

Supplemental information

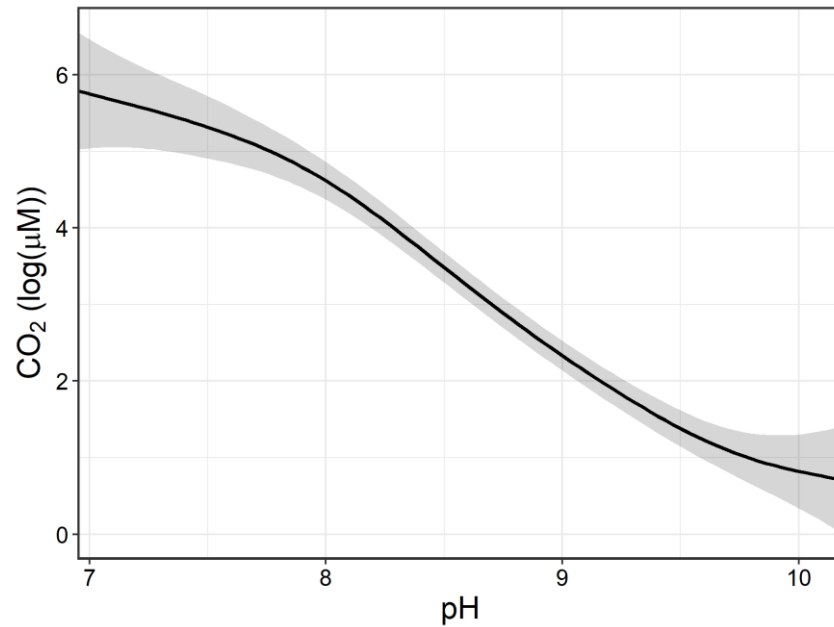


Figure S1: Correlation between measured log-transformed CO₂ concentrations (µM) and surface water pH using a generalised additive model. Model deviance explained was 86.3%.

The response pattern shown is the partial effect splines from the GAM and shaded area indicated 95% credible intervals.

Table S1: Spearman correlation matrix of biotic and abiotic factors with log-transformed CO₂ and CH₄ concentrations. Variables included total nitrogen (TN), chlorophyll *a* (Chla), alkalinity (Alk), sediment C/N ratio (SedCNorg), total phosphorus (TP), dissolved organic carbon (DOC), Nitrate-nitrite (NOx), conductivity (Cond), and dissolved oxygen (DO).

Row	logCO ₂	logCH ₄	logTN	logChla	logAlk	SedCNorg	logTP	logDOC	logNO _x	logCond	sqrtDO
logCO ₂											
logCH ₄	0.21*										
logTN	0.20*	0.31**									
logChla	-0.15	0.36***	0.20								
logAlk	0.41*****	-0.03	0.53*****	-0.10							
SedCNorg	0.19	0.25*	0.30**	0.14	0.23*						
logTP	0.29**	0.30**	0.62*****	0.16	0.29**	0.18					
logDOC	0.13	0.10	0.84*****	0.19	0.59*****	0.30**	0.52*****				
logNO _x	0.30**	0.48*****	0.47*****	0.14	0.12	0.21*	0.42*****	0.12			
logCond	0.17	-0.29**	0.42*****	-0.10	0.66*****	0.06	0.16	0.52*****	-0.10		
sqrtDO	-0.46*****	-0.21*	-0.10	0.21*	-0.16	0.01	-0.13	-0.04	-0.15	-0.06	
logDIN	0.28**	0.51*****	0.72*****	0.14	0.21*	0.19	0.53*****	0.33***	0.85*****	0.07	-0.18

p < .0001 *****; *p* < .001 ***, *p* < .01 **, *p* < .05 *

Table S2: Spearman correlation matrix of hydromorphological factors with log-transformed CO₂ and CH₄ concentrations. Variables included reservoir surface area (*Area*), index of basin permanence (*IBP*), evaporation to inflow ratio (*EtoI*), residence time (*RT*), inflow volume (*Inflow*), deuterium excess (*d_excess*), and δ¹⁸O of inflow (*del18O*).

<i>Row</i>	<i>logCO2</i>	<i>logCH4</i>	<i>logArea</i>	<i>logIBP</i>	<i>logEtoI</i>	<i>logRT</i>	<i>logInflow</i>	<i>d_excess</i>	<i>del18O</i>
logCO2									
logCH4	0.18								
logArea	-0.22*	-0.20*							
logIBP	-0.19	-0.20*	0.76*****						
logEtoI	-0.09	0.07	0.10	-0.10					
logRT	-0.19	-0.04	0.28**	0.39*****	0.78*****				
logInflow	-0.21*	-0.11	0.78*****	0.48*****	0.69*****	0.66*****			
d_excess	0.09	-0.03	-0.12	0.08	-0.96*****	-0.72*****	-0.70*****		
del18O	-0.07	-0.07	0.04	-0.03	0.03	-0.02	0.03	0.05	
sqrtBF	-0.06	0.12	-0.18	-0.06	-0.12	-0.01	-0.20*	0.16	0.15

p < .0001 *****; *p* < .001 ***, *p* < .01 **, *p* < .05 *

Table S3: Spearman correlation matrix of landscape factors with log-transformed CO₂ and CH₄ concentrations. Variables include landscape elevation (*Elevation*), total soil sand (*TSAND*), total soil silt (*TSILT*), total soil clay (*TCLAY*), soil organic carbon (*ORGCARB*), soil pH (*PH2*), and soil cation exchange capacity (*CEC*).

