

Supplementary material

The net benefits of human-ignited wildfire forecasting: the case of Tribal land units in the United States

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Table S1. Autoregressive Conditional Poisson (ACP) parameter estimates (standard errors in parentheses) for incendiary wildfires on 23 tribal land units in the United States (data January 1996 through the first week of October 2008)

	Constant (Ω)		A_1		A_2		A_3	
AZFTA	-1.82	***	-0.85	***	-2.12	***	-1.97	***
	(0.10)		(0.07)		(0.23)		(0.18)	
AZNAA	-2.73	***	-0.97	***	-2.20	***	-2.47	***
	(0.14)		(0.11)		(0.48)		(0.52)	
AZPMA	-2.07	***	-1.11	***	-1.73	***	-2.01	***
	(0.11)		(0.09)		(0.21)		(0.23)	
AZSCA	-1.72	***	-0.32	***	-1.70	***	-4.01	***
	(0.08)		(0.02)		(0.11)		(0.59)	
CAHIA	-1.43	***	-0.51	***	-1.48	***	-2.34	***
	(0.10)		(0.03)		(0.07)		(0.16)	
CARVA	-2.18	***	-1.04	***	-1.60	***	-2.93	***
	(0.13)		(0.12)		(0.23)		(0.59)	
CATIA	-2.15	***	-0.57	***	-1.75	***	-1.97	***
	(0.11)		(0.03)		(0.12)		(0.13)	
MNMNA	-1.51	***	-0.38	***	-2.99	***		
	(0.03)		(0.02)		(0.22)			
MNRLA	-1.66	***	-0.43	***	-1.66	***	-4.68	***
	(0.03)		(0.01)		(0.04)		(0.65)	
MTCRA	-1.93	***	-0.80	***	-2.70	***	-2.02	***
	(0.06)		(0.05)		(0.52)		(0.18)	
MTFPA	-2.57	***	-0.70	***	-1.72	***	-1.92	***

	Constant (Ω)		A_1		A_2		A_3	
	(0.14)		(0.04)		(0.12)		(0.13)	
MTRBA	-2.17 ***		-0.95 ***		-1.91 ***		-2.28 ***	
	(0.09)		(0.11)		(0.28)		(0.32)	
NDFTA	-0.09 ***		-0.16 ***					
	(0.01)		(0.00)					
NDSRA	-1.85 ***		-0.96 ***		-1.71 ***		-1.65 ***	
	(0.11)		(0.08)		(0.14)		(0.10)	
NDTMA	-2.24 ***		-0.43 ***		-2.18 ***		-2.33 ***	
	(0.05)		(0.02)		(0.13)		(0.09)	
OKANA	-2.74 ***		-0.96 ***		-1.89 ***		-1.32 ***	
	(0.16)		(0.07)		(0.21)		(0.14)	
OKCHA	-3.09 ***		-0.52 ***		-3.51 ***		-1.70 ***	
	(0.08)		(0.08)		(0.95)		(0.13)	
OKCNA	-1.15 ***		-0.59 ***		-2.22 ***		-2.97 ***	
	(0.05)		(0.02)		(0.13)		(0.24)	
OKOMA	-2.73 ***		-0.69 ***		-1.03 ***		-4.20 ***	
	(0.06)		(0.05)		(0.06)		(0.71)	
OKOSA	-2.11 ***		-0.82 ***		-2.24 ***		-1.87 ***	
	(0.08)		(0.05)		(0.26)		(0.13)	
OKTLA	-1.49 ***		-0.85 ***		-1.81 ***		-1.54 ***	
	(0.07)		(0.04)		(0.10)		(0.08)	
SDRBA	-2.45 ***		-0.70 ***		-2.15 ***		-2.04 ***	
	(0.14)		(0.05)		(0.27)		(0.18)	
WIGLA	-2.16 ***		-0.62 ***		-1.96 ***		-2.40 ***	
	(0.08)		(0.03)		(0.12)		(0.12)	

Table S2. Autoregressive Conditional Poisson (ACP) parameter estimates (standard errors in parentheses) for other human-ignited wildfires on 23 tribal land units in the United States (data January 1996 through the first week of October 2008)

	Constant (Ω)		A_1		A_2		A_3		A_4		A_5
AZFTA	-1.42 (0.07)	***	-1.04 (0.08)	***	-1.27 (0.09)	***	-2.44 (0.28)	***			
AZNAA	-1.51 (0.12)	***	-0.62 (0.05)	***	-1.88 (0.19)	***	-2.25 (0.22)	***	-3.72 (0.87)	***	
AZPMA	-1.25 (0.10)	***	-0.98 (0.07)	***	-1.27 (0.09)	***	-3.96 (1.31)	***	-1.93 (0.16)	***	-4.14 (1.32)
AZSCA	-1.62 (0.08)	***	-0.32 (0.01)	***	-2.55 (0.14)	***	-1.99 (0.08)	***			
CAHIA	-1.67 (0.10)	***	-1.63 (0.15)	***	-1.77 (0.16)	***	-2.40 (0.32)	***	-4.49 (1.82)	**	-2.01 (0.19)
CARVA	-2.45 (0.19)	***	-1.50 (0.19)	***	-1.78 (0.22)	***	-1.93 (0.30)	***	-3.01 (0.82)	***	-2.39 (0.48)
CATIA	-3.02 (0.16)	***	-1.33 (0.23)	***	-2.74 (0.94)	***	-3.80 (1.56)	**	-4.17 (1.93)	**	
MNMNA	-1.20 (0.02)	***	-0.36 (0.02)	***	-3.02 (0.22)	***					
MNRLA ^a											
MTCRA	-0.76 (0.06)	***	-0.68 (0.03)	***	-2.31 (0.13)	***	-2.87 (0.26)	***	-2.52 (0.16)	***	
MTFPA	-1.17 (0.10)	***	-0.79 (0.03)	***	-1.70 (0.08)	***	-2.75 (0.24)	***	-2.43 (0.16)	***	-2.91 (0.26)
MTRBA	-1.21 (0.07)	***	-0.99 (0.07)	***	-1.75 (0.12)	***	-4.40 (1.66)	***	-3.71 (0.80)	***	-4.46 (1.32)
NDFTA	-3.00 (0.08)	***	-1.05 (0.07)	***	-1.25 (0.08)	***	-2.56 (0.39)	***	-3.52 (0.56)	***	-4.32 (1.33)
NDSRA	-0.75 (0.07)	***	-0.61 (0.02)	***	-2.13 (0.12)	***	-3.21 (0.30)	***	-4.91 (1.57)	***	-2.50 (0.14)
NDTMA	-0.58 (0.03)	***	-0.45 (0.01)	***	-1.85 (0.03)	***					
OKANA	-1.65 (0.10)	***	-1.26 (0.13)	***	-1.29 (0.11)	***	-1.86 (0.16)	***			
OKCHA	-2.02 (0.08)	***	-0.91 (0.05)	***	-1.00 (0.07)	***	-2.81 (0.30)	***			
OKCNA	-2.49 (0.07)	***	-0.83 (0.08)	***	-1.25 (0.07)	***	-3.23 (0.54)	***			
OKOMA	-2.91 (0.14)	***	-0.76 (0.08)	***	-1.52 (0.13)	***	-2.46 (0.26)	***	-4.81 (1.75)	***	
OKOSA	-1.81 (0.08)	***	-0.62 (0.05)	***	-2.18 (0.21)	***	-2.96 (0.42)	***			

