

## Appendix 2. Northeast Region standard forest unit (SFU) revised SQL statements

The original MW1 and MW2 were both split into conifer-leading and hardwood-leading (see **New science**), resulting in 18 rather than the original 16 Northeast Region SFUs. Although 19 statements are identified in Table A.2, the Undefined, UDF statement is not a standard forest unit (SFU) and should not be included in the final SFU assignment. The planning team decides how to address forest stands initially classified as UDF

**Table A.2.** Northeast region boreal standard forest unit (SFU) revised SQL statements. Each SFU was defined by the human language description of the intent. The SQL is a suggested starting point for the human language conceptual definition. This table contains basic SFU SQL mechanisms of classification based on the Ontario forest resources inventory (FRI) attributes (ca. 2007 to 2011; eFRI t1). Species codes are Forest Information Manual (FIM) compliant; ecosite codes refer to the Ontario Ecological Land Classification system (Wester et al. 2015a,b). The order of the classification criteria of the SQL algorithms is imperative. The <NER SFU revision code field> ensures that codes assigned early in the algorithm are not overwritten later; thus, the SQL order is the required order of classification. The use of \_ with species codes such as \_Or and \_By ensure the FIM species codes are not misinterpreted as SQL keywords. STKG refers to forest stand stocking, which is the total basal area relative to normalized basal area, and OSC refers to the overstory site class (Plonski 1981) both of which are attributes in the eFRI. The UDF (Sort Order=19) code is intended to identify anomalies not addressed by formal Ontario forest management SFUs in the NER SFU 2<sup>nd</sup> edition publication (Sort Order=1 to 18). The UDF code identifies forest stands that require case-by-case interpretation and SFU code assignment. The UDF code is not intended for use in forest management plans.

SQL order	NER SFU revision code	NER SFU revision SQL criteria, eFRI
1	PR1	(Pr >=70) And <NER SFU revision code field>Is Null <sup>†</sup>
2	PW1	((Pw + Pr + He + (Sw + Sx) >=40 And Pw >=30) And (((Pw + Pr + _Or + Ow + He + Sr + Sw + (Hi + Hl + Hm + Hp + Hs))/100) * STKG * 44 >=12.0)) And <NER SFU revision code field>Is Null <sup>†</sup>
3	PRW	((Pw + Pr + He + (Sw + Sx) >=40) And (Pw + Pr >=30)) And <NER SFU revision code field>Is Null
4	LH1	((((Ab + Ew + Pb + Mr + _By) >=30) And ((Ab + Ew + _By >=20) Or (Ecosite_GeoRangeAndNumber in (B119, B120, B123, B129, B130, B131, B133, G119, G120, G123, G129, G130, G131, G133))) Or (Pb >=70)) And <NER SFU revision code field>Is Null
5	TH1	((Ab + Ew) + Mh + (_By + Mr) + He >=30) And <NER SFU revision code field>Is Null

SQL order	NER SFU revision code	NER SFU revision SQL criteria, eFRI
6	SBOG	((Sb + La + (Ce + Cw) >=70) And (((OSC=4) And (Ecosite_GeoRangeAndNumber in (B126, B136, B137, G126, G136, G137)))) And <NER SFU revision code field>Is Null
7	SB1	((Sb >=80)) And (Ab <=10) AND Ecosite_GeoRangeAndNumber in (B127, B128, B129, B222, B223, B224, G127, G128, G129, G222, G223, G224)) And <NER SFU revision code field>Is Null
8	PJ1	((Pj >=70) And ((Po + Pt) + Bw + (_By + Mr) + Mh + (Ab + Ew + Pb) <=20)) And Ecosite_GeoRangeAndNumber in (B012, B033, B034, B035, B048, B049, B050, G012, G033, G034, G035, G048, G049, G050)) Or (Pj >=90)) And <NER SFU revision code field>Is Null
9	LC1	((Ce + Cw) + La + Sb + Bf + Sw >=70) AND (Ecosite_GeoRangeAndNumber in (B127, B128, B129, B222, B223, B224, B136, B137, G127, G128, G129, G222, G223, G224, G136, G137))) And <NER SFU revision code field>Is Null
10	PJ2	((Pj + Sb + Pr + Pw >=70) Or (Pj >=30 And Pj + Sb + Bf + (Sw + Sx) + Pw + Pr + (Ce + Cw) + La >=70)) And ((Pj + Pw + Pr) >= (Sb + (Sw + Sx) + (Ce + Cw))) And <NER SFU revision code field>Is Null
11	SP1	((Sb + (Sw + Sx) + Bf + (Ce + Cw) + La + Pw + Pj + Pr + He >=70) And ((Bf + (Ce + Cw) + Pw + (Sw + Sx) + He <=20) Or (Pj + Pr + La >=30))) And <NER SFU revision code field>Is Null <sup>‡</sup>
12	SF1	(Sb + (Sw + Sx) + Bf + (Ce + Cw) + La + Pw + Pj + Pr >=70) And <NER SFU revision code field>Is Null <sup>‡</sup>
13	PO1	((Po + Pt + Pl) + Bw + Mh + (_By + Mr) + (Ab + Ew + Pb) >=70) And ((Po + Pt + Pl + Pb) >=50)) And <NER SFU revision code field>Is Null
14	BW1	((Po + Pt + Pl) + Bw + Mh + (_By + Mr) + (Ab + Ew + Pb) >=70) And <NER SFU revision code field>Is Null
15	MH1	((Bf <=20 And (Sw + Sx) <=20 And (Ce + Cw) <=20) And (Po + Pt + Pl) + Bw + Mh + (_By + Mr) + (Ab + Ew + Pb) >=50) And (Pj + Pr <=50 And Pj + Pr >=20)) AND (Ecosite_GeoRangeAndNumber in (B016, B019, B028, B040, B043, B055, B059, B070, B076, G016, G019, G028, G040, G043, G055, G059, G070, G076))) And <NER SFU revision code field>Is Null
16	MC1	((Bf <=20 And (Sw + Sx) <=20 And (Ce + Cw) <=20 And (Pj + Pr + La) >=20) AND (Ecosite_GeoRangeAndNumber in (B012, B014, B035, B037, B038, B050, B052, B053, B065, B067, B068, G012, G014, G035, G037, G037, G050, G052, G053, G065, G067, G068))) Or (Pj + Pr >=50)) And <NER SFU revision code field>Is Null <sup>*</sup>
17	MH2	((Po + Pt + Pl) + Bw + Mh + (_By + Mr) + (Ab + Ew + Pb) >=50) And <NER SFU revision code field>Is Null <sup>‡</sup>
18	MC2	(Sb + (Sw + Sx) + Bf + (Ce + Cw) + La + Pw + Pj + Pr >50) And <NER SFU revision code field>Is Null <sup>‡</sup>

SQL order	NER SFU revision code	NER SFU revision SQL criteria, eFRI
19	UDF	(POLYTYPE=FOR) And <NER SFU revision code field>Is Null <sup>‡</sup>

Note: <sup>‡</sup> indicates that assigning the forest stand to the SFU requires the use of local silvicultural records or up to date forest resources inventory