Northeast Region Phosphorus Index Field Worksheet

Field ID:	
Soil Type:	
Soil Test P (Cornell Morgan)	*(if >160 lbs P/acre (NY, CT, ME, MA, RI) or 35% Psat.(NH), no need to continue)*

RAW TRANSPORT SCORE		***DP Score***	***PP Score***
Circle the score under each column (DP & PP) that corresponds with the existing conditions for each transport factor for the field you are scoring.			
Hydrologic Soil Group (HSG)	A	0	0
	B	4	1
	C	6	3
	D	8	5
Erosion (E) tons/ac/yr	≤1.0	N/A	0
	1.1 – 3.0	N/A	1
	3.1 – 5.0	N/A	3
	>5.0	N/A	5
Flooding Frequency	Never	0	0
	Occasionally	2	2
	Frequent	5	5
Concentrated Flow	None/Treated	0	0
	Present	4	4
Flow Distance to Stream	>500 ft	0	0
	301-500 ft	4	4
	101-300 ft	6	6
	≤100 ft	8	8
Vegetated Flow Distance	<35 ft	0	0
	≥35 ft	-2	-4
Total Transport Score *(Column Total X 10)*		_____ *x 10 =* _____	_____ *x 10 =* _____

Information collected from your office (i.e. maps, soil survey, RUSLE2 software, etc.).

Information collected in the

Information collected from farmer interview.

BMP COEFFICIENTS			
Method of Application	**Coefficient**		
	Scen. A	Scen. B	Scen. C*
Surface spread without setback	1.0	1.0	1.0
Surface spread with ≥100-ft setback from the field boundary (start of the predominant flow path)	0.8	0.8	0.8
Surface spread with ≥35-ft managed vegetated (sod/harvested) setback from the field boundary (start of the predominant flow path)	0.7	0.7	0.7
Incorporation within 24 hours with ≥15-ft setback from down-gradient surface waters	0.7	0.7	0.7
Injection with ≥15-ft setback from down-gradient surface waters	0.5	0.5	0.5
Ground Cover/Timing			
Bare ground and more than 2 weeks before planting	1.0	1.0	1.0
Bare ground and within 2 weeks of planting (in spring)	0.8	0.8	0.8
Winter-hardy cover crop (fall/winter)	0.8	0.8	0.8
Whole-plant crop residue (~80% or more ground cover, e.g. corn grain)	0.7	0.7	0.7
Sod after last cutting (fall/winter)	0.6	0.6	0.6
Growing sod or row crop/planting green	0.5	0.5	0.5

*You have the option to choose three different BMP scenarios to compare results based on various combinations of BMP's.

For example:

Scen. A =
*100 * 0.5 * 0.5 = 25*

Scen. B =
*100 * 0.8 * 0.7 = 56*

Scen. C =
*100 * 1.0 * 1.0 = 100*

Phosphorus Index Score

Higher Total Transport Score *(of DP/PP above)*		Method Coefficient Scen. A	Scen. B	Scen. C		Cover/Timing Coefficient Scen. A	Scen. B	Scen. C	=	P Index Score Scen. A	Scen. B	Scen. C
	X				X							

Interpreting your Northeast Region PI Score

Once you have calculated your transport score x BMP coefficient to arrive at your PI Score, you can determine the management implications dependent on Soil Test P by using the tables below.

Table 1: Field management implications for the Northeast Region Phosphorus Index.

Zero P	no manure or P fertilizer *
P-based	Manure and fertilizer P application not to exceed annual P removal with harvest of that crop
N-based	Manure and fertilizer application not to exceed annual nitrogen (N) needs for the crop grown based on the Cornell Nutrient Guidelines

**see 'Incidental P Application' (Section 7 in manual) for exceptions.*

Table 2: Overall interpretation and management implication of the NE-PI 2.0.

Overall interpretation (transport score × BMP score × 10)					
Management implication for NY, CT, MA, ME and RI					
P-loss risk	PI score	Soil test P (Morgan or Modified Morgan in lbs/acre)[1]			
		< 40	40-100	101-160	> 160
Low	< 50	N-based	N-based	P-based	Zero P
Medium	50-74	N-based	P-based	Zero P	Zero P
High	75-99	P-based	P-based	Zero P	Zero P
Very high	≥ 100	Zero P	Zero P	Zero P	Zero P
Management implication for NH					
P-loss risk	PI score	Soil test P (P saturation derived from Mehlich 3)[1]			
		< 11	11-22	23-35	> 35
Low	< 50	N-based	N-based	P-based	Zero P
Medium	50-74	N-based	P-based	Zero P	Zero P
High	75-99	P-based	P-based	Zero P	Zero P
Very high	≥ 100	Zero P	Zero P	Zero P	Zero P

[1]When university crop guidelines call for P above the STP or rate limits in this table, P can be added to not exceed land grant guidelines as long as the NE-PI score is less than 100.

Link to Northeast Region Phosphorus Index website:

- Website: http://nmsp.cals.cornell.edu/northeastregionPI.html
  - Manual: http://nmsp.cals.cornell.edu/publications/extension/NortheastPIndexUserGuide.pdf.
  - Excel spreadsheet: *http://nmsp.cals.cornell.edu/software/northeastregionPI2024v1.xlsm*.

NOTES:

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