OKTLA	-2.93 ***	-1.14 ***	-2.29 ***	-0.94 ***	
	(0.16)	(0.09)	(0.17)	(0.03)	
SDRBA	0.28 ***	-0.61 ***	-2.53 ***	-4.11 ***	
	(0.03)	(0.02)	(0.17)	(0.86)	
WIGLA	-1.44 ***	-1.04 ***	-1.47 ***	-2.37 ***	-4.16 ***
	(0.03)	(0.03)	(0.03)	(0.12)	(0.41)

^aModel estimates not available because the log-likelihood function of the tribal unit's ACP model would not converge.

Table S3. Weather-augmented Autoregressive Conditional Poisson (ACP) parameter estimates (standard errors in parentheses) for incendiary wildfires on 23 tribal land units in the United States (data January 1996 through the first week of October 2008)

	Maximum MFWI (t-1)		Maximum T (t-1)		Maximum RH (t-1)		Maximum KBDI (t-1)		Constant (Ω)		A_1		A_2		A_3	
AZFTA	0.013 (0.00)	***	-0.008 (0.01)		-0.015 (0.00)	***	-0.0013 (0.00)	***	-1.11 (0.32)	***	-0.69 (0.29)	**	-1.86 (0.40)	***	-1.75 (0.38)	***
AZNAA	0.025 (0.01)	***	0.107 (0.02)	***	-0.049 (0.01)	***	-0.0024 (0.00)	***	-4.83 (0.87)	***	-4.27 (0.87)	***	-5.84 (1.22)	***	-6.36 (1.73)	***
AZPMA	0.0156 (0.004)	***	0.010 (0.010)		-0.019 (0.008)	**	-0.0029 (0.0004)	***	-0.62 (0.58)		-0.17 (0.59)		-0.74 (0.60)		-0.97 (0.61)	
AZSCA	0.015 (0.002)	***	-0.031 (0.004)	***	-0.0057 (0.002)	***	-0.0024 (0.0001)	***	-0.71 (0.18)	***	0.76 (0.16)	***	-0.11 (0.19)	***	-1.39 (0.29)	***
CAHIA	-0.0039 (0.0011)	***	0.065 (0.004)	***	0.002 (0.001)		-0.00022 (0.0002)		-2.28 (0.17)	***	-2.05 (0.16)	***	-3.04 (0.18)	***	-3.60 (0.24)	***
CARVA ^a																
CATIA ^a																
MNMNA	0.018 (0.003)	***	0.026 (0.005)	***	0.0067 (0.0010)	***	-0.048 (0.002)	***	-1.89 (0.12)	***	-1.263 (0.127)	***	-2.86 (0.25)	***		
MNRLA	-0.022 (0.002)	***	-0.059 (0.002)	***	-0.0076 (0.0005)	***	0.0021 (0.0002)	***	-0.55 (0.07)	***	1.70 (0.07)	***	0.46 (0.09)	***	-0.63 (0.11)	***
MTCRA ^a																
MTFPA	-0.025 (0.005)	***	0.057 (0.009)	***	0.0106 (0.0027)	***	-0.0019 (0.0004)	***	-3.40 (0.40)	***	-1.93 (0.43)	***	-2.95 (0.46)	***	-3.09 (0.47)	***
MTRBA	-0.0049 (0.0066)		0.010 (0.007)		-0.0215 (0.0046)	***	-0.0011 (0.0007)	*	-1.10 (0.34)	***	-0.27 (0.32)		-1.04 (0.42)	**	-1.49 (0.44)	***
NDFTA	-0.0026 (0.0004)	***	-0.029 (0.001)	***	-0.00074 (0.0002)	***	-0.00099 (0.00005)	***	0.43 (0.02)	***	0.75 (0.02)	***				
NDSRA	-0.018 (0.003)	***	0.0052 (0.0037)		-0.017 (0.002)	***	-0.000049 (0.00029)		-0.53 (0.197)	***	0.074 (0.20)		-0.64 (0.26)	**	-0.47 (0.23)	**

	Maximum MFWI (t-1)		Maximum T (t-1)		Maximum RH (t-1)		Maximum KBDI (t- 1)		Constant (Ω)		A ₁		A ₂		A ₃	
NDTMA	0.017 (0.002)	***	-0.025 (0.003)	***	-0.0034 (0.0010)	***	-0.0011 (0.0003)	***	-2.14 (0.15)	***	-0.24 (0.12)	**	-1.83 (0.27)	***	-1.92 (0.13)	***
OKANA	-0.013 (0.006)	**	-0.020 (0.007)	***	-0.0068 (0.0048)		0.00047 (0.00040)		-1.62 (0.41)	***	0.22 (0.40)		-0.82 (0.46)	*	-0.13 (0.42)	
OKCHA	0.0031 (0.008)		-0.072 (0.011)	***	0.0089 (0.0048)	*	0.0024 (0.0004)	***	-2.35 (0.49)	***	0.11 (0.48)		-4.38 (3.82)		-1.17 (0.57)	**
OKCNA	0.0018 (0.0022)		-0.069 (0.003)	***	-0.019 (0.002)	***	0.00036 (0.00013)	***	1.62 (0.15)	***	1.88 (0.15)	***	0.20 (0.25)		-0.67 (0.36)	*
OKOMA	0.013 (0.005)	***	-0.078 (0.006)	***	-0.019 (0.002)	***	-0.00019 (0.00022)		0.08 (0.18)		1.71 (0.25)	***	1.14 (0.19)	***	-3.23 (3.04)	
OKOSA	0.032 (0.006)	***	-0.064 (0.007)	***	-0.023 (0.003)	***	-0.00085 (0.00025)	***	0.23 (0.20)		0.94 (0.18)	***	-0.37 (0.36)	***	-0.08 (0.32)	
OKTLA	-0.006 (0.002)	***	-0.050 (0.003)	***	-0.019 (0.001)	***	0.0011 (0.0001)	***	0.94 (0.14)	***	1.09 (0.16)	***	0.28 (0.17)		0.61 (0.16)	***
SDRBA	0.0107 (0.0047)	**	0.024 (0.006)	***	-0.010 (0.004)	**	-0.0015 (0.0004)	***	-2.53 (0.29)	***	-1.03 (0.28)	***	-1.03 (0.28)	***	-2.46 (0.40)	***
WIGLA	0.022 (0.005)	***	0.036 (0.006)	***	0.010 (0.002)	***	-0.0082 (0.0009)	***	-3.49 (0.25)	***	-2.26 (0.23)	***	-3.59 (0.31)	***	-4.08 (0.29)	***

^aModel estimates not available because the log-likelihood function of the tribal unit's ACP model would not converge.