<i>Row</i>	<i>logCO2</i>	<i>logCH4</i>	<i>logElevation</i>	<i>TSAND</i>	<i>TSILT</i>	<i>TCLAY</i>	<i>logORGCARB</i>	<i>PH2</i>	<i>logCEC</i>
<i>logCO2</i>									
<i>logCH4</i>	0.17								
<i>logElevation</i>	-0.10	-0.03							
<i>TSAND</i>	-0.10	-0.24*	-0.03						
<i>TSILT</i>	0.00	0.16	0.13	-0.65****					
<i>TCLAY</i>	0.00	0.20	0.08	-0.77****	0.45****				
<i>logORGCARB</i>	0.12	0.17	-0.34***	-0.42****	0.19	-0.12			
<i>PH2</i>	0.02	0.23*	-0.10	-0.34***	0.11	0.48****	0.06		
<i>logCEC</i>	0.13	0.26*	-0.09	-0.91****	0.39****	0.59****	0.64****	0.32**	
<i>logKSAT</i>	-0.04	-0.23*	-0.08	0.90****	-0.67****	-0.94****	-0.08	-0.44****	-0.71****

p < .0001 ****; *p* < .001 ***; *p* < .01 **, *p* < .05 *

Output tables

Table S4: Summary of GAM output used to assess multivariate drivers of CO₂ concentrations. Predictor variables included DO saturation (*DO*), alkalinity (*Alk*), NO_x (*NO_x*), buoyancy frequency (*BF*), δ_1 ($\delta^{18}O$), water residence time (*RT*), soil cation exchange capacity (*CEC*), elevation (*Elevation*), and soil salinity (parametric coefficients).

Smooth terms	Ref edf	edf	F statistic	p-value
<i>f(sqrt(DO_i))</i>	6	2.66	10.7	<0.001
<i>f(log(Alk_i))</i>	6	1.80	3.2	<0.001
<i>f(log(NO_x_i))</i>	6	1.49	1.0	<0.05
<i>f(sqrt(BF_i))</i>	6	1.22	0.6	<0.05
<i>f(log(RT_i), $\delta^{18}O_i$)</i>	24	2.58	0.9	<0.001
<i>f(log(CEC_i))</i>	6	0.80	0.7	<0.05
<i>f(log(Elevation_i))</i>	6	0.82	0.8	<0.05
Parametric coefficients	Estimate	Std. Error	p-value	
<i>Non-saline (N)</i>	2.94	0.24		
<i>Weakly saline (W)</i>	3.36	0.15	0.14	
<i>Moderately saline (M)</i>	3.17	0.14	0.40	
<i>Strongly saline (S)</i>	2.79	0.55	0.79	
Intercept coefficient: 2.94 ± 0.23				
Deviance explained: 65.7%				

Table S5: Summary of GAM output showing significance of predictor variables for CH₄ concentrations.

Predictor variables included DO saturation (*DO*), sediment C/N (*SedC/N*), DIN (*DIN*), conductivity (*Cond*), buoyancy frequency (*BF*), δ_I ($\delta^{18}O$), water residence time (*RT*), soil K_{sat} (*KSAT*), elevation (*Elevation*), and land use (parametric coefficients).

Smooth terms	Ref edf	Edf	F statistic	<i>p</i> -value
<i>f(sqrt(DO_i))</i>	6	2.10	1.42	<0.01
<i>f(SedC/N_i)</i>	6	1.87	2.07	<0.001
<i>f(log(DIN_i))</i>	6	0.98	6.73	<0.001
<i>f(log(Cond_i))</i>	6	1.80	5.27	<0.001
<i>f(sqrt(BF_i))</i>	6	7.4E-6	0.00	0.71
<i>f(log(RT_i), $\delta^{18}O_i$)</i>	32	5.10	0.95	<0.001
<i>f(log(KSAT_i))</i>	6	0.47	0.09	0.32
<i>f(log(Elevation_i))</i>	6	0.21	0.04	0.24
Parametric coefficients	Estimate	Std. Error		<i>p</i> -value
<i>Pasture</i>	0.59	0.22		
<i>Livestock</i>	0.82	0.10		0.27
<i>Crop</i>	1.23	0.21		<0.05
Intercept coefficient: 0.59 ± 0.19				
Deviance explained: 74.1%				

