

Method (w EC loss)	100%	20%	2%
Not Pretrained			
PGRNN	1.550(± 0.043)	1.670(± 0.037)	3.263(± 2.767)
Attention PGRNN	1.486(± 0.067)	1.789(± 0.137)	2.073(± 0.385)
Spatial-Temporal PGRNN	1.576(± 0.075)	3.721(± 2.684)	4.716(± 2.373)
Temporal-Spatial PGRNN	1.538(± 0.087)	1.700(± 0.123)	3.242(± 2.684)
Spatial-Temporal Attention PGRNN	1.584(± 0.063)	1.885(± 0.105)	2.417(± 0.603)
Pretrained*			
PGRNN	1.452(± 0.066)	1.537(± 0.049)	1.752(± 0.145)
Attention PGRNN	1.503(± 0.043)	1.636(± 0.060)	1.854(± 0.150)
Spatial-Temporal PGRNN	1.426(± 0.098)	1.522(± 0.048)	1.853(± 0.122)
Temporal-Spatial PGRNN	1.478(± 0.102)	1.693(± 0.058)	1.691(± 0.102)
Spatial-Temporal Attention PGRNN	1.489(± 0.069)	1.606(± 0.099)	1.712(± 0.094)

*Pretrained: In this project, models are pretrained with GLM predicted data on Lake Mendota

**Each experiments is replicated for 5 times with a different seed

Method (w/o EC loss)	100%	20%	2%
Not Pretrained			
RNN	1.778(± 0.083)	1.848(± 0.134)	4.127(± 2.443)
Attention RNN	1.604(± 0.072)	1.820(± 0.123)	2.469(± 0.639)
Spatial-Temporal RNN	1.752(± 0.103)	1.858(± 0.131)	3.095(± 1.592)
Temporal-Spatial RNN	1.668(± 0.113)	2.369(± 0.830)	4.339(± 2.527)
Spatial-Temporal Attention RNN	1.725(± 0.109)	2.172(± 0.142)	2.820(± 0.622)
Pretrained*			
RNN	1.602(± 0.115)	1.701(± 0.132)	1.916(± 0.126)
Attention RNN	1.545(± 0.028)	1.746(± 0.099)	1.819(± 0.086)
Spatial-Temporal RNN	1.509(± 0.028)	1.654(± 0.067)	1.907(± 0.033)
Temporal-Spatial RNN	1.605(± 0.094)	1.649(± 0.089)	1.883(± 0.135)
Spatial-Temporal Attention RNN	1.661(± 0.130)	1.715(± 0.250)	2.012(± 0.207)

*Pretrained: In this project, models are pretrained with GLM predicted data on Lake Mendota

**Each experiments is replicated for 5 times with a different seed