Table S4. Weather-augmented Autoregressive Conditional Poisson (ACP) parameter estimates (standard errors in parentheses) for other human-ignited wildfires on 23 tribal land units in the United States (data January 1996 through the first week of October 2008)

	Maximum MFWI (t-1)		Maximum T (t-1)		Maximum RH (t-1)		Maximum KBDI (t-1)		Constan t (Ω)		A ₁		A ₂		A ₃		A ₄
AZFTA	0.011 (0.00)	***	0.011 (0.01)	**	-0.027 (0.00)	***	-0.0026 (0.00)	***	-0.39 (0.19)	**	-1.07 (0.24)	***	-0.90 (0.21)	***	-1.73 (0.38)	***	
AZNA	0.015 (0.00)	***	0.057 (0.01)	***	-0.025 (0.00)	***	-0.0021 (0.00)	***	-1.85 (0.28)	***	-2.39 (0.33)	***	-3.73 (0.46)	***	-4.03 (0.62)	***	-4.49 (0.71)
AZPMA	0.0072 (0.002)	***	0.010 (0.004)	**	-0.019 (0.003)	***	-0.0022 (0.0002)	***	0.66 (0.21)	***	-0.21 (0.22)	***	-0.10 (0.23)	***			
AZSCA	0.010 (0.001)	***	-0.037 (0.003)	***	-0.0080 (0.002)	***	-0.0020 (0.0001)	***	0.52 (0.15)	***	1.88 (0.14)	***	-0.14 (0.19)	***	0.79 (0.18)	***	
CAHIA	-0.0071 (0.0039)	*	0.065 (0.013)	***	-0.014 (0.005)	***	0.00019 (0.0005)	***	-1.72 (0.50)	***	-2.65 (0.55)	***	-3.14 (0.70)	***	-3.59 (0.68)	***	
CARVA ^a																	
CATIA ^a																	
MNMNA	0.0040 (0.0024)	*	-0.0072 (0.0033)	**	-0.0017 (0.0007)	**	-0.012 (0.001)	***	-0.80 (0.09)	***	-0.078 (0.100)	***	-2.45 (0.24)	***			
MNRLA																	
MTCRA ^a																	
MTFPA	0.033 (0.003)	***	0.051 (0.002)	***	-0.0047 (0.0013)	***	-0.0012 (0.0002)	***	-1.34 (0.13)	***	-3.47 (0.15)	***	-4.42 (0.22)	***	-5.28 (0.56)	***	
MTRBA	-0.0099 (0.0036)	***	0.017 (0.004)	***	-0.0084 (0.0027)	***		***	-0.74 (0.21)	***	-0.94 (0.22)	***	-1.66 (0.21)	***	-8.72 (154.89)	***	-4.36 (1.90)
NDFTA	0.0038 (0.0037)		0.0083 (0.0084)		-0.0065 (0.0036)	*	-0.0073 (0.0009)	***	-2.10 (0.27)	***	-0.78 (0.28)	***	-0.84 (0.27)	***	-2.06 (0.49)	***	-3.33 (0.91)
NDSRA	0.0004 (0.0013)		0.027 (0.002)	***	-0.0094 (0.0010)	***	-0.0014 (0.0001)	***	0.041 (0.093)	***	-0.98 (0.10)	***	-2.63 (0.19)	***	-4.33 (0.85)	***	
NDTMA	-0.0081 (0.0009)	***	-0.013 (0.001)	***	-0.0016 (0.0006)	***	-0.0012 (0.0001)	***	-0.14 (0.05)	***	0.24 (0.04)	***	-1.06 (0.06)	***			

	Maximum MFWI (t-1)		Maximum T (t-1)		Maximum RH (t-1)		Maximum KBDI (t-1)		Constan t (Ω)		A ₁		A ₂		A ₃		A ₄
OKANA	-0.010 (0.003)	***	-0.0082 (0.004)	**	-0.019 (0.004)	***			0.02 (0.27)		0.35 (0.28)		0.40 (0.29)				
OKCHA	-0.009 (0.003)	***	-0.028 (0.004)	***	-0.012 (0.002)	***	0.0011 (0.0002)	***	-0.55 (0.20)	***	0.35 (0.18)	*	0.25 (0.18)		-1.45 (0.36)	***	
OKCNA	-0.0093 (0.0045)	**	-0.10 (0.01)	***	-0.028 (0.003)	***	0.00074 (0.00024)	***	1.65 (0.22)	***	2.95 (0.27)	***	2.24 (0.22)	***	-0.95 (2.44)		
OKOMA	0.016 (0.003)	***	-0.025 (0.009)	***	-0.010 (0.006)	*			-1.99 (0.51)	***	-0.20 (0.47)		-0.97 (0.42)	**	-1.90 (0.51)	***	
OKOSA	0.018 (0.005)	***	-0.045 (0.005)	***	-0.015 (0.002)	***			-0.12 (0.21)		0.62 (0.21)	***	-0.90 (0.34)	***	-2.00 (0.73)	***	
OKTLA			0.017 (0.008)	**			0.00078 (0.00022)	***	-2.65 (0.22)	***	-1.82 (0.33)	***	-3.10 (0.29)	***			
SDRBA	-0.0070 (0.0012)	***	0.029 (0.001)	***	-0.013 (0.001)	***			0.87 (0.07)	***	-1.06 (0.08)	***	-4.12 (0.72)	***			
WIGLA	0.045 (0.002)	***	0.060 (0.004)	***	0.0090 (0.0014)	***	-0.017 (0.001)	***	-3.33 (0.15)	***	-3.55 (0.12)	***	-4.37 (0.19)	***	-4.91 (0.15)	***	-7.18 (0.80)

^aModel estimates not available because the log-likelihood function of the tribal unit's ACP model would not converge.

Table S5a. Seasonality-augmented Autoregressive Conditional Poisson (ACP) parameter estimates (standard errors in parentheses) (January through August indicator variables only) for incendiary wildfires on 23 tribal land units in the United States (data January 1996 through the first week of October 2008)

