Mountain	ROM	PIPO	1679	35.38	-111.53	1611-2005	395	20	33	A, B, C
Sunset Crater	SVC	PIPO	2125	35.37	-111.54	1814-2016	203	39	79	D, E
Visitor Centre										

*Species Key: PIED = *Pinus edulis*, PIPO = *Pinus ponderosa*

#Collector Key: A= Jeffery Dean, B= David M Meko, C= Ramzi Touchan, D= Paul Sheppard, E= 2017 Participants of Dendroclimatology Class

Table S2. Summary statistics for the four chronologies and the Standard regional chronology for the ARSTAN program (Cook and Holmes 1999; Cook and Krusic 2005).

Site Code	Total Chronology				Common Interval			
	Mean Sample Segment Length	Standard Deviation	Skewness	Kurtosis	Year EPS ≥ 0.85	Time Span	Mean Correlation Among Radii	Explained Variance PC1 (%)
REB	299	0.35	-0.06	0.152	1529	1763-1966	0.64	64
SLM	247	0.44	-0.05	-0.34	1631	1770-1951	0.71	72
ROM	280	0.37	-0.30	-0.19	1616	1758-1971	0.68	69
SVC	149	0.26	-0.73	1.24	1824	1895-2014	0.56	58
RC*	241	0.33	-0.21	0.26	1581	1770-1966	0.53	54

*RC= Standard regional chronology includes REB, SLM, ROM, and SVC