Table S6: Reference information for Figure 4 and 5 in the main article

Study	Reference
Alaska ponds	Sepulveda-Jauregui, A., Walter Anthony, K. M., Martinez-Cruz, K., Greene, S., and Thalasso, F.: Methane and carbon dioxide emissions from 40 lakes along a north–south latitudinal transect in Alaska, <i>Biogeosciences</i> , 12, 3197-3223, 10.5194/bg-12-3197-2015, 2015.
Arctic ponds	Bouchard, F., Laurion, I., Prékienis, V., Fortier, D., Xu, X., and Whitticar, M. J.: Modern to millennium-old greenhouse gases emitted from ponds and lakes of the Eastern Canadian Arctic (Bylot Island, Nunavut), <i>Biogeosciences</i> , 12, 7279-7298, 2015.
Artificial ponds, India	Panneer Selvam, B., Natchimuthu, S., Arunachalam, L., and Bastviken, D.: Methane and carbon dioxide emissions from inland waters in India-Implications for large scale greenhouse gas balances, <i>Global change biology</i> , 2014.
Aquaculture ponds	Yang, P., He, Q., Huang, J., and Tong, C.: Fluxes of greenhouse gases at two different aquaculture ponds in the coastal zone of southeastern China, <i>Atmospheric Environment</i> , 115, 269-277, https://doi.org/10.1016/j.atmosenv.2015.05.067 , 2015.
Beaver ponds, New York	Yavitt, J. B., Angell, L. L., Fahey, T. J., Cirimo, C. P., and Driscoll, C. T.: Methane fluxes, concentrations, and production in two Adirondack beaver impoundments, <i>Limnology and Oceanography</i> , 37, 1057-1066, doi:10.4319/lo.1992.37.5.1057, 1992. Yavitt, J. B., and Fahey, T. J.: Beaver impoundments in temperate forests as sources of atmospheric CO ₂ , <i>Geophysical Research Letters</i> , 21, 995-998, doi:10.1029/94GL00906, 1994.
Beaver ponds, Rhode Is.	Lazar, J. G., Addy, K., Welsh, M. K., Gold, A. J., and Groffman, P. M.: Resurgent beaver ponds in the Northeastern United States: implications for greenhouse gas emissions, <i>Journal of environmental quality</i> , 43, 1844-1852, 2014.
Bog pools	McEnroe, N., Roulet, N., Moore, T., and Garneau, M.: Do pool surface area and depth control CO ₂ and CH ₄ fluxes from an ombrotrophic raised bog, James Bay, Canada? <i>Journal of Geophysical Research: Biogeosciences</i> , 114, 2009.
Boreal ponds	Kankaala, P., Huotari, J., Tulonen, T., and Ojala, A.: Lake-size dependent physical forcing drives carbon dioxide and methane effluxes from lakes in a boreal landscape, <i>Limnology and Oceanography</i> , 58, 1915-1930, 10.4319/lo.2013.58.6.1915, 2013.
Coal mine ponds	Gilbert, P. J., Cooke, D. A., Deary, M., Taylor, S., and Jeffries, M. J.: Quantifying rapid spatial and temporal variations of CO ₂ fluxes from small, lowland freshwater ponds, <i>Hydrobiologia</i> , 793, 83-93, 10.1007/s10750-016-2855-y, 2017.
Constructed wetland	Liikanen, A., Huttunen, J. T., Karjalainen, S. M., Heikkinen, K., Väisänen, T. S., Nykänen, H., and Martikainen, P. J.: Temporal and seasonal changes in greenhouse gas emissions from a constructed wetland purifying peat mining runoff waters, <i>Ecological Engineering</i> , 26, 241-251, https://doi.org/10.1016/j.ecoleng.2005.10.005 , 2006.
Farm reservoirs, Australia	Ollivier, Q. R., Maher, D. T., Pitfield, C., and Macreadie, P. I.: Punching above their weight: Large release of greenhouse gases from small agricultural dams, <i>Global Change Biology</i> , 25, 721-732, doi:10.1111/gcb.14477, 2019.

