

Parent Material

A

Weathered bedrock



Very Rare in Northern Indiana

Parent Material

A

Till



**default: if nothing else fits
judged deep in pit**

Parent Material

A

Outwash



step 2 from water

courser under finer subsoil

Parent Material

A



Eolian Sand

sand on top (can have mod clay sub)

generally falls out throughout pit

no pebbles

judged high or throughout pit

Parent Material

A

Loess



medium surface texture (silt) & subsoil (sticky silt -silt clay)

no pebbles

judged high in pit

Parent Material

A

Alluvium



Next to water
organic material
Medium over Medium

Parent Material

A



Local Overwash

Bottom of hill

> 20" thick

buries a dark horizon

judged high in pit

Slope

B

Use clinometer

0-2%

Pretty level

3-6%

small hill

7-12%

medium hill

13-18%

large hill

19-25%

XL hill (steep)

26-35%

Supersize hill

>35%

ravine

Landform

C

Till or Loess, Parent material

Upland

hillslope > 3% slope

swell <2%, convex water runs away

depression <2%, 3 sides higher

flat Flat Landform marked YES

Landform

c

Dune

Eolian sand Parent material

> 3% slope

Landform

C

Filled Depression

Local Overwash Parent material

Landform

C

Outwash Outwash Parent material

hillslope > 3% slope

swell <2%, convex water runs away

depression <2%, 3 sides higher

flat <2%, flat circled yes on sitecard

Landform

c

Floodplain

Alluvium Parent material

Color, Surface

D



Use Munsell 10yr color chart

Wet down soil

Judge 2" below surface

Erosion

E



None to slight

>6" of topsoil

Moderate

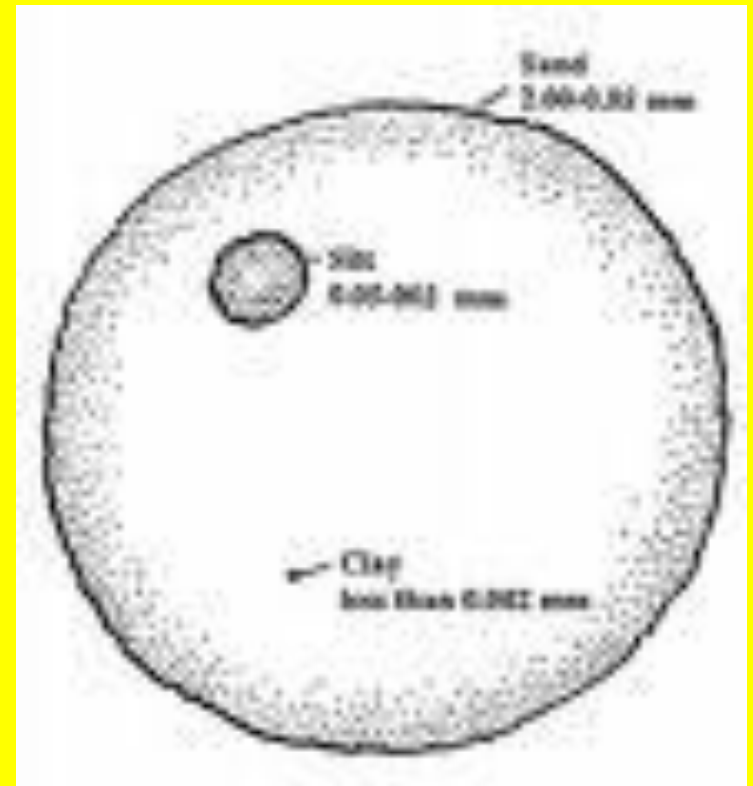
2-6" of topsoil

Severe

<2" of topsoil

Texture

F & G (surface & subsoil)



Texture

F & G (surface & subsoil)



Sandy
Moderately Sandy
Medium
Moderately Clayey
Clayey

will not ribbon
ribbons < 1/2"

ribbons 1/2-1 & 1/2"

long ribbon, dull

long ribbon, shiny

Natural Drainage

Diagnostic zone:

dark surface

judge 6" below dark surface

brown/gray surface

judge 10-18" below top of pit



Natural Drainage

H

Poorly
Somewhat poorly
Moderately well
well

>50% gray diagnostic zone

NDDZ 2-50% Gray

NDDZ <2% gray but some gray 18-30"

no gray <30"

Limiting Layer

I

Limiting layers must be at least 10" thick or continue to bottom of pit

Bedrock



Limestone in Indiana

Limiting Layer

I

Dense till



Associated with calcareous deposits

No plant roots present

$>1.75 \text{ g/cm}^3$

Limiting Layer

I

Fragipan



Not in Northern Indiana

Limiting Layer

#9

Course Sand & Gravel (CS&G)



large sand or gravelly



falls out at bottom

Limiting Layer

#9

None within 40"

nothing that qualifies as a limiting layer

Agriculture & Environmental Practices



Restore Original Vegetation

#15



Wetland= Poorly Drained

Prairie= Not poorly drained, has a black surface, >10 inches

Mesic Forest= If not wetland or prairie

Prime Farmland

#16

Yes If: no pure sand in subsoil

and >20" to bedrock or CS&G



and <6% slope

and not a floodplain

Soil & Water Degradation

#17

high potential
soil erosion by water

Yes If:

