THE Pedestal

2025 Winter Tour

Indiana Association of Professional Soil Classifiers (IAPSC)

Indiana Association of Professional Soil Classifiers

Winter Tour

Monday February 24, 2025

Location: Hendricks County Fairgrounds
1900 E Main St
Danville, IN 46122

Agenda (Eastern Time Zone)***

8:30 – 9:30	Registration
9:30 – 9:45	Welcome and Introductions Tiffani Gibson – President
9:30 – 10:15	Partner Updates NRCS- John Allen Purdue University- Dr. Gary Steinhardt Ball State University- Dr. Jessi Haeft IOWPA IRSS
10:15-10:30	Break
10:30 – 11:15	Land Slide Research- Victoria Leffel, Research Geologist IGWS
11:15-12:00	Heavy Metals and Microplastics in Urban Soils- Dr. Anna Paltseva, Purdue University
12:00-1:00	LUNCH
1:00-2:00	Panel Discussion- Business Topics, Taxes, Money Management, Price Points & Fees, Investing, Customer Service- Tom Adams, Larry Huber, Dave Ralston, Amber Willen, & Tiffani Gibson
2:00-2:15	Survey Resluts
2:15-2:30	Elections/Break
2:30-3:15	IAPSC Business Meeting
3:15-3:30	Election Results
3:30	Adjourn – SAFE TRAVELS!

The Indiana Association of Professional Soil Classifiers (IAPSC) is a not-for-profit organization of soil scientists who are interested in the field study and evaluation of soils.

Tiffani Gibson, President
Gary Steinhardt, Past President
John Allen, President-Elect
Dena Anderson, Secretary-Treasurer
Sarah Bolinger, Pedestal Editor
Tim Porter, Website Administrator

https://www.oisc.purdue.edu/irss/iapsc.html

https://www.iapsc-in.com/

Indiana Registry of Soil Scientists

(As written on the IRSS web site.)

The Indiana Registry of Soil Scientists is a program that establishes ethical standards and education, examination, and work experience criteria for Indiana Registered Soil Scientists.

http://www.oisc.purdue.edu/irss/

Pedestal

We need your stories and photographs for the Fall Tour 2025 Pedestal! Having them submitted by August 1st 2025 would be much appreciated. Please email them to:
saletsinger@gmail.com

Or mail them to:
Sarah Bolinger
14715 N 100 E
North Manchester, IN 46962

See the Pedestal in color:

Electronic copies of Pedestal will eventually be found at:
http://www.iapsc-in.com/#!documents/c1po4

Romans 8:28

"And we know that for those who love God all things work together for good, for those who are called according to his purpose."

Dr. Jessi Haeft and her family have recently lived through the tragedy of loosing their home. Prayers for her and her family are uch appreciated! We will also have a collectiob box at our Winter Tour Meeting for anyone wishing to donate to the Haeft family.

Membership Email Addresses

If you did not get an email notification of the electronic Pedestal it means we no longer have a valid email address for you. Please submit your current email address to Sarah Bolinger:

saletsinger@gmail.com
Email is the most cost-effective way the IAPSC can keep you informed of any last-minute changes in meeting plans, or time sensitive notifications of importance to the group.