Finnish ponds	Huttunen, J. T., Väisänen, T. S., Heikkinen, M., Hellsten, S., Nykänen, H., Nenonen, O., and Martikainen, P. J.: Exchange of CO ₂ , CH ₄ and N ₂ O between the atmosphere and two northern boreal ponds with catchments dominated by peatlands or forests, <i>Plant Soil</i> , 242, 137-146, 2002.
Global ponds	Holgerson, M. A., and Raymond, P. A.: Large contribution to inland water CO ₂ and CH ₄ emissions from very small ponds, 9, 222, 10.1038/ngeo2654 https://www.nature.com/articles/ngeo2654#supplementary-information , 2016.
Peatland pond	Burger, M., Berger, S., Spangenberg, I., and Blodau, C.: Summer fluxes of methane and carbon dioxide from a pond and floating mat in a continental Canadian peatland, <i>Biogeosciences</i> , 13, 3777-3791, 2016.
Permafrost ponds	Kuhn, M., Lundin, E. J., Giesler, R., Johansson, M., and Karlsson, J.: Emissions from thaw ponds largely offset the carbon sink of northern permafrost wetlands, <i>Scientific Reports</i> , 8, 9535, 10.1038/s41598-018-27770-x, 2018.
Prairie wetlands	Bortolotti, L. E., St. Louis, V. L., Vinebrooke, R. D., and Wolfe, A. P.: Net Ecosystem Production and Carbon Greenhouse Gas Fluxes in Three Prairie Wetlands, <i>Ecosystems</i> , 19, 411-425, 10.1007/s10021-015-9942-1, 2016.
Reservoirs – agro	Wang, X., He, Y., Yuan, X., Chen, H., Peng, C., Yue, J., Zhang, Q., Diao, Y., and Liu, S.: Greenhouse gases concentrations and fluxes from subtropical small reservoirs in relation with watershed urbanization, <i>Atmospheric Environment</i> , 154, 225-235, https://doi.org/10.1016/j.atmosenv.2017.01.047 , 2017.
Reservoirs – forest	Wang, X., He, Y., Yuan, X., Chen, H., Peng, C., Yue, J., Zhang, Q., Diao, Y., and Liu, S.: Greenhouse gases concentrations and fluxes from subtropical small reservoirs in relation with watershed urbanization, <i>Atmospheric Environment</i> , 154, 225-235, https://doi.org/10.1016/j.atmosenv.2017.01.047 , 2017.
Reservoirs – urban	Wang, X., He, Y., Yuan, X., Chen, H., Peng, C., Yue, J., Zhang, Q., Diao, Y., and Liu, S.: Greenhouse gases concentrations and fluxes from subtropical small reservoirs in relation with watershed urbanization, <i>Atmospheric Environment</i> , 154, 225-235, https://doi.org/10.1016/j.atmosenv.2017.01.047 , 2017.
Shallow pond	Natchimuthu, S., Panneer Selvam, B., and Bastviken, D.: Influence of weather variables on methane and carbon dioxide flux from a shallow pond, <i>Biogeochemistry</i> , 119, 403-413, 10.1007/s10533-014-9976-z, 2014.
Small lakes	Whitfield, C. J., Aherne, J., and Baulch, H. M.: Controls on greenhouse gas concentrations in polymictic headwater lakes in Ireland, <i>Science of The Total Environment</i> , 410, 217-225, http://dx.doi.org/10.1016/j.scitotenv.2011.09.045 , 2011.
Temporary ponds	Catalán, N., von Schiller, D., Marcé, R., Koschorreck, M., Gomez-Gener, L., and Obrador, B.: Carbon dioxide efflux during the flooding phase of temporary ponds, <i>Limnetica</i> , 33, 349-360, 2014.
Urban ponds	Peacock, M., Audet, J., Jordan, S., Smeds, J., and Wallin, M. B.: Greenhouse gas emissions from urban ponds are driven by nutrient status and hydrology, <i>Ecosphere</i> , 10, e02643, 10.1002/ecs2.2643, 2019.
Vernal pools 1	Kifner, L. H., Calhoun, A. J. K., Norton, S. A., Hoffmann, K. E., and Amirbahman, A.: Methane and carbon dioxide dynamics within four vernal pools in Maine, USA, <i>Biogeochemistry</i> , 139, 275-291, 10.1007/s10533-018-0467-5, 2018.
Vernal pools 2	Ross, B. N.: Assessing hydrology, carbon flux, and soil spatial variability within vernal pool wetlands, 2017.

Wetlands – Ontario

Hamilton, J. D., Kelly, C. A., Rudd, J. W. M., Hesslein, R. H., and Roulet, N. T.: Flux to the atmosphere of CH₄ and CO₂ from wetland ponds on the Hudson Bay lowlands (HBLs), *Journal of Geophysical Research: Atmospheres* (1984–2012), 99, 1495-1510, 10.1029/93JD03020, 1994.

Table of model data currently in private Github repository.

