

## Appendix 1. Variables used in the artificial neural network models.

[SC, specific conductance; WL, water level; hr, hour; MWA, moving window average]

Variable	Description
CSC110760A	“Cleaned up” SC for 02110760-daily average
CWL110777	“Cleaned up” WL for 02110777
CWL110777A	Daily average WL for 02110777
CWL110777AD2	2-day time derivative of CWL110777A
CWL110777AD2L2	CWL110777AD2 lagged 2 days
CWL110777AD3L1	3-day time derivative of CWL110777A lagged 1 day
CWL110777AD3L2	3-day time derivative of CWL110777A lagged 2 days
CWL110777AL1	Daily average WL110777
CWL110777AL2	Daily avg WL110777
CWL110777D3	3-hr time derivative of CWL110777
CWL110777D3(003)	3-hr time derivative of CWL110777 lagged 3 hours
CWL110777D3(006)	3-hr time derivative of CWL110777 lagged 6 hours
CWL110777D3(009)	3-hr time derivative of CWL110777 lagged 9 hours
DIRECTA4	4-day MWA of wind direction
ICXWL110777	“Cleaned & Interpolated” XWL110777
ICXWL110777A	Daily average XWL110777
ICXWL110777A28	28-day MWA of ICXWL110777A
ICXWL110777AD2	2-day time derivative of ICXWL110777A
ICXWL110777AD2L2	2-day time derivative of ICXWL110777A - lagged 2 days
ICXWL110777AD2L4	2-day time derivative of ICXWL110777A-lagged 2 days
ICXWL110777AD2L6	2-day time derivative of ICXWL110777A-lagged 2 days
ICXWL110777AL1	1-day lag of ICXWL110777A
ICXWL110777AL2	2-day lag of ICXWL110777A
ICXWL110777D3	3-day time derivative of ICXWL110777A
ICXWL110777D3(003)	3-day time derivative of ICXWL110777A - lagged 3 hours
ICXWL110777D6(006)	3-day time derivative of ICXWL110777A - lagged 6 hours
IQTOTA14L23	14-day MWA of total inflow lagged 23 days
IQTOTA14L37	14-day MWA of total inflow lagged 37 days
IQTOTA14L9	14-day MWA of total inflow lagged 9 days
IQTOTA2	2-day MWA of total inflow
IQTOTA3	3-day MWA of total inflow
IQTOTA3L2	2-day lag of IQTOTA3
IQTOTA7L2	2-day lag of 7-day MWA of total inflow
IQTOTA7L3	3-day lag of 7-day MWA of total inflow
PSC755ALD18H	predicted daily SC for station 02110755 lead 18 hours
PSC809ALD18HD2	2-day time derivation of predicted daily SC for station 02110809 lead 18 hours
PSC8125ALD18H	Predicted daily SC for station 021108125 lead 18 hours
PSC812ALD18H	Predicted daily SC for station 02110812 lead 18 hours
PSC812ALD18HD2	2-day time derivation of predicted daily SC for station 02110812 lead 18 hours
PSC8135ALD18H	Predicted daily SC for station 021108135 lead 18 hours
PSC8135ALD18HD2	2-day time derivation of predicted daily SC for station 021108135 lead 18 hours
PSC815A	Predicted daily SC for station 02110815
PSC815AD2	2-day time derivative of PSC815A
PSC815ALD18H	Predicted daily SC for station 02110815 lead 18 hours
SC110755	Hourly SC at station 02110755
SC110755A	Daily SC at station 02110755
SC110760	Hourly SC at station 02110760
SC110770	Hourly SC at station 02110770
SC110770A	Daily SC at station 02110770
SC110777	Hourly SC at station 02110777
SC110777A	Daily SC at station 02110777
SC110809	Hourly SC at station 02110809

**Appendix 1.** Variables used in the artificial neural network models. — Continued

[SC, specific conductance; WL, water level; hr, hour; MWA, moving window average]

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Variable	Description
SC110809A	Daily SC at station 02110809
SC110812	Hourly SC at station 02110812
SC1108125	Hourly SC at station 021108125
SC1108125A	Daily SC at station 021108125
SC110812A	Daily SC at station 02110812
SC1108135	Hourly SC at station 021108135
SC1108135A	Daily SC at station 021108135
SC110815	Hourly SC at station 02110815
SC110815A	Daily SC at station 02110815
SPEEDA4	4-day MWA of wind speed

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