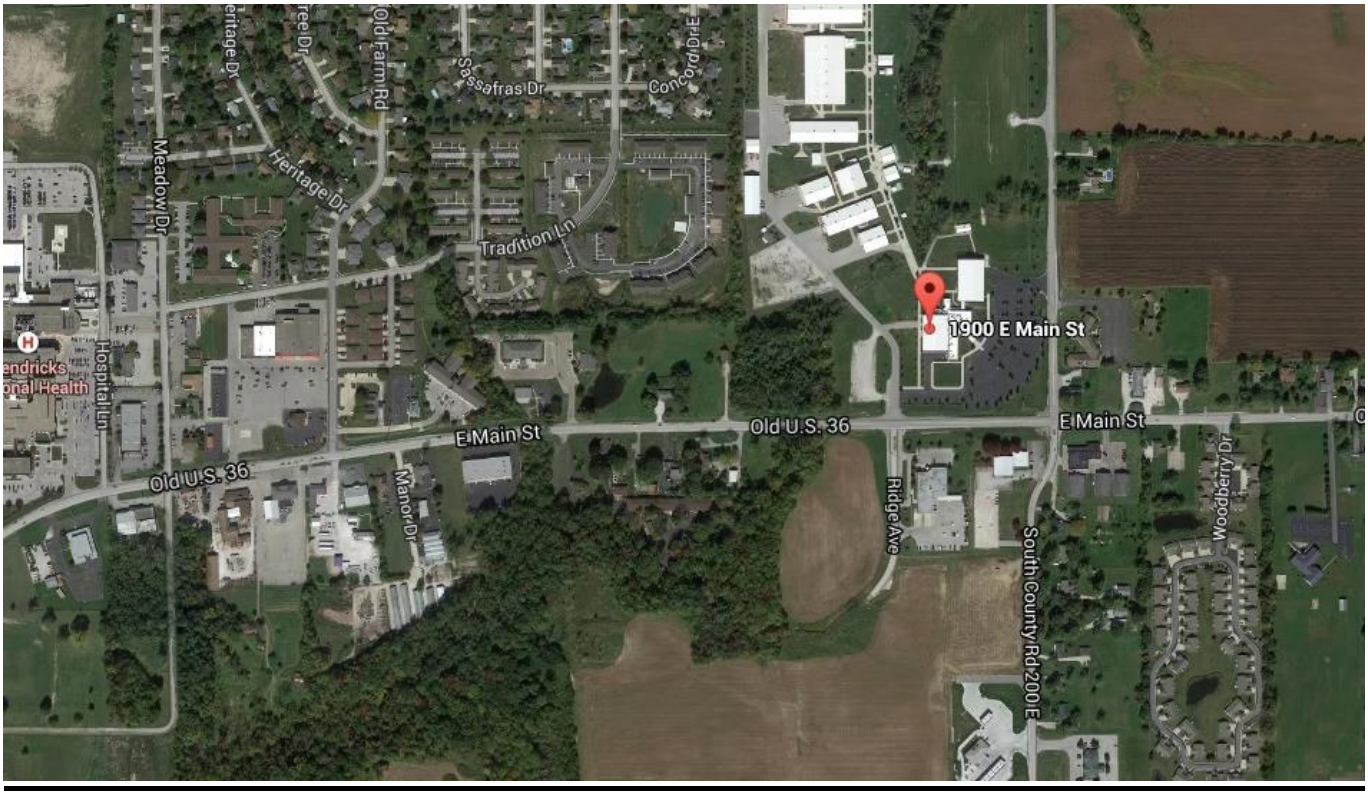
Soil Classifiers:

Alice Quinn of the IDOH sends a monthly email newsletter, the On-site Sewage System (OSS) update. This newsletter features any pertienent information for soil scientists including upcoming dates of importance, local health department staff changes, interesting (sometimes head shaking) stories and more! If you are not on her email list, please contact Alice.

Alice Quinn |
Residential On-site Sewage Systems Manager
Environmental Public Health Division
office: 317-233-7179 • mobile: 317-518-4388 • fax: 317-233-7047
alquinn@health.in.gov

Meeting Location

Hendricks County Fairgrounds
Danville, Indiana



Catering for our Winter Meeting will be by the Mayberry Café!

2025 WINTER TOUR REGISTRATION FORM

For Monday February 24th

Registration fee includes lunch

Help us keep costs low by registering early.

Send in your check today!

Registration Fee $35.00

Make checks to I.A.P.S.C. Inc. Clip
and mail to Dena Anderson:

IAPSC Secretary/Treasurer 6939
S. Majors Rd.
Hanover, IN 47243

Questions, Call or Text Dena at 812-525-6433, or 812-591-3770

Name(s):

Members, please update the following, IF needed:

Name:

Address:

Phone No:

E-mail address:

Eventbrite Link for online registration:
https://www.eventbrite.com/e/2025-iapsc-winter-workshop-tickets-1207144163689?aff=oddtdtcreator

Amoozemeter to the Rescue: Testing North Carolina Soils

Author: Cassie Rinkenberger

In early May of 2024, my father and I found ourselves in a 7-acre grassy field surrounded by the rolling hills of the Southern Appalachian Mountains near Asheville, North Carolina. Our purpose: tweak the design of 2 proposed stormwater detention basins for Biltmore Church who had outgrown their current church and were needing to relocate for expansion.

Early morning at the site.

Project Scope

Upon reviewing the geotechnical engineer's report, we soon realized that an infiltration test was sorely needed since undocumented fill material was spread on floodplain portions of the site! With the help of an excavator, we studied and tested the soil of two separate basins we cleverly labeled Basin 1 and Basin 2. In Basin 1, the soil was mapped: somewhat poorly drained, moderately rapidly permeable Cullowhee-Nikwasi complex, commonly found in floodplains of the Southern Appalachian Mountains. Basin 2 was mapped: well drained moderately permeable Dillsboro on stream terraces and colluvial fans in the Blue Ridge Mountains (MLRA 130).