Site_ID	DO.s at	RT	Alk. mg.L	pH	NOx. ug.N. L	Soil_ pH	Eleva tion	b.f.m ax	sedim ent_C _Nor g	DIN. ug.N. L	Surfa ce_C ond	KSA T	CO2. uM	CH4. uM	Salini ty_co de	dellI 8O	Land use	CEC	TSA ND
14A	58	1.46	393.6 2	8.92	13.67	7	547	0.008 9	10.02	263.6 7	5179	4.67	7.95	0.39	M	-9.36	Lives tock	22	44
14B	85.1	0.53	398.0 7	8.44	12.6	7.3	562	0.007 7	13.42	122.6	1291	5.39	52.05	1.05	M	- 13.09	Lives tock	24	47
20	97.2	0.49	221.4 7	9.11	7.76	7.3	619	0.001 3	9.91	97.76	1369	5.39	6.61	0.70	M	- 13.56	Lives tock	24	47
49	95.5	0.51	261.7	9.14	7.62	7	599	0.003 5	11.17	117.6 2	1400	24.79	9.87	1.99	M	- 11.02	Lives tock	14	72
54B	98.7	0.25	155.3 9	10.19	11.75	7	589.8	0.005 6	10.33	171.7 5	1421	24.79	2.72	1.64	M	- 10.78	Lives tock	14	72
53A	110.8	0.19	129.2 7	9.8	3188. 68	7	595	0.011 8	9.45	3428. 68	2504	24.79	1.34	0.62	M	- 11.03	Pastu re	14	72
54A	82	0.21	333.0 4	8.85	12.26	7	593	0.001 9	10.05	112.2 6	1860	24.79	19.50	2.54	M	- 10.67	Crop	14	72
52	89.8	0.23	288.9 2	8.74	114.8 6	7	590	0.000 0	10.75	214.8 6	2463	24.79	20.97	0.88	M	-9.88	Lives tock	14	72
48A	96.5	0.45	317.9 7	8.62	13.98	7.3	619	0.007 3	11.67	113.9 8	2170	5.39	20.71	1.43	M	- 10.99	Lives tock	24	47
51	145.5	0.20	153.1 1	9.16	16.83	7	608	0.007 3	11.96	106.8 3	2069	24.79	NA	NA	M	- 12.39	NA	14	72
48B	95.4	0.19	218.7	8.51	6.69	7.3	617.9	0.015 7	10.00	96.69	1773	5.39	20.46	0.54	M	- 11.11	Pastu re	24	47
55B	82.1	0.56	141.0 5	9.01	7.09	7.3	586	0.012 8	9.52	117.0 9	416.7	5.39	5.64	1.65	M	- 12.30	Crop	24	47
4G	47.7	0.41	271.9 5	7.73	1.83	7.5	576	0.009 9	NA	31.83	501.7	0.34	178.1 3	2.04	W	- 12.07	Crop	40	8
4D	122	0.77	118.1 1	9	39.8	7.5	572	0.018 1	10.23	369.8	263.1	0.34	8.70	4.02	W	- 13.66	Crop	40	8
4E	91	0.76	377.1 7	8.11	231.5 5	7.5	572	0.009 8	9.20	481.5 5	766	0.34	147.0 7	6.45	W	- 10.96	Crop	40	8
4C	131.1	0.46	111.9 8	9.88	4.81	7.5	576	0.005 2	9.82	64.81	592	0.34	2.27	0.73	W	-9.54	Crop	40	8

4B	126.5	0.98	148.8 6	9.85	14.17	7	634	0.005 7	11.03	204.1 7	721	2.83	5.03	8.07	W	- 13.66	Crop	25	40
4A	110.1	0.50	NA	8.68	NA	7.5	576	0.007 5	10.82	NA	617	0.34	9.01	1.54	W	- 13.94	Crop	40	8
62E	29.1	1.38	628.9 7	8.17	462.9 2	6.8	704.2	0.000 0	10.45	2352. 92	5360	4.67	74.60	0.98	W	-8.81	Pasture	23	44
62B	63	0.38	755.4 9	9.07	5.28	6.7	686.4	0.000 0	9.80	65.28	2154	26.96	14.62	1.88	N	- 12.51	Lives tock	11	81
62C	38.1	0.17	595.9 3	8.58	402.6 8	6.7	689	0.000 0	9.79	882.6 8	1108	26.96	38.76	3.24	N	- 13.89	Lives tock	11	81
61A	60	0.71	158.2 5	9.48	6.29	6.8	700.6	0.002 6	9.92	126.2 9	1408	3.1	3.39	1.15	W	- 12.46	Lives tock	25	39
61B	44	0.81	164.9 4	7.48	10.01	6.8	715.3	0.000 0	10.75	230.0 1	4886	3.1	83.09	0.53	W	- 12.63	Lives tock	25	39
61C	44.9	0.76	235.0 7	8.25	9.11	6.8	725	0.004 4	9.62	59.11	756	3.1	53.61	0.46	W	- 13.57	Lives tock	25	39
56A	76.4	0.65	437.7 5	8.4	4.19	6.8	708.7	0.015 8	10.31	64.19	7805	3.1	29.83	0.42	M	- 12.22	Pasture	25	39
56B	50.4	0.63	353.8 4	8.43	4.44	6.8	701	0.000 4	10.03	64.44	6506	3.1	42.09	0.09	M	- 11.37	Pasture	25	39
66A	112.4 1	0.40	439.6 3	9.19	1.21	6.8	605	0.000 8	9.16	51.21	3208	7.33	6.10	0.64	S	- 12.15	Pasture	19	55
66B	90.4	0.38	299.8 2	9.2	3.11	6.6	605	0.008 6	10.61	73.11	3332	4.2	5.70	0.87	S	- 11.16	Lives tock	24	32
66C	101.2	0.82	160.4 8	8.68	2.18	6.8	607	0.012 1	8.48	42.18	584	7.4	10.05	0.94	S	- 14.10	Pasture	17	54
27A	20	0.27	109.7 4	6.95	320.9	6.8	595	0.003 7	10.28	360.9	246	3.1	326.1 3	21.18	M	- 17.04	Crop	25	39
27B	178.1 2	0.92	84.9	9.52	49.59	6.8	596	0.012 9	9.87	89.59	220.4	3.1	3.69	2.67	M	- 14.93	Crop	25	39
27C	12.7	0.32	99.64	7.05	16.32	6.8	596.3	0.006 6	9.56	76.32	234.6	3.1	317.5 7	3.99	M	- 17.31	Crop	25	39
45A	231.9	0.43	148.6 2	9.48	13.12	7.3	601	0.027 6	10.91	263.1 2	1555	5.39	3.85	3.80	M	- 11.37	Lives tock	24	47
45D	57.3	0.56	264.9 4	8.1	19.27	7	600	0.021 3	12.76	139.2 7	2127	24.79	53.49	3.49	M	-8.70	Lives tock	14	72
45B	222.8	0.61	127.3 8	9.58	18.25	7.3	603	0.026 9	10.04	98.25	324.9	5.39	4.45	9.35	M	- 11.59	Lives tock	24	47