	January	February	March	April	May	June	July	August		
AZFTA					0.56 *** (0.11)	0.41 *** (0.11)				
AZNAA				1.26 *** (0.42)	1.84 *** (0.30)	2.00 *** (0.33)	1.27 *** (0.33)			
AZPMA				1.08 *** (0.17)	0.99 *** (0.16)	0.76 *** (0.17)	0.47 ** (0.18)			
AZSCA				0.75 *** (0.06)	0.76 *** (0.05)	0.42 *** (0.06)	-0.16 ** (0.07)			
CAHIA					0.70 *** (0.08)	1.00 *** (0.05)	0.62 *** (0.04)		0.53 *** (0.05)	
CARVA					2.76 *** (0.40)	2.59 *** (0.40)	2.80 *** (0.40)		2.50 *** (0.41)	
CATIA					1.31 *** (0.13)	1.57 *** (0.08)	1.06 *** (0.09)		1.21 *** (0.09)	
MNMNA			1.70 *** (0.17)	4.24 *** (0.09)	2.72 *** (0.10)					
MNRLA			3.06 *** (0.25)	3.53 *** (0.24)	2.63 *** (0.25)	0.97 ** (0.45)	2.80 *** (0.25)		2.92 *** (0.26)	
MTCRA			0.85 *** (0.19)	0.52 *** (0.14)	0.03 (0.36)	1.02 *** (0.19)	0.80 *** (0.10)		1.08 *** (0.11)	
MTFPA					1.36 *** (0.10)	0.37 *** (0.11)	0.43 *** (0.09)		0.72 *** (0.10)	
MTRBA			0.84 *** (0.23)	0.83 *** (0.14)	0.08 (0.27)	0.28 (0.32)	0.72 *** (0.14)			
NDFTA			3.22 *** (0.12)	4.59 *** (0.11)	3.45 *** (0.12)	2.62 *** (0.12)	2.78 *** (0.12)		2.32 *** (0.14)	
NDSRA			0.94 *** (0.21)	0.87 *** (0.15)	0.87 *** (0.17)	0.80 *** (0.17)	1.03 *** (0.14)		0.47 ** (0.19)	
NDTMA				2.45 *** (0.17)	1.10 *** (0.19)	1.24 *** (0.25)	1.81 *** (0.18)		1.02 *** (0.30)	
OKANA	0.40 **	0.40 ***	-0.001	-0.81 ***						

	January	February	March	April	May	June	July	August
	(0.17)	(0.14)	(0.169)	(0.28)				
OKCHA	1.24 ***	1.21 ***	0.64 ***					0.74 ***
	(0.16)	(0.16)	(0.17)					(0.19)
OKCNA	2.24 ***	2.41 ***	2.47 ***	1.62 ***	-1.10		1.23 ***	1.37 ***
	(0.21)	(0.21)	(0.20)	(0.21)	(0.75)		(0.23)	(0.22)
OKOMA	1.51 ***	1.60 ***	1.16 ***	0.41				
	(0.19)	(0.20)	(0.20)	(0.26)				
OKOSA	1.29 ***	1.19 ***	1.31 ***	0.39 **				
	(0.14)	(0.17)	(0.14)	(0.19)				
OKTLA	1.02 ***	0.91 ***	0.80 ***	0.03	-0.52 *	-0.57	0.55 ***	0.94 ***
	(0.15)	(0.15)	(0.15)	(0.16)	(0.28)	(0.35)	(0.18)	(0.17)
SDRBA			0.88 ***			0.85 ***	0.82 ***	0.87 ***
			(0.17)			(0.26)	(0.14)	(0.16)
WIGLA				2.30 ***	1.44 ***	1.01 ***	1.59 ***	
				(0.10)	(0.13)	(0.16)	(0.13)	

Table S5b. Seasonality-augmented Autoregressive Conditional Poisson (ACP) parameter estimates (standard errors in parentheses) (September through November indicator variables, constant and autoregressive terms) for incendiary wildfires on 23 tribal land units in the United States (data January 1996 through the first week of October 2008)

	September	October	November	Constant (Ω)	A_1	A_2	A_3	A_4	A_5
AZFTA				-1.76 *** (0.10)	-1.14 *** (0.09)	-2.32 *** (0.26)	-2.21 *** (0.21)		
AZNAA				-3.39 *** (0.23)	-2.73 *** (0.39)	-3.82 *** (0.63)	-4.29 *** (0.97)		
AZPMA				-2.29 *** (0.13)	-1.89 *** (0.18)	-2.53 *** (0.28)	-2.78 *** (0.31)		
AZSCA				-1.77 *** (0.08)	-0.92 *** (0.06)	-1.91 *** (0.11)	-2.97 *** (0.26)		
CAHIA	0.51 *** (0.05)			-1.37 *** (0.09)	-1.17 *** (0.05)	-2.11 *** (0.10)	-2.47 *** (0.13)		
CARVA	2.32 *** (0.43)	2.46 *** (0.40)		-3.76 *** (0.36)	-3.87 *** (0.45)	-4.57 *** (0.58)	-6.27 *** (1.74)		
CATIA				-2.12 *** (0.10)	-1.92 *** (0.09)	-3.05 *** (0.18)	-3.15 *** (0.19)		
MNMNA				-2.65 *** (0.08)	-5.28 *** (0.11)				
MNRLA	1.82 *** (0.34)	1.79 *** (0.28)		-3.66 *** (0.24)	-3.79 *** (0.24)	-4.66 *** (0.24)			
MTCRA				-2.31 *** (0.11)	-1.52 *** (0.10)	-3.43 *** (0.59)	-2.57 *** (0.21)		
MTFPA				-2.87 *** (0.14)	-1.14 *** (0.09)	-2.15 *** (0.16)	-2.42 *** (0.17)		
MTRBA				-2.40 *** (0.12)	-1.58 *** (0.15)	-2.37 *** (0.34)	-2.66 *** (0.35)		
NDFTA	2.39 *** (0.13)	3.26 *** (0.12)	2.56 *** (0.12)	-1.95 *** (0.11)	-4.91 *** (0.12)				
NDSRA	0.56 *** (0.19)	0.78 *** (0.18)	0.60 *** (0.20)	-2.34 *** (0.15)	-1.81 *** (0.14)	-2.55 *** (0.22)	-2.42 *** (0.20)		
NDTMA	1.15 *** (0.35)	2.01 *** (0.19)		-3.29 *** (0.17)	-2.79 *** (0.17)	-3.80 *** (0.22)	-3.51 *** (0.18)		

	September		October		November		Constant (Ω)	A_1	A_2	A_3	A_4	A_5
OKANA							-2.76 *** (0.17)	-1.05 *** (0.08)	-1.95 *** (0.22)	-1.33 *** (0.16)		
OKCHA							-3.45 *** (0.17)	-1.39 *** (0.17)	-6.00 *** (5.47)	-2.30 *** (0.19)		
OKCNA	1.42 *** (0.23)		2.01 *** (0.21)		0.91 *** (0.28)		-2.23 *** (0.20)	-2.93 *** (0.21)	-4.98 *** (0.38)	-6.41 *** (1.30)		
OKOMA					1.57 *** (0.23)		-3.33 *** (0.19)	-2.10 *** (0.21)	-2.14 *** (0.21)	-5.15 *** (0.90)		
OKOSA			0.68 *** (0.18)		1.22 *** (0.18)		-2.64 *** (0.12)	-1.89 *** (0.15)	-3.49 *** (0.38)	-2.73 *** (0.21)		
OKTLA	0.61 *** (0.17)		0.23 *** (0.18)		0.63 *** (0.19)		-1.80 *** (0.15)	-1.65 *** (0.15)	-2.55 *** (0.20)	-2.12 *** (0.18)		
SDRBA							-2.73 *** (0.15)	-1.35 *** (0.15)	-2.76 *** (0.32)	-2.47 *** (0.22)		
WIGLA							-2.53 *** (0.10)	-2.77 *** (0.12)	-4.34 *** (0.26)	-4.05 *** (0.18)		