Concrete Fill Material in Basin 1

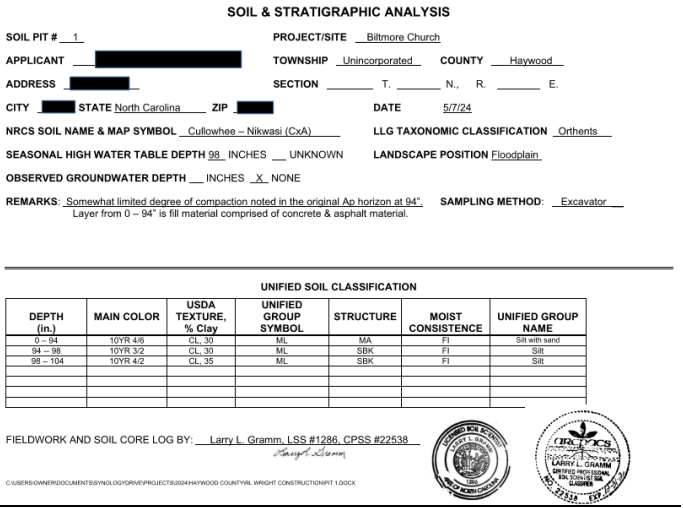
Basin 2

Results

Basin 1 generally consisted of 8 feet of undocumented fill underlain by the alluvial soils and resulted in a Ksat of .01 in/hr (.32 in/day). This Ksat is associated with compacted soils, where the pore spaces between soil

particles are reduced. This could be due to natural compaction or human activities like heavy machinery or foot traffic. The Amoozemeter showed us that water moves very slowly through the soil which could lead to waterlogging if rainfall or irrigation exceeds the soil's infiltration capacity. With limited water infiltration, excess water is more likely to run off the surface, increasing the risk of erosion and runoff, particularly in heavy rainfall events.

Basin 2 generally consisted of Dillsboro clay loam, a soil formed in colluvium weathered from felsic to mafic, igneous and meta morphic rocks. This Basin resulted in a Ksat of 0.36 in/hr (8.56 in/day). These numbers are typical of soils with good drainage, such as sandy soils or soils with loose structure. This soil allows water to penetrate quickly, making it beneficial for areas where rapid drainage is necessary, such as preventing waterlogging in agricultural fields. However, it also means the soil may dry out faster due to low water retention. In certain conditions, this faster water movement could lead to leaching nutrients or contaminants deeper into the soil or even into groundwater, especially in agricultural or contaminated sites.



SOIL & STRATIGRAPHIC ANALYSIS

SOIL PIT # 1 — PROJECT/SITE Biltmore Church

APPLICANT [redacted] — TOWNSHIP Unincorporated — COUNTY Haywood

ADDRESS [redacted] — SECTION _____ T. _____ N., R. _____ E.

CITY [redacted] STATE North Carolina ZIP [redacted] — DATE 5/7/24

NRCS SOIL NAME & MAP SYMBOL Cullowhee – Nikwasi (CxA) — LLG TAXONOMIC CLASSIFICATION Orthents

SEASONAL HIGH WATER TABLE DEPTH 98 INCHES __ UNKNOWN — LANDSCAPE POSITION Floodplain

OBSERVED GROUNDWATER DEPTH __ INCHES X NONE

REMARKS: Somewhat limited degree of compaction noted in the original Ap horizon at 94". Layer from 0 – 94" is fill material comprised of concrete & asphalt material. — SAMPLING METHOD: Excavator

UNIFIED SOIL CLASSIFICATION

DEPTH (in.)	MAIN COLOR	USDA TEXTURE, % Clay	UNIFIED GROUP SYMBOL	STRUCTURE	MOIST CONSISTENCE	UNIFIED GROUP NAME
0 – 94	10YR 4/6	CL, 30	ML	MA	FI	Silt with sand
94 – 98	10YR 3/2	CL, 30	ML	SBK	FI	Silt
98 – 104	10YR 4/2	CL, 35	ML	SBK	FI	Silt

FIELDWORK AND SOIL CORE LOG BY: Larry L. Gramm, LSS #1286, CPSS #22538

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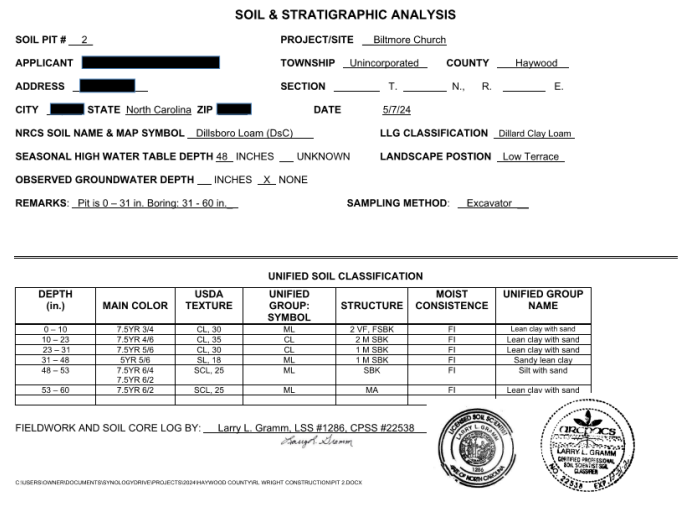
Basin 1 Soil Report



SOIL & STRATIGRAPHIC ANALYSIS

SOIL PIT # 2 — PROJECT/SITE Biltmore Church

APPLICANT [redacted] — TOWNSHIP Unincorporated — COUNTY Haywood

ADDRESS [redacted] — SECTION _____ T. _____