45C	135.6	0.48	179.2 8	9.24	17.15	7.3	604	NA	13.20	267.1 5	176.7	5.39	2.51	1.59	M	- 13.77	Lives tock	24	47
15B	126.1	0.66	141.5 2	9.24	12.69	7	597	0.010 9	9.63	42.69	1102	24.79	2.99	0.39	M	- 12.08	Pastu re	14	72
15A	88	1.00	253.9 6	9.05	4.38	7.3	617	0.011 3	9.06	54.38	1594	5.39	6.21	0.79	M	- 11.86	Pastu re	24	47
67A	96.5	0.30	251.9 8	8.17	169.4 4	NA	NA	0.008 3	10.82	3769. 44	1680	NA	179.7 7	1.53	NA	- 13.57	Crop	NA	NA
67B	240.5	0.57	246.4 4	9.01	155.2 5	7	658	0.011 7	10.18	685.2 5	1110	4.67	24.61	15.85	M	- 13.76	Crop	22	44
22B	54.5	0.70	269.4 8	7.62	99.6	7	588.7	0.003 2	10.04	739.6	1647	4.67	162.1 2	2.47	M	- 13.29	Crop	22	44
68	42.9	1.20	108.0 9	9.1	536.5 4	7.5	585	0.001 0	11.02	556.5 4	230.2	0.34	3.97	18.50	W	- 11.00	Crop	40	8
32A	45.7	1.01	292.8 1	9.04	25.31	NA	NA	0.013 4	10.56	125.3 1	2982	NA	7.57	1.73	NA	-9.45	Lives tock	NA	NA
32B	17.6	0.52	423.0 9	8.27	580.9 7	7.6	624	0.000 4	11.59	990.9 7	2152	4	78.64	6.83	M	- 12.72	Pastu re	24	39
32C	35.2	1.71	290.9 9	19.36	7.6	608	0.005 9	9.10	129.3 6	3460	4	6.83	1.99	M	-8.96	Lives tock	24	39	
8H	163.9	0.08	219.7 2	8.64	265.0 4	7	533.7	NA	13.29	305.0 4	838	6.8	70.29	11.00	N	- 11.57	Lives tock	21	50
8G	117.8	0.33	248.8 6	8.91	63.74	7	529	0.005 8	11.22	93.74	1092	6.8	13.13	2.21	N	- 11.77	Lives tock	21	50
8D	8.9	0.25	290.9 7.81	7.81	1757. 96	6.6	538.9	0.000 4	11.15	7687. 96	793	2.18	135.4 8	21.52	N	- 16.94	Lives tock	29	26
8C	2.3	1.52	239.6 2	7.68	2637. 6	7.5	549	0.027 1	10.77	6917. 6	1033	5.36	213.1 9	54.45	W	- 11.31	Lives tock	26	46
8A	52.4	0.56	185.1 2	7.81	33.23	7.2	556	0.003 3	9.27	83.23	799	4.47	110.5 5	2.41	N	- 13.93	Lives tock	23	42
8B	100.5	0.65	245.5 4	8.24	347.7 2	7.5	550	0.026 9	11.75	447.7 2	880	5.36	28.46	4.21	W	- 13.79	Lives tock	26	46
69B	74.9	0.75	136.3 6	8.63	84.18	7	973	0.000 4	10.68	104.1 8	613	23.02	13.66	1.33	N	- 16.11	Lives tock	11	70
69A	87.4	0.58	164.9 3	8.71	43.79	7	997	0.000 4	11.19	213.7 9	510	3.1	14.94	5.97	M	- 17.01	Lives tock	25	39
69C	79.1	0.66	158.5 7	9.19	17.8	7	966	0.000 7	9.06	127.8	382.5	3.1	5.37	4.10	W	- 18.01	Lives tock	25	39