Table S6a. Seasonality-augmented Autoregressive Conditional Poisson (ACP) parameter estimates (standard errors in parentheses) (January through August indicator variables only) for other human-ignited wildfires on 23 tribal land units in the United States (data January 1996 through the first week of October 2008)

	January	February	March	April	May	June	July	August	
AZFTA				0.77 (0.08)	*** (0.08)	0.88 (0.08)	*** (0.09)	0.45 (0.09)	***
AZNAA				0.74 (0.12)	*** (0.11)	1.00 (0.11)	*** (0.11)	1.02 (0.13)	*** (0.13)
AZPMA				0.48 (0.07)	*** (0.07)	0.58 (0.07)	*** (0.07)	0.33 (0.07)	***
AZSCA		1.24 (0.15)	*** (0.13)	1.52 (0.13)	*** (0.11)	1.85 (0.11)	*** (0.12)	1.76 (0.12)	*** (0.12)
CAHIA						0.70 (0.18)	*** (0.14)	1.23 (0.14)	*** (0.12)
CARVA						1.27 (0.38)	*** (0.29)	1.74 (0.29)	*** (0.30)
CATIA						1.86 (0.35)	*** (0.41)	2.01 (0.41)	*** (0.38)
MNMNA			2.76 (0.09)	***	3.91 (0.09)	***	2.31 (0.11)	***	
MNRLA ^a									
MTCRA			1.12 (0.07)	***	1.02 (0.07)	***	0.17 (0.12)	1.25 (0.07)	*** (0.06)
MTFPA						-0.04 (0.06)	0.32 (0.05)	*** (0.04)	0.22 (0.04)
MTRBA			0.73 (0.11)	***	0.77 (0.09)	***	-0.01 (0.15)	0.50 (0.13)	*** (0.09)
NDFTA			2.99 (0.72)	***	3.42 (0.72)	***	1.55 (0.76)	** (0.78)	1.85 (0.76)
NDSRA			1.61 (0.12)	***	1.51 (0.12)	***	1.21 (0.13)	*** (0.11)	1.97 (0.11)
NDTMA					3.05 (0.06)	***	1.97 (0.06)	*** (0.09)	1.19 (0.09)
OKANA	0.51	***	0.63	***	0.26	**		0.38	*
								0.47	***

	January		February		March		April		May		June		July		August
	(0.12)		(0.14)		(0.13)				(0.20)		(0.14)		(0.10)		
OKCHA	0.86	***	0.53	***	0.68	***	-0.39	***	-1.93	*			1.06	***	
	(0.09)		(0.09)		(0.09)		(0.14)		(1.10)				(0.09)		
OKCNA	1.95	***	1.68	***	1.64	***									
	(0.16)		(0.15)		(0.15)										
OKOMA	1.79	***	1.36	***	1.36	***							0.99	***	0.61
	(0.29)		(0.24)		(0.22)								(0.37)		(0.32)
OKOSA	0.90	***	1.03	***	1.05	***	0.42	***							0.41
	(0.12)		(0.11)		(0.09)		(0.10)								(0.17)
OKTLA	0.87	***	0.75	**			0.91	***					1.44	***	1.06
	(0.27)		(0.33)				(0.20)						(0.26)		(0.23)
SDRBA	0.44	***	0.40	***	0.84	***	0.71	***	0.37	***	1.52	***	0.99	***	0.91
	(0.10)		(0.10)		(0.09)		(0.09)		(0.11)		(0.08)		(0.08)		(0.09)
WIGLA					1.78	***	4.16	***	2.52	***	1.80	***	2.43	***	
					(0.27)		(0.20)		(0.22)		(0.27)		(0.23)		

^aModel estimates not available because the log-likelihood function of the tribal unit's ACP model would not converge.

Table S6b. Seasonality-augmented Autoregressive Conditional Poisson (ACP) parameter estimates (standard errors in parentheses) (September through November indicator variables, constant and autoregressive terms) for other human-ignited wildfires on 23 tribal land units in the United States (data January 1996 through the first week of October 2008)

	September	October	November	Constant (Ω)	A_1	A_2	A_3	A_4	A_5
AZFTA				-1.41 *** (0.07)	-1.66 *** (0.11)	-1.83 *** (0.13)	-2.90 *** (0.35)		
AZNAA				-1.40 *** (0.10)	-1.43 *** (0.13)	-2.74 *** (0.29)	-3.09 *** (0.43)	-4.19 *** (1.01)	
AZPMA				-1.15 *** (0.10)	-1.37 *** (0.10)	-1.61 *** (0.11)	-4.92 *** (3.00)	-2.11 *** (0.18)	-3.33 *** (0.59)
AZSCA				-2.07 *** (0.11)	-1.94 *** (0.12)	-5.29 *** (0.79)	-2.87 *** (0.13)		
CAHIA	0.76 *** (0.19)			-1.78 *** (0.10)	-2.56 *** (0.19)	-3.01 *** (0.35)	-3.53 *** (0.47)		
CARVA	1.47 *** (0.34)	1.19 *** (0.34)		-2.94 *** (0.22)	-3.32 *** (0.43)	-3.40 *** (0.45)	-3.24 *** (0.47)	-5.11 ** (2.13)	
CATIA				-3.73 *** (0.23)	-3.02 *** (0.51)	-4.62 *** (1.48)			
MNMNA				-2.26 *** (0.09)	-4.61 *** (0.10)				
MNRLA ^a									
MTCRA				-0.87 *** (0.06)	-1.93 *** (0.07)	-4.15 *** (0.37)	-4.27 *** (0.46)	-3.29 *** (0.19)	
MTFPA				-0.85 *** (0.08)	-0.86 *** (0.04)	-1.80 *** (0.09)	-2.23 *** (0.11)		
MTRBA				-1.33 *** (0.09)	-1.70 *** (0.12)	-2.39 *** (0.15)	-6.71 *** (11.47)	-3.52 *** (0.49)	
NDFTA	0.78 (1.27)	3.15 *** (0.73)		-5.12 *** (0.72)	-4.39 *** (0.74)	-4.01 *** (0.73)	-3.78 *** (0.73)	-5.49 *** (0.88)	
NDSRA	1.35 *** (0.12)	1.19 *** (0.12)	0.87 *** (0.14)	-1.27 *** (0.10)	-2.19 *** (0.12)	-3.83 *** (0.20)			
NDTMA	1.05 *** (0.11)	1.86 *** (0.06)		-1.16 *** (0.06)	-3.50 *** (0.06)	-4.69 *** (0.09)			

