

Land Use Filter / Base Factor Table for Assessments

In the original Model, the baseline factor was higher for Agricultural, Commercial, Manufacturing and Residential Property. A decision was made based on a recommendation by Leonard Massie (A programming note that I found) to level the Base Line Index for all Land Use Types to 1000 units. The feeling was that the Land Use Index was sufficient in determining separation of benefits based on land use.

Step 1 = Search for "G1" If a parcel is designated as "G1" exclusively, or residential it is assessed the Flat Fee. In some instances for example, we'll have a parcel with both a 'G1' and a 'G4'. In such instanced, the parcel is treated as the 'second' code. In this example it would be treated as agriculture. A real example are those cases where someone builds a home on a 35 acre parcel. **What also happens in this step is the removal of properties that have a Land Use Factor of '0'. These are the government exempt properties.**

UseCode	Classification	LandUseFactor	LandUseIndex	BaseLineIndex
CEM	Cemetery	2	2000	1000
G1	Residential	4	4000	1000
G2	Commercial	10	10000	1000
G3	Manufacturing	14	14000	1000
G4	Agriculture	2	2000	1000
G5	Undeveloped	1.5	1500	1000
G5m	Agricultural Forest	1.5	1500	1000
G6	Productive Forest Lands	1.5	1500	1000
G7	Other	2	2000	1000
P1	Parks & Rec	2	2000	1000
W1	Private Forest Crop Pre 72	1.5	1500	1000
W10	Wetland Ag Use	1.5	1500	1000
W2	Private Forest Crop Post 71	1.5	1500	1000
W3	Private Forest Crop Special	1.5	1500	1000
W4	County Forest Crop	1.5	1500	1000
W5	Managed Forest Lands Open Entered After 2004	1.5	1500	1000
W6	Managed Forest Lands Closed Entered After 2004	1.5	1500	1000
W7	Managed Forest Lands Open Entered Before 2005	1.5	1500	1000
W8	Managed Forest Lands Closed Entered Before 2005	1.5	1500	1000
W9	Wetland	1	1000	1000
X1	Federal Exempt	0	0	1000
X2	State Exempt	0	0	1000
X3	County Exempt	0	0	1000
X4	Other Exempt	2	2000	1000
X5	Other Exempt (For Reporting Only)	0	0	1000
X6	Municipal Detention Area	2	2000	1000
X7	Municipal Sewer Plant	10	10000	1000
X8	Municipal Recycling	4	4000	1000

The following table is the Soils table which comes from the 'Soil Survey of Dane County'.

SoilType	SoilName	DepthHighWater	WaterTableFactor	CropBuAC	YieldFactor
Ad	Adrian Muck	0-1	1	90	0.77
Af	Alluvial Land Wet	0-1	1	120	0.77
BaB2	Basco Silt Loam, 2 to 6 percent slopes, eroded	2-4	0.5	100	0.77
BaC2	Basco Silt Loam, 6 to 12 percent slopes, eroded	2-4	0.5	90	0.77
BbA	Batavia Silt Loam, gravelly substratum 0-2% slopes	3-5	0.5	155	1
BbB	Batavia Silt Loam, gravelly substratum 2-6% slopes	>5	0	150	0.97
BbC2	Batavia silt loam, gravelly substratum, 6 to 12 percent slopes, eroded	3-5	0.5	120	0.77
BoB	Boyer Sandy Loam 2-6% slopes	>5	0	85	0.55
BoC2	Boyer Sandy Loam, 6 to 12 percent slopes, eroded	>6	0	0	0
BoD2	Boyer Sandy Loam, 12 to 20 percent slopes, eroded	>7	0	0	0
ChB	Chaseburg Silt Loam 2-6% Slopes	3-5	0.5	110	0.71
Co	Colwood Silt Loam	0-1	1	100	0.65
Cu	Cut and fill land	0-1	1	155	1
DnB	Dodge Silt Loam, 2-6% Slopes	>5	0	120	0.77
DnC2	Dodge Silt Loam, 6-12% Slopes, eroded	>5	0	110	0.71
DoC2	Dodge and Kidder 6-20% slopes eroded	>5	0	85	0.55
DrD2	Dresden Loam, 12-20% slopes, eroded	>5	0	90	0.58
DrE2	Dresden Loam, 20-30% slopes, eroded	>5	0	70	0.55
DsB	Dresden Silt Loam, 2-6% Slopes	>5	0	110	0.71
DsC2	Dresden Silt Loam, 6-12% Slopes	>5	0	100	0.65
DuC2	Dunbarton silt loam, 6-12% slopes, eroded	>5	0	110	0.71
DuE2	Dunbarton silt loam, 20-30% slopes, eroded	>5	0	70	0.71
EdB2	Edmund Silt Loam, 2-6% slopes, eroded	>5	0	80	0.5
EdD2	Edmund silt loam, 12-20% slopes, eroded	>5	0	0	0
EfB	Elburn Silt Loam 1 to 4% slope	1-3	0.75	145	0.94
EgA	Elburn Silt Loam 0-3% Slopes	1-3	0.75	150	0.97
EhC2	Eleva Sandy Loam, 6-12% Slopes, eroded	>5	0	55	0.71