26C	116.8	0.49	146.9 8	8.71	154.7 1	7	966	0.015 6	9.35	224.7 1	576	3.1	46.79	2.04	M	- 17.98	Pasture	25	39
26B	72.4	0.57	194.8 8	8.77	43.76	7	964	0.002 7	10.97	303.7 6	713	3.1	9.60	3.60	M	- 15.75	Pasture	25	39
26A	119.1	1.00	222.2 7	9.72	60.63	7	964	0.004 3	11.04	350.6 3	747	3.1	2.09	5.10	M	- 15.05	Pasture	25	39
24A	120	0.68	174.5	9.8	20.24	7	807.4	0.001 9	9.76	130.2 4	872	3.1	2.06	2.40	M	- 15.50	Livestock	25	39
24B	49.7	0.64	NA	8.91	NA	7	805	0.004 3	9.16	NA	217.1	3.1	8.78	22.98	M	- 15.95	Livestock	25	39
70A	77.9	1.06	210.3 2	8.57	13.29	7	738	0.013 6	9.51	153.2 9	4386	31.1	13.93	0.49	N	- 16.32	Livestock	11	84
70C	85	0.11	302.5 3	8.06	44.87	6.7	713.2	0.000 6	9.03	84.87	647	20.81	88.68	0.55	N	- 19.69	Pasture	12	74
70B	59.6	0.73	491.4 4	8.83	170.8	7	707.5	0.016 3	10.05	270.8	1258	31.1	21.15	2.26	N	- 14.59	Livestock	11	84
65	109	0.68	103	8.22	336.8 4	7	667	0.007 6	9.77	346.8 4	242.8	26.96	24.71	0.34	W	- 14.39	Livestock	13	81
8E	98.7	0.23	NA	8.39	748.6 8	7	530	0.002 9	10.60	1028. 68	3244	2.61	20.20	2.44	N	- 11.69	Livestock	25	30
8F	40.3	NA	208.8 9	8.73	89.22	6.6	539	0.000 4	12.27	119.2 2	792	2.18	12.06	5.31	N	- 12.46	Livestock	29	26
36	344	0.30	253.9 6	9.21	83.7	7	539	0.026 8	11.69	243.7	2056	1.67	25.84	6.40	W	- 12.63	Pasture	27	24
63B	118.6	1.17	275.9 1	9.51	375.3 6	6.5	488	0.006 7	10.55	565.3 6	521	26.96	3.22	1.15	W	- 11.42	Livestock	15	81
63A	36.4	0.48	468.9 3	8.03	524.5 7	7	589	0.005 0	10.73	784.5 7	1756	4.67	134.4 9	2.32	M	- 14.55	Livestock	22	44
64A	129	1.08	120.9 5	9.45	3.9	7	646	0.001 1	9.51	93.9	464.1	3.29	5.20	0.26	W	- 16.74	Livestock	22	38
64C	94.8	1.10	245.8 4	8.86	45.02	7	661	0.003 7	9.28	85.02	722	1.45	13.18	0.52	M	- 16.90	Livestock	21	15
64B	82.4	0.80	79.59	9.37	50.17	7	659	0.005 9	9.25	210.1 7	365.7	3.29	2.51	2.82	W	- 16.41	Livestock	22	38
31A	174	1.44	611.8 5	8.41	NA	7	671	0.012 4	10.43	NA	1348 9	4.67	51.74	1.25	W	- 12.93	Livestock	22	44
31B	30	0.87	484.7	8.07	1160	7	685.1	0.005 9	10.64	2790	3809	4.67	190.6 0	5.20	W	- 13.33	Livestock	22	44