	September	October	November	Constant (Ω)	A_1	A_2	A_3	A_4	A_5
OKANA				-1.88 *** (0.12)	-1.64 *** (0.14)	-1.57 *** (0.12)	-2.05 *** (0.18)		
OKCHA			0.73 *** (0.17)	-2.33 *** (0.10)	-1.77 *** (0.11)	-1.48 *** (0.10)	-2.18 *** (0.16)		
OKCNA			1.36 *** (0.21)	-3.14 *** (0.15)	-2.67 *** (0.16)	-2.85 *** (0.19)	-4.11 *** (0.44)		
OKOMA	1.17 *** (0.38)		1.88 *** (0.23)	-3.85 *** (0.26)	-2.30 *** (0.25)	-2.34 *** (0.24)	-3.17 *** (0.32)		
OKOSA			0.89 *** (0.13)	-2.18 *** (0.10)	-1.39 *** (0.08)	-2.90 *** (0.29)	-3.51 *** (0.50)		
OKTLA	0.81 *** (0.21)	-1.28 * (0.66)		-3.47 *** (0.24)	-2.06 *** (0.23)	-3.15 *** (0.29)	-1.65 *** (0.21)		
SDRBA	0.88 *** (0.09)	0.55 *** (0.09)	0.39 *** (0.10)	-0.24 *** (0.08)	-1.53 *** (0.09)	-3.78 *** (0.25)			
WIGLA				-3.19 *** (0.20)	-5.23 *** (0.21)	-5.18 *** (0.21)	-5.57 *** (0.27)	-6.23 *** (0.38)	

^aModel estimates not available because the log-likelihood function of the tribal unit's ACP model would not converge.

Table S7. Tests of restrictions that all (exponentiated) autoregressive terms are jointly zero

Tribal Unit	Incendiary						Other Human					
	Pure Auto-regressive		Weather Augmented		Seasonal Augmented		Pure Auto-regressive		Weather Augmented		Seasonal Augmented	
AZFTA	295	***	108	***	187	***	553	***	162	***	236	***
AZNAA	119	***	34	***	37	***	937	***	192	***	252	***
AZPMA	235	***	127	***	114	***	935	***	256	***	476	***
AZSCA	4,386	***	2,160	***	1,722	***	5,004	***	2,186	***	1,542	***
CAHIA	2,325	***	483	***	479	***	158	***	37	***	41	***
CARVA	159	***	a		42	***	155	***	a		43	***
CATIA	934	***	a		192	***	39	***	a		16	***
MNMNA	1,209	***	599	***	51	***	1,806	***	774	***	123	***
MNRLA	2,975	***	2,401	***	1,170	***	b		b		b	
MTCRA	345	***	a		233	***	796	***	a		181	
MTFPA	743	***	486	***	557	***	804	***	74	***	455	***
MTRBA	271	***	183	***	183	***	301	***	162	***	135	***
NDFTA	7,546	***	4,335	***	574	***	437	***	283	***	269	***
NDSRA	408	***	162	***	261	***	972	***	292	***	326	***
NDTMA	1,564	***	1,182	***	689	***	3,219	***	1,842	***	458	***
OKANA	352	***	336	***	323	***	308	***	273	***	259	***
OKCHA	581	***	393	***	418	***	1,182	***	713	***	965	***
OKCNA	812	***	503	***	234	***	682	***	222	***	366	***
OKOMA	1,194	***	781	***	754	***	404	***	257	***	296	***
OKOSA	398	***	204	***	223	***	546	***	333	***	353	***
OKTLA	1,142	***	544	***	760	***	463	***	263	***	318	***
SDRBA	411	***	314	***	280	***	1,229	***	393	***	539	***
WIGLA	598	***	292	***	145	***	933	***	528	***	213	***

^a The model could not be estimated due to lack of weather data.

^b The model would not converge in maximum likelihood estimation.

Table S8. Out-of-sample root mean squared errors of alternative forecast models, for incendiary wildfires in selected Bureau of Indian Affairs tracked tribal land units in the United States

Tribal Land Unit	Root Mean Squared Error					
	Simple ACP	Weather Augmented ACP	Seasonal Augmented ACP	Random Walk	CompStat53	Ensemble
AZFTA	0.52	0.54	0.54	0.63	0.55	0.51
AZNAA	1.23	1.23	1.21	1.30	1.42	1.17
AZPMA	0.83	1.01	0.82	0.98	0.96	0.81
AZSCA	1.40	1.41	1.37	1.51	1.55	1.34
CAHIA	2.70	2.67	2.67	3.08	2.90	2.55
CARVA	0.81	0.81	0.81	1.02	0.94	0.84
CATIA	0.76	0.76	0.76	0.91	1.62	0.86
MNMNA	2.79	3.55	2.49	3.23	2.43	2.64
MNRLA	5.87	5.82	6.42	6.49	6.20	5.55
MTCRA	0.62	0.62	0.62	0.76	0.62	0.61
MTFPA	0.35	0.38	0.38	0.39	0.92	0.45
MTRBA	1.26	1.22	1.26	1.43	1.77	1.26
NDFTA	3.73	4.03	4.56	3.96	5.69	3.58
NDSRA	1.78	1.81	1.84	1.96	2.26	1.74
NDTMA	2.11	2.18	2.24	2.28	2.66	2.01
OKANA	1.55	1.58	1.57	1.77	1.72	1.49
OKCHA	0.41	0.44	0.41	0.50	1.90	0.75
OKCNA	4.58	4.93	4.64	5.32	5.49	4.54
OKOMA	1.75	1.79	1.68	1.93	2.88	1.74
OKOSA	2.42	2.73	2.28	2.73	3.79	2.48
OKTLA	1.46	1.36	1.48	1.67	1.61	1.40
SDRBA	1.14	1.15	1.17	1.36	1.24	1.12
WIGLA	1.19	1.19	1.22	1.45	1.14	1.16

Table S9. Out-of-sample bias of alternative forecast models, for incendiary wildfires in selected Bureau of Indian Affairs tracked tribal land units in the United States

Tribal Land Unit	Bias					
	Simple ACP	Weather Augmented ACP	Seasonal Augmented ACP	Random Walk	CompStat53	Ensemble
AZFTA	-0.11	-0.16	-0.13	0.00	0.02	-0.03
AZNAA	0.24	0.27	0.31	0.00	0.36	0.20
AZPMA	0.13	0.55	0.23	0.00	0.11	0.08
AZSCA	-0.13	-0.15	-0.09	0.00	-0.37	-0.16
CAHIA	-0.10	-0.05	-0.01	-0.01	-0.40	-0.17
CARVA	-0.01	-0.01	0.01	0.00	0.08	0.03
CATIA	-0.11	-0.11	-0.15	-0.02	-0.59	-0.24
MNMNA	-0.09	-0.23	-0.33	0.03	0.07	0.01
MNRLA	0.17	-0.38	0.19	0.00	-0.35	-0.06
MTCRA	-0.10	-0.10	-0.10	0.00	-0.10	-0.07
MTFPA	-0.06	-0.09	-0.06	0.01	-0.17	-0.08
MTRBA	0.08	0.08	0.07	0.00	-0.49	-0.14
NDFTA	-0.52	-0.77	-1.12	0.02	-0.67	-0.39
NDSRA	-0.04	0.34	-0.08	0.00	0.03	0.00
NDTMA	0.03	-0.11	0.06	-0.01	-0.49	-0.15
OKANA	0.19	0.25	0.26	0.01	0.08	0.09
OKCHA	-0.02	-0.03	-0.02	0.00	-0.45	-0.16
OKCNA	0.65	0.44	1.24	0.01	0.49	0.38
OKOMA	0.05	0.18	0.21	0.00	-0.75	-0.24
OKOSA	0.40	0.34	0.46	0.01	-0.33	0.03
OKTLA	-0.09	-0.07	-0.09	0.00	-0.01	-0.03
SDRBA	0.00	-0.01	0.00	0.00	-0.24	-0.08
WIGLA	-0.03	-0.05	-0.04	0.00	-0.03	-0.02