SoilType	SoilName	DepthHighWater	WaterTableFactor	CropBuAC	YieldFactor
EmD2	Elk mound Sandy Loam, 12-20% Slopes, eroded	>5	0	55	0.71
EmE2	Elk mound Sandy Loam, 20-30% Slopes, eroded	>5	0	55	0.71
Ev	Elvers Silt Loam	0-1	1	110	0.71
Gn	Granby Loamy Sand	0-1	0.25	70	0.55
Gp	Gravel Pit	>5	0	100	0.65
GwB	Griswold	>5	0	110	0.71
GwC	Griswold Loam 6 to 12% slope	>5	0	110	0.71
GwD2	Griswold Loam	>5	0	110	0.71
HaA	Hayfield Silt Loam, 0-3% Slopes	1-3	0.75	90	0.58
HbB	Hixton Loam, 2 to 6% Slopes	>5	0	80	0.71
Ho	Houghton Muck	0-1	1	135	0.87
KcB	Kickapoo Fine Sandy Loam 0-3% Slopes	3-5	0.5	90	0.58
KdB	Kidder loam, 2-6 % slopes	>5	0	105	0.68
KdC2	Kidder Loam, 6-12% slopes, eroded	>5	0	95	0.61
KdD2	Kidder Loam, 12-20% slopes, eroded	>5	0	85	0.55
KeA	Kegonsa silt loam, 0-2% slopes	>5	0	105	0.55
KeB	Kegonsa silt loam, 2-6% slopes	>5	0	125	0.81
KrD2	Kidder 10-20% Slopes eroded	>5	0	85	0.55
KrE2	Kidder Soils 20-35% Slopes eroded	>5	0	80	0.52
LDF	Other Soil Types	>5	0	155	0.97
Ma	Made Land (Other)	0-1	1	155	1
Mc	Marshan silt loam	0-1	1	90	0.58
MdB	McHenry Silt Loam, 2-6% slopes	>5	0	120	0.77
MdC2	McHenry Silt Loam, 6-12% slopes eroded	>5	0	110	0.71
MdD2	McHenry Silt Loam, 12-20% slopes eroded	>5	0	100	0.65
MeA	Meridian Loam, 0-2% Slopes	>5	0	95	0.71
M-W	Other Soil Types	>5	0	155	0.97
Or	Orion Silt Loam	1-3	0.75	145	0.94
Os	Orion silt loam, wet	0-1	1	145	0.94
Ot	Otter Silt Loam	0-1	1	140	0.9
Other	Other Soil Types	>5	0	155	0.97

