

Martin, KL, MD Hurteau, BA Hungate, GW Koch, MP North. 2015. Carbon tradeoffs of restoration and provision of endangered species habitat in a fire-maintained forest. *Ecosystems*, 18:76-88.  
 LANDIS-II and Century Succession Extension parameter values.

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Table S1. Species Parameters for LANDIS

Species	Longevity	Sexual Maturity	Shade Tol.	Fire Tol.	Effective Disp.	Max Disp.	Sprout Prob.	Min Sprout	Max Sprouting Sprout	
<i>Pinus palustris</i>	400	30	1	5	30	200	0	0	3	none
<i>Pinus taeda</i>	350	15	2	4	45	200	0	0	3	none
<i>Pinus echinata</i>	350	20	1	5	30	200	0	5	25	resprout
<i>Quercus falcata</i>	150	25	3	2	30	500	0.75	5	20	resprout
<i>Quercus alba</i>	300	20	3	2	30	500	0.5	5	40	resprout
<i>Quercus laevis</i>	150	10	2	2	30	500	0.75	5	50	resprout
<i>Quercus laevis</i>	150	10	2	2	30	500	0.75	5	50	resprout
<i>Quercus marilandica</i>	300	5	2	2	30	500	0.75	5	50	resprout
<i>Carya tomentosa</i>	300	25	3	1	30	500	0.75	5	250	resprout
<i>Liquidambar styraciflua</i>	350	20	2	1	60	180	0.75	5	50	resprout
<i>Acer rubrum</i>	250	10	4	1	100	1000	0.5	5	150	none

Table S2. Century Succession Species Parameters for LANDIS

Species	GDD		Min T	Max T	Leaf Drought	Leaf Long	Lignin				C:N			
	Min	Max					CRoot	Leaf	FRoot	Wood	CRoot	Leaf	FRoot	Wood
<i>Pinus palustris</i>	4000	7000	3	0.423	2	0.2	0.2	0.35	0.35	50	50	380	170	100
<i>Pinus taeda</i>	4000	7000	1	0.360	3	0.2	0.2	0.35	0.35	50	50	380	170	100
<i>Pinus echinata</i>	4000	7000	1	0.423	3	0.2	0.2	0.35	0.35	50	50	380	170	100
<i>Quercus alba</i>	3176	7000	1	0.330	1	0.367	0.23	0.23	0.23	24	48	500	333	55
<i>Quercus falcata</i>	4000	7000	-5	0.423	1	0.293	0.23	0.23	0.35	24	48	500	333	55
<i>Quercus laevis</i>	4000	7000	1	0.423	1	0.293	0.23	0.23	0.35	24	48	500	333	55
<i>Quercus marilandica</i>	4000	7000	1	0.423	1	0.293	0.23	0.23	0.35	24	48	500	333	55
<i>Carya tomentosa</i>	3788	7000	1	0.300	1	0.293	0.23	0.23	0.23	24	48	500	333	55
<i>Liquidambar styraciflua</i>	3912	7000	1	0.300	1	0.331	0.255	0.255	0.255	25	45	90	90	45
<i>Acer rubrum</i>	1260	7000	-18	0.2	1	0.223	0.255	0.255	0.255	20	45	90	90	45

There were not any nitrogen fixing or epicormic sprouting species.

Table S3. Century Succession Functional Group Parameters

	PPDF1 T-mean	PPDF2 T-Max	PPDF3 T-Shape	PPDF4 T-shape	FCFRAC leaf	BTOLAI	KLAI	MAXLAI	PPRPTS2	PPRPTS3	Wood Decay	Monthly Wood	Age Mort	Leaf Drop Month
Pine	28.0	45.0	4.5	5.0	0.37	0.00823	1000.0	10.0	1.0	0.8	0.6	0.003	15	10
Hardwood	27.0	45.0	3.0	3.5	0.5	0.00823	1000.0	20.0	1.0	0.8	0.6	0.003	15	10

Species were grouped into hardwoods and pines.

Table S4. Ecoregion Parameters for Soil Organic Matter

	SOM1 C surf	SOM1 N surf	SOM1 C	SOM1 N	SOM2 C	SOM2 N	SOM3 C	SOM3 N	Minrl N
Eco1	136.8	1.52	62.6	5.21	876.4	17.5	626.0	15.7	0.9
Eco2	98.4	1.09	124.2	10.4	1739.0	34.8	1242.1	31.1	0.9
Eco3	139.7	1.55	157.1	13.1	2199.4	44.0	1571.0	39.3	0.7
Eco4	139.7	1.55	31.5	2.62	441.4	8.8	315.3	7.88	0.7

Table S5. Ecoregion Parameters

	Percent		Field	Wilt	StormF	BaseF		Decay	Decay	Decay	Decay
	Clay	Sand	Cap.	Point	Frac	Frac.	Drainage	surface	SOM1	SOM2	SOM3
Eco1	0.06	0.84	0.16	0.06	0.4	0.1	1.0	0.127	0.31	0.0215	0.00006
Eco2	0.12	0.66	0.23	0.10	0.4	0.1	1.0	0.19	0.24	0.0133	0.00006
Eco3	0.34	0.30	0.35	0.16	0.4	0.1	0.9	0.134	0.3306	0.013	0.00017
Eco4	0.36	0.53	0.32	0.17	0.4	0.1	0.9	0.15	1.075	0.0655	0.00058

Soil depths were 100 cm in all ecoregions. Across ecoregions, atmospheric N input was parameterized as 0.006 and intercept 0.02, with denitrification of 0.03. The latitude at Ft. Benning is 32 degrees.

Table S6. Fire Behavior Parameters for the Dynamic Fire Extension

Region	Mu	Sigma	Max	Sp	Sp	Sp	Su	Su	Su	Fa	Fa	Fa	Open	Num
				Size	FMCL	FMCH	HProp	FMCL	FMCH	HProp	FMCL	FMCH		
Inactive	1	1	1	120	120	0.0	120	120	0.0	120	120	0.0	0	0
Eco5	7	3	13	95	120	0.5	90	120	0.5	90	120	0.50	1	690
Eco6	7	3	13	95	120	0.6	90	120	0.6	90	120	0.60	1	245
Eco7	7	3	13	95	120	0.6	90	120	0.6	90	120	0.60	1	85
Eco8	7	3	13	95	120	0.6	90	120	0.6	90	120	0.60	1	28
Eco9	7	3	13	95	120	0.6	90	120	0.6	90	120	0.60	1	95

Table S7. Fuel Table for Dynamic Fire Extension

Index	Base	Surface	IngProb	a	b	c	q	BUI	MaxBE	CBH
1	Conifer	C5	1.0	30	0.080	3.5	0.8	56	1.220	0
2	Conifer	C5	1.0	30	0.080	3.5	0.8	56	1.220	2
3	Conifer	C5	1.0	30	0.080	3.5	0.8	56	1.220	5
4	Deciduous	D1	1.0	30	0.0232	1.6	0.9	32	1.179	0
5	Deciduous	D1	1.0	30	0.0232	1.6	0.9	32	1.179	2
6	Conifer	M1	1.0	0	0	0	0.8	50	1.250	0
7	Conifer	C5	1.0	30	0.08	3.0	0.8	50	1.460	5
8	Conifer	C5	0.0	30	0.080	3.5	0.8	50	1.220	0
9	Conifer	C5	0.0	30	0.080	3.5	0.8	50	1.220	0
10	Conifer	C5	1.0	30	0.080	3.0	0.8	50	1.460	5