Table S10. Out-of-sample mean absolute error of alternative forecast models, for incendiary wildfires in selected Bureau of Indian Affairs tracked tribal land units in the United States

Tribal Land Unit	Mean Absolute Error					
	Simple ACP	Weather Augmented ACP	Seasonal Augmented ACP	Random Walk	CompStat53	Ensemble
AZFTA	0.34	0.36	0.36	0.25	0.25	0.27
AZNAA	0.67	0.59	0.60	0.66	0.68	0.63
AZPMA	0.60	0.66	0.58	0.61	0.70	0.59
AZSCA	0.86	0.89	0.84	0.80	1.01	0.85
CAHIA	1.51	1.51	1.49	1.57	1.79	1.45
CARVA	0.41	0.41	0.41	0.39	0.44	0.41
CATIA	0.37	0.37	0.40	0.33	0.74	0.42
MNMNA	0.82	0.96	0.76	0.72	0.62	0.69
MNRLA	2.30	2.43	2.36	2.41	2.74	2.29
MTCRA	0.31	0.31	0.31	0.23	0.28	0.27
MTFPA	0.17	0.19	0.17	0.10	0.31	0.19
MTRBA	0.59	0.55	0.58	0.58	1.02	0.69
NDFTA	2.33	2.57	2.47	2.10	3.06	2.15
NDSRA	0.69	0.52	0.72	0.62	0.86	0.67
NDTMA	0.94	0.93	0.85	0.95	1.33	0.99
OKANA	1.08	1.10	1.09	1.13	1.31	1.06
OKCHA	0.19	0.20	0.19	0.17	0.68	0.34
OKCNA	2.75	2.89	2.67	3.15	3.58	2.88
OKOMA	0.95	0.88	0.85	0.91	1.52	0.98
OKOSA	1.32	1.38	1.19	1.41	2.11	1.42
OKTLA	0.87	0.85	0.86	0.81	0.94	0.82
SDRBA	0.49	0.49	0.49	0.51	0.69	0.52
WIGLA	0.48	0.48	0.47	0.45	0.46	0.45

Table S11. Out-of-sample rate of correct outbreak week forecast of alternative forecast models, for incendiary wildfires in selected Bureau of Indian Affairs tracked tribal land units in the United States

Tribal Land Unit	Rate of Correct Outbreak Week Forecast					
	Simple ACP	Weather Augmented ACP	Seasonal Augmented ACP	Random Walk	CompStat53	Ensemble
AZFTA	0.37	0.47	0.37	0.37	0.26	0.47
AZNAA	0.52	0.43	0.41	0.52	0.59	0.52
AZPMA	0.65	0.13	0.47	0.67	0.56	0.72
AZSCA	0.63	0.63	0.65	0.59	0.67	0.67
CAHIA	0.92	0.92	0.93	0.88	0.91	0.94
CARVA	0.33	0.33	0.33	0.29	0.05	0.24
CATIA	0.67	0.67	0.81	0.56	0.89	0.81
MNMNA	0.59	0.53	0.76	0.53	0.76	0.76
MNRLA	0.71	0.71	0.65	0.67	0.71	0.83
MTCRA	0.27	0.27	0.27	0.27	0.67	0.40
MTFPA	0.22	0.44	0.22	0.22	0.11	0.22
MTRBA	0.57	0.57	0.53	0.53	0.83	0.70
NDFTA	1.00	0.99	0.98	0.83	0.89	0.95
NDSRA	0.61	0.17	0.53	0.50	0.22	0.53
NDTMA	0.66	0.61	0.59	0.57	0.70	0.68
OKANA	0.72	0.75	0.73	0.73	0.77	0.85
OKCHA	0.38	0.38	0.38	0.31	0.00	0.31
OKCNA	0.84	0.82	0.81	0.74	0.71	0.89
OKOMA	0.63	0.60	0.48	0.60	0.58	0.73
OKOSA	0.65	0.64	0.62	0.61	0.75	0.72
OKTLA	0.65	0.63	0.61	0.53	0.51	0.71
SDRBA	0.34	0.31	0.28	0.28	0.28	0.48
WIGLA	0.69	0.72	0.66	0.62	0.62	0.69

Table S12. Out-of-sample root mean squared errors of alternative forecast models, for other human-ignited wildfires in selected Bureau of Indian Affairs tracked tribal land units in the United States

Note: 'na' indicates that the ACP models for this tribal unit could not be estimated due to lack of convergence of the likelihood function; as well, no ensemble model could be constructed

Tribal Land Unit	Root Mean Squared Error					
	Simple ACP	Weather Augmented ACP	Seasonal Augmented ACP	Random Walk	CompStat53	Ensemble
AZFTA	0.74	0.85	0.76	0.93	0.83	0.75
AZNAA	1.40	1.39	1.41	1.69	1.38	1.39
AZPMA	1.33	1.31	1.31	1.63	1.40	1.31
AZSCA	1.63	1.57	1.61	1.74	2.43	1.64
CAHIA	0.49	0.49	0.51	0.63	0.52	0.48
CARVA	0.61	0.61	0.57	0.86	0.80	0.67
CATIA	0.53	0.53	0.54	0.73	0.55	0.56
MNMNA	3.68	3.44	3.90	3.92	5.73	3.86
MNRLA	na	na	na	6.37	8.12	na
MTCRA	2.46	2.46	2.42	2.91	2.56	2.38
MTFPA	1.77	1.81	1.76	2.19	2.60	1.87
MTRBA	0.34	0.37	0.41	0.24	0.37	0.25
NDFTA	0.05	0.09	0.08	0.00	0.03	0.02
NDSRA	1.99	1.94	1.94	2.27	2.18	1.91
NDTMA	1.96	1.95	2.23	2.20	2.88	1.94
OKANA	1.21	1.19	1.23	1.41	1.37	1.18
OKCHA	1.21	1.23	1.27	1.38	1.87	1.26
OKCNA	1.22	1.36	1.26	1.46	1.31	1.22
OKOMA	1.90	2.02	2.20	2.20	2.40	1.92
OKOSA	2.34	2.40	2.34	2.63	3.31	2.38
OKTLA	0.75	0.74	0.79	0.95	0.74	0.74
SDRBA	1.82	2.11	2.03	1.78	2.17	1.67
WIGLA	0.98	1.06	1.20	1.11	1.11	0.96