SoilType	SoilName	DepthHighWater	WaterTableFactor	CropBuAC	YieldFactor
Pa	Palms Muck	0-1	1	120	0.77
PeC2	Pecatonica silt loam, 2-6% slopes	3-5	0.5	110	0.71
PnA	Plano Silt Loam	>5	0	155	1
PnB	Plano Silt Loam 2 to 6% Slopes	3-5	0.5	130	0.91
PnC2	Plano Silt Loam, 6-12% slopes	3-5	0.5	145	0.91
PoB	Plano Silt Loam, 2-6% slopes	3-5	0.5	145	0.91
PrB	Port Byron Silt Loam 2 to 6% Slopes	3-5	0.5	145	0.94
PrC	Port Byron Silt Loam 6 to 12% slopes	3-5	0.5	140	0.9
QUA	Other Soil Types	>5	0	155	0.97
RaA	Radford silt loam, 0-3% slopes	1-3	0.75	145	0.94
RnB	Ringwood silt loam, 2-6% slopes	>5	0	130	0.84
RnC2	Ringwood silt loam	>5	0	110	0.71
RoB	Rockton Silt Loam, 2-6% slopes	>5	0	110	0.69
RoC2	Rockton Silt Loam, 6-12% slopes	>5	0	85	0.69
RpE	Rodman sandy loam, 12-35 slopes	>5	0	110	0.69
SaA	Sable silty clay loam, 0-3% slopes	0-1	1	155	1
ScA	St. Charles silt loam, 0-2% slopes	3-5	0.5	150	0.94
ScB	St. Charles silt loam, 2-6% slopes	3-5	0.5	145	0.94
ScC2	St. Charles Silt Loam 6-12% eroded	3-5	0.5	135	0.87
ScD2	St. Charles silt loam, 6-12% slopes, eroded	3-5	0.5	135	0.87
SfA	Salter silt loam, 0-2% slopes, eroded	3-5	0.5	95	0.87
SfB2	Salter silt loam, 2-6% slopes, eroded	3-5	0.5	110	0.71
ShA	Salter Sandy Loam, wet variant, 0-3% slopes	3-5	0.5	135	0.87
SmB	Seaton Silt Loam 2 to 6%	3-5	0.5	145	0.94
SmC2	Seaton Silt Loam 6 to 12%	3-5	0.5	135	0.87
SmD2	Seaton Silt Loam 12 to 20% eroded	3-5	0.5	110	0.71
St	Stony and Rocky Land	>5	0	0	0
TrB	Troxel Silt Loam 1 to 4% slopes	3-6	0.6	145	0.91
VrB	Virgil silt loam, 1-4 % slopes	1-3	0.75	155	1
VwA	Virgil silt loam, gravelly substratum, 0-3% slopes	1-3	0.75	150	0.97
W	Do Not Use	>5	0	110	0.69

SoilType	SoilName	DepthHighWater	WaterTableFactor	CropBuAC	YieldFactor
Wa	Wacousta silty clay loam	0-1	1	110	0.71
water	water	0	1	0	0
WrB	Warsaw Silt Loam, 2-6% Slopes	>5	0	90	0.69
WrC2	Warsaw Silt Loam, 6-12% Slopes, eroded	>5	0	80	0.69
WxB	Whalan silt loam, 2-6% slopes	>5	0	100	0.65
WxC2	Whalan silt loam, 6-12% slopes, eroded	>5	0	100	0.63

Step 2 = Generate Net Factor from Soil Type For District
 [Water Table Factor] * [Yield Factor] * [Land Use Factor]

Step 3 = Generate Net Benefit Units from Soil Type for District
 [Base Line Index] * [Measured Acres] * [Net Factor]

The following is an example from the final temp table that is created. Each soil type in the district is evaluated to determine if there is a benefit. Dry soils would calc to zero benefits; whereas wet soils would have benefits.

Soil Type	Acres	Benefit Units
DnB	97.55	-
DnC2	8.39	-
EdB2	4.56	-
EdD2	7.48	-
EfB	113.63	160,215.71
GP	0.00	-
GwB	8.16	-
GwC	4.97	-
HaA	1.49	1,294.84
KdC2	3.03	-
KdD2	6.72	-
KrE2	12.84	-
MdB	8.41	-
MdC2	25.75	-
MdD2	3.93	-

Soil Type	Acres	Benefit Units
Os	24.68	46,402.75
Pa	3.17	4,884.21
PnA	13.96	-
PnB	157.62	-
PnC2	0.62	560.41
RaA	26.04	36,718.16
RnB	44.76	-
RoB	3.56	-
SaA	351.23	702,456.15
ScA	24.22	22,767.08
ScB	57.86	54,385.72
ScC2	5.96	5,188.46
VrB	81.37	122,052.20
WxB	4.63	-
WxC2	9.84	-
Grand Total	1,116.42	1,156,925.69

Step 4 = The above calculations are repeated; but not for the district; but for the individual parcel within the district (Save for Residential).

Step 5 = [Total Benefit of Individual Parcel] ÷ [Total Benefit of the District] = Percentage of District Benefit

Step 6 = [Percentage of District Benefit] * [Balance of Remaining District Assessment]

* Please note, that the 'Balance of Remaining District Assessment' is that portion of the remaining assessment less the minimum charges for both Residential and Agricultural. Residential automatically is assessed a minimum fee. As a general rule, houses are not built on wet soils and because the lots are typically a couple acres or less, the individual assessments would only amount to a few dollars. Additionally, there are some agricultural parcels that fall below the minimum of \$75; because a parcel is basically all 'dry soils'. These parcels are also adjusted to the minimum and the continues to run until no further minimums are found. The Final 'Balance of Remaining District Assessment' is multiplied against the parcels percent of benefit.