

SUPPLEMENTARY MATERIAL S4

TABLE S4 | Subset of environmental variables correlated (Pearson r) with the standard effect size (ses) of turnover for each stream group. **TRE**: Trees in stream banks; **FRO**: Submerged roots in stream banks; **LIT**: Litter packs on stream bed; **SAN**: Percent cover of sand in the stream bed; **CUR**: Current velocity; **DOX**: Dissolved oxygen concentration; **CON**: Conductivity; **DEP**: Depth; **WID**: Width; **MF_WSHD**: Proportion of mature forest in the watershed; **MF_BUFF**: Proportion of mature forest in the riparian buffer; **EF_WSHD**: Proportion of effective forest in the watershed; **EF_BUFF**: Proportion of effective forest in the riparian buffer; **LUI_WSHD**: Land Use Intensity in the watershed; **LUI_BUFF**: Land Use Intensity in the riparian buffer. **all**: all 75 streams; **ref**: reference streams; **new**: recently deforested streams; **old**: historically deforested streams.

Turnover metrics	Selected variables	r
Taxonomic		
ses.β.RC.all	TRE, DOX, DEP, MF_WSHD, EF_WSHD, LUI_WSHD	0.358
ses.β.RC.ref	FRO, SAN, DOX, CON, WID	0.650
ses.β.RC.new	CUR, DOX, CON, LUI_WSHD, LUI_BUFF	0.260
ses.β.RC.old	TRE, CUR, DOX, EF_WSHD, MF_BUFF	0.235
Functional		
ses.β.MPD.all	FRO, DOX, DEP, MF_WSHD, EF_WSHD, EF_BUFF	0.287
ses.β.MPD.ref	FRO, DOX, DEP	0.409
ses.β.MPD.new	LIT, EF_BUFF	0.426
ses.β.MPD.old	FRO, TRE, EF_WSHD, EF_BUFF	0.517
ses.β.MNTD.all	FRO, DEP, MF_WSHD, EF_WSHD	0.295
ses.β.MNTD.ref	FRO, DEP	0.342
ses.β.MNTD.new	FRO, LIT, DOX, DEP, EF_WSHD, EF_BUFF	0.328
ses.β.MNTD.old	FRO, LIT, EF_WSHD, EF_BUFF	0.501



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