>2 slope and <20 to a limiting layer

or

>6 slope

Soil & Water Degradation

#18

**high potential
soil erosion by wind**

Yes If:

sand on top



Soil & Water Degradation

#19

high potential
soil compaction

Yes If:



wet

and

without pure sand on top



Vegetation and buffer practices

#20

Grassed waterways

Yes If:

3 - 18% slope



Vegetation and buffer practices

#21

windbreaks

Yes If:

Sand on top



Vegetation and buffer practices

#22

Yes If:

Filter strips

<18% slope



Buffers and Cover Crops

#23 Most Significant Benefit Cover Crops

A. Scavenge N - <2 slope,

or 3-6% slope and sandy subsoil or CS&G

B. No Need - >18 Slope

C. Erosion Control - Anything else



Cropping Practices

#24



Timber Stand Improvement (TSI)

Yes If:

Always

Tillage and Cropping practices

#25

Yes If:

permanant pasture

<25% slope



Tillage and Cropping practices

#26

Crop Rotation

Yes If:

<18% slope



Tillage and Cropping practices

#27

Yes If:



No-till

<6% slope

and

dry or

wet without pure clay on top

Tillage and Cropping practices #28

Moldboard or chisel plowing



Yes If:

<2% slope

and

NO Sand on top

and

wet

Water Management practices

#29

Drainage

Yes If:

wet

and

not a floodplain



Water Management practices

#30

Yes If:



Irrigation

<6% slope

and

sand in subsoil or CS&G

Water Management practices

#31

Terraces

Yes If:



not poorly drained

and

deep

and

3 - 12% slope

and

no sand in subsoil

Chemical & Fertility practices

#32

High lf:



Nitrogen application

deep

and

no sand

and

wet

and

black surface

Chemical & Fertility practices

#32

Medium If:



Nitrogen application

>20" to limiting layer

and no pure sand and

<12% slope

Low If: **anything else**

Chemical & Fertility practices

#33

Apply If:

P: Phosphorus

< 15 ppm



Deplete If:

> 100 ppm

Chemical & Fertility practices

#34

Apply If:

K: Potassium

< 100 ppm

Deplete If:

> 250 ppm



Chemical & Fertility practices

#35

Lime

Apply If:

pH < 6.5



Nitrogen Pollution Potential

#36

High, ground water

Dry and CS&G or sandy subsoil

High surface water

Wet and not a flood plain

Med.

Anything else

Phosphorus pollution potential

#37

High

> 12 slope

Medium

3-6% slope with medium or mod clay on top or 7-12% slope

Low

anything else

Homesite Practices

Site Selection & Construction

#15

Is the site suitable for a homesite?

Yes If:

Not a floodplain or filled depression

If no, all of 16-38 is no, not applicable, or N/A

Site Selection & Construction

#16

Preserve trees & plant new ones

Yes If:

For all usable homesites

Site Selection & Construction

#17

Yes If:

Maintain soil cover during construction



>2% slope

Site Selection & Construction

#18

Improve surface drainage



Yes If:

wet

and

<2% slope

Site Selection & Construction

#19

Is soil suitable for a basement?



Yes If: **Well drained**
and **No bedrock <40**
and **Slope <12**

Site Selection & Construction

#20

design for high-clay subsoils

Yes If:



pure clay subsoil

Site Selection & Construction

#21

Potential construction hazards on slopes

Yes If:

>12% slope



Site Selection & Construction

#22 Install diversion structures & drains

Yes If: **>2% slope**

and

dense till, fragipan, bedrock <40"

or

clay in subsoil



Site Selection & Construction

#23 provide foundation drainage

Yes:



unless well drained
with

sandy sub

or

CS&G

Site Selection & Construction

#24

High Risk for Cave-in During Construction



Yes If:

Floodplain, Outwash, Poorly Drained

or

Dune

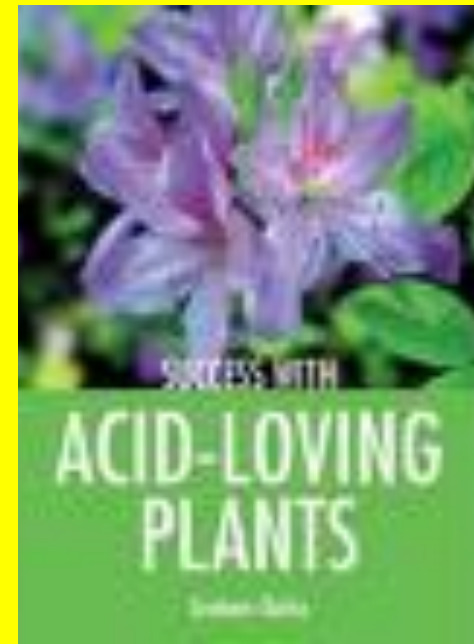
Landscape & Lawn practices

#25

Acid loving shrubs

No Application:

pH < 5.7



Apply Sulfur: **pH 5.7 to 7.9**

Plant other species: **pH > 7.9**

Landscaping & Lawn practices

#26 Manage soil reaction for lawns



Lime: **pH < 6.0**

No application: **pH 6.0 to 7.5**

Plant other species: **pH > 7.5**

Landscape & Lawn practices

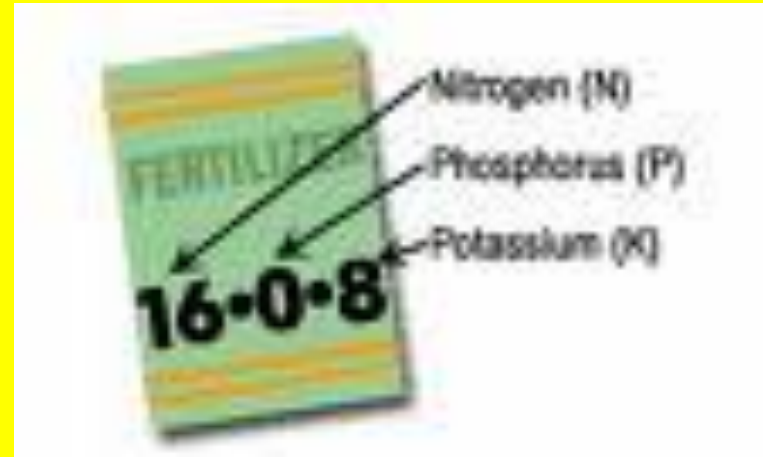
#27

Phosphorus

for lawns:

Apply:

P < 25 ppm



Landscape & Lawn practices

#28

Potassium

for lawns:



Apply: **K < 75 ppm**

Site Selection & Construction

#29

Is the soil suitable for an absorption field?

Yes If: **no limiting layer <20"**

slope <25%

landform does not have the word depression

If no, all of 30-38 is no or N/A

Septic Tank Practices

#30

Tank Filter cleaning interval

6 months **4 or more residents**

1 year **1-3 residents**

On-site wastewater disposal practices

#31

Septic Tank Pumping Interval

$$(D \times G) / 1000$$

R

Round answer to nearest whole number

Round .5 down



On-site wastewater disposal practices

#32

Yes If:

Subsurface Trench, gravity flow system

deep

and



well drained

and

<12% slope

and **mod sand or medium subsoil**

On-site wastewater disposal practices

#33

Yes If:

Subsurface Trench, Flood dose system

deep

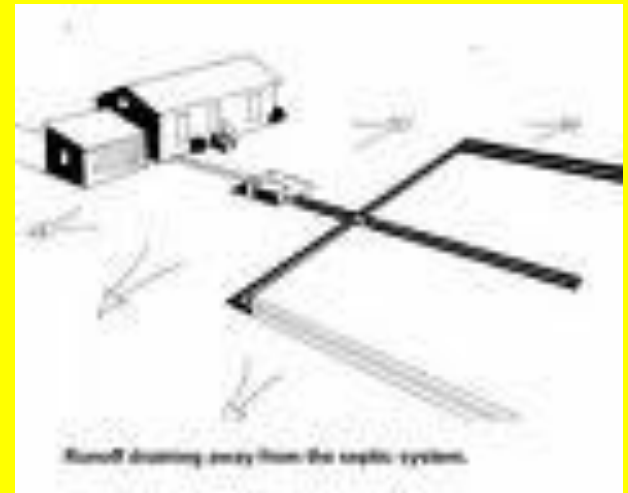
and

well drained

and

<12% slope

and **clay in subsoil**



On-site wastewater disposal practices

#34

Yes If:

Subsurface Trench, gravity flow system

deep

and



well drained

and

<12% slope

and

sandy subsoil

On-site wastewater disposal practices

#35

Elevated sand mound

Yes If:

dry

and

<6% slope



On-site wastewater disposal practices

#36

Elevated Sand Mound and Subsurface Drain

Yes If:

wet

and

<6% slope



On-site wastewater disposal practices

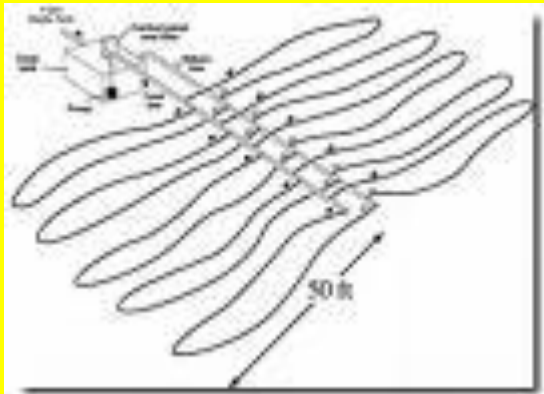
#37

Yes If:



Drip distribution system

Well drained or mod well with perimeter drain.



On-site wastewater disposal practices

#38

Yes If:

Secondary Treatment



at least 1 soil absorption field practice (32-36) is marked yes