7B	79.2	0.26	128.5 8	8.43	27.9	6.6	535.5	0.002 9	9.20	107.9	820	39.7	26.31	0.55	M	- 17.30	Lives tock	10	88
7A	98.5	0.69	194.8 4	9.28	9.67	NA	NA	0.006 0	8.54	99.67	1004	NA	4.45	2.19	NA	- 14.66	Pastu re	NA	NA
7I	48	0.73	384.3 8	9.37	272.3 8	7	540	0.003 1	10.60	592.3 8	1157	2.13	6.10	11.92	W	- 10.20	Crop	28	28
30A	60	0.30	242.1	7.86	3.44	7.5	603	0.001 5	9.59	33.44	623	0.34	97.63	1.40	W	- 13.43	Crop	40	8
30B	277.9	0.74	174.5	9.61	129.9 2	7.5	590	0.004 8	9.05	319.9 2	634	0.34	3.20	5.89	W	- 18.53	Crop	40	8
60A	90.2	0.55	126.4 9	8.29	211.7 9	7	539	0.001 8	8.91	1521. 79	339.7	26.96	34.68	3.71	W	- 13.98	Lives tock	13	81
60B	103.9	1.57	72.34	9.79	39.45	7	536	0.001 9	9.00	109.4 5	189.8	26.96	2.35	1.25	W	- 13.90	Lives tock	13	81
60C	278.3	1.40	618.1 3	9.36	146.4 1	6.6	547	0.011 4	9.82	466.4 1	980	39.7	9.40	1.04	M	- 13.31	Lives tock	10	88
57D	42.7	1.74	174.6 5	9.29	57.96	6	728	0.001 5	10.54	147.9 6	467	2.18	5.31	1.72	N	- 13.36	Lives tock	27	26
57C	43.7	1.52	135.1 6	8.86	51.15	6	724	0.001 6	10.15	151.1 5	414.1	2.18	10.53	1.75	N	- 11.84	Lives tock	27	26
57B	104.1	0.55	285.9 3	9.09	20.45	6.3	729	0.003 1	12.91	140.4 5	636	16.14	10.17	13.12	N	- 11.26	Lives tock	18	54
57A	70	1.45	117.4 9	7.99	35.02	6.3	729	0.006 7	11.04	105.0 2	367	16.14	43.12	0.31	N	- 18.55	Lives tock	18	54
59B	104.8	1.43	70.99	9.59	15.25	6.5	566.9	0.006 3	11.16	65.25	136.1	23.25	2.38	0.67	W	- 18.63	Lives tock	22	77
59A	94.5	0.75	99.56	8.31	480.0 1	6.8	567	0.002 7	8.93	540.0 1	228.8	7.4	20.17	5.16	N	- 18.22	Lives tock	21	50
59D	114.7	2.51	357.4 6	8.41	1060	6.5	569	0.001 7	11.62	5000	684	26.96	45.97	1.35	W	- 18.11	Lives tock	15	81
44A	92.1	1.97	95.51	8.71	11.33	6	618	0.000 4	8.87	51.33	363.2	2.18	7.19	0.19	W	- 14.88	Crop	27	26
44B	65.2	0.78	231.9 3	8.49	8.89	6.6	631	0.005 4	10.32	78.89	1212	5.77	23.23	0.82	M	- 13.82	Crop	22	48
58A	89.7	1.15	639.5 2	8.52	44.13	6.5	569	0.008 2	10.82	134.1 3	2814	26.96	59.64	0.26	W	- 13.41	Lives tock	15	81
58B	56.9	1.00	308.2 6	8.81	303.5 7	6.8	575	0.002 3	12.47	693.5 7	706	7.4	15.95	14.47	W	- 15.08	Lives tock	21	53

58C	59.5	0.78	138.7 5	8.59	18.77	6.8	573	0.001 6	9.79	758.7 7	457.4	7.4	16.47	23.03	W	- 15.07	Lives tock	21	53
4H	87.7	0.76	156.8 5	8.29	42.53	7.5	573	0.000 9	10.75	102.5 3	501	0.34	37.78	5.05	W	- 12.40	Crop	40	8
5	43.6	1.78	322.5 7	8.07	26.84	6.8	484	0.000 0	9.15	106.8 4	3239	7.4	90.92	0.32	M	-8.76	Lives tock	21	50
74A	71.8	0.96	316.8 9	7.84	302.0 5	6.8	491	0.005 2	13.25	332.0 5	783	30	188.4 6	3.56	M	- 11.84	Lives tock	180	-9
74B	93.4	0.21	262.3	8.52	12.22	6.5	495	0.005 4	11.91	42.22	683	26.96	30.24	4.66	W	- 11.57	Lives tock	15	81
74C	108	NA	139.8	9.19	39.02	6.5	494	0.004 4	10.69	129.0 2	617	26.96	5.35	1.71	W	NA	Lives tock	15	81
10C	82.3	2.22	112.5 5	8.88	19.83	NA	NA	0.000 0	10.06	99.83	1049	NA	5.08	0.56	NA	- 15.36	Lives tock	NA	NA
10D	115.5	0.52	119.9	9.69	NA	7	532	NA	9.23	NA	3569	9.5	1.92	0.29	S	-9.77	Lives tock	21	50
10A	48.5	0.44	248.2 2	7.88	21.1	7.3	533	0.000 4	10.60	261.1	738	5.39	108.6 6	3.17	M	- 13.74	Pastu re	24	47
10B	96.2	0.72	163.4 3	9.3	5.48	7.3	533	0.003 4	10.28	95.48	1313	5.39	3.26	0.99	M	-8.40	Pastu re	24	47