Table S13. Out-of-sample bias of alternative forecast models, for other human-ignited wildfires in selected Bureau of Indian Affairs tracked tribal land units in the United States

Note: 'na' indicates that the ACP models for this tribal unit could not be estimated due to lack of convergence of the likelihood function; as well, no ensemble model could be constructed

Tribal Land Unit	Bias					
	Simple ACP	Weather Augmented ACP	Seasonal Augmented ACP	Random Walk	CompStat53	Ensemble
AZFTA	-0.14	-0.27	-0.18	0.01	0.15	0.01
AZNAA	-0.05	0.04	-0.05	0.00	0.08	0.01
AZPMA	-0.13	-0.15	-0.11	-0.01	0.00	-0.04
AZSCA	-0.11	-0.01	0.09	-0.01	-0.26	-0.12
CAHIA	-0.12	-0.15	-0.16	0.00	-0.11	-0.08
CARVA	-0.03	-0.03	-0.05	0.00	0.01	-0.01
CATIA	0.02	0.02	0.03	0.00	-0.01	0.00
MNMNA	0.08	0.08	0.02	0.01	-0.39	-0.10
MNRLA	na	na	na	0.00	1.15	na
MTCRA	-0.13	-0.13	-0.20	0.01	-0.36	-0.16
MTFPA	-0.16	-0.50	-0.26	0.01	-0.50	-0.21
MTRBA	-0.29	-0.31	-0.34	0.00	-0.10	-0.13
NDFTA	-0.05	-0.09	-0.06	0.00	-0.01	-0.02
NDSRA	-0.22	-0.37	-0.33	0.00	-0.11	-0.11
NDTMA	-0.37	-0.42	-0.86	0.00	-0.68	-0.35
OKANA	0.06	0.11	0.07	0.00	-0.14	-0.02
OKCHA	-0.03	-0.04	-0.06	0.00	-0.43	-0.16
OKCNA	0.11	0.21	0.33	0.00	0.03	0.06
OKOMA	0.18	0.14	0.09	0.01	0.11	0.12
OKOSA	0.36	0.43	0.43	0.00	0.09	0.19
OKTLA	0.00	0.02	0.02	0.00	-0.04	-0.01
SDRBA	-0.96	-1.29	-1.11	-0.02	-0.57	-0.52
WIGLA	-0.15	-0.16	-0.21	0.00	0.08	-0.02

Table S14. Out-of-sample mean absolute error of alternative forecast models, for other human-ignited wildfires in selected Bureau of Indian Affairs tracked tribal land units in the United States

Note: 'na' indicates that the ACP models for this tribal unit could not be estimated due to lack of convergence of the likelihood function; as well, no ensemble model could be constructed

Tribal Land Unit	Mean Absolute Error					
	Simple ACP	Weather Augmented ACP	Seasonal Augmented ACP	Random Walk	CompStat53	Ensemble
AZFTA	0.49	0.55	0.50	0.41	0.44	0.43
AZNAA	0.91	0.86	0.92	0.97	0.86	0.89
AZPMA	1.01	0.99	0.99	1.09	1.04	0.98
AZSCA	1.12	1.11	1.08	1.10	1.68	1.14
CAHIA	0.37	0.36	0.38	0.27	0.32	0.31
CARVA	0.28	0.28	0.29	0.27	0.30	0.26
CATIA	0.18	0.18	0.17	0.19	0.20	0.19
MNMNA	1.30	1.23	1.34	1.20	2.12	1.38
MNRLA	na	na	na	2.58	3.26	na
MTCRA	1.39	1.39	1.35	1.43	1.40	1.30
MTFPA	1.03	1.27	1.09	0.96	1.54	1.09
MTRBA	0.33	0.35	0.37	0.06	0.15	0.18
NDFTA	0.05	0.09	0.06	0.00	0.01	0.02
NDSRA	1.25	1.29	1.25	1.22	1.33	1.14
NDTMA	1.21	1.24	1.29	1.01	1.55	1.15
OKANA	0.87	0.85	0.86	0.91	1.05	0.88
OKCHA	0.72	0.73	0.72	0.70	1.08	0.76
OKCNA	0.78	0.84	0.76	0.86	0.81	0.76
OKOMA	1.00	1.06	1.10	1.07	1.42	1.07
OKOSA	1.48	1.48	1.51	1.56	2.02	1.54
OKTLA	0.41	0.42	0.42	0.42	0.42	0.40
SDRBA	1.54	1.76	1.66	1.05	1.55	1.28
WIGLA	0.52	0.52	0.54	0.34	0.42	0.42

Table S15. Out-of-sample rate of correct outbreak week forecast of alternative forecast models, for other human-ignited wildfires in selected Bureau of Indian Affairs tracked tribal land units in the United States

Note: 'na' indicates that the ACP models for this tribal unit could not be estimated due to lack of convergence of the likelihood function; as well, no ensemble model could be constructed

Tribal Land Unit	Rate of Correct Outbreak Week Forecast					
	Simple ACP	Weather Augmented ACP	Seasonal Augmented ACP	Random Walk	CompStat53	Ensemble
AZFTA	0.71	0.67	0.62	0.62	0.33	0.67
AZNAA	0.83	0.65	0.69	0.72	0.75	0.78
AZPMA	0.84	0.90	0.86	0.62	0.75	0.84
AZSCA	0.83	0.85	0.74	0.77	0.66	0.87
CAHIA	0.27	0.54	0.54	0.38	0.54	0.46
CARVA	0.33	0.33	0.33	0.33	0.07	0.47
CATIA	0.00	0.00	0.00	0.18	0.18	0.18
MNMNA	0.60	0.65	0.85	0.60	0.80	0.80
MNRLA	0.00	0.00	0.00	0.67	0.63	0.00
MTCRA	0.90	0.90	0.89	0.66	0.89	0.86
MTFPA	0.83	1.00	0.88	0.68	0.66	0.90
MTRBA	0.00	0.00	0.25	0.00	0.25	0.00
NDFTA	na	na	na	na	na	na
NDSRA	0.96	0.98	0.99	0.72	0.81	0.92
NDTMA	1.00	0.89	0.89	0.58	0.67	0.76
OKANA	0.63	0.71	0.70	0.54	0.62	0.75
OKCHA	0.72	0.72	0.70	0.57	0.49	0.79
OKCNA	0.75	0.49	0.42	0.62	0.65	0.75
OKOMA	0.65	0.63	0.65	0.63	0.51	0.69
OKOSA	0.76	0.66	0.66	0.67	0.68	0.80
OKTLA	0.36	0.27	0.36	0.42	0.58	0.55
SDRBA	0.99	0.99	0.99	0.64	0.84	0.96
WIGLA	0.50	0.64	0.59	0.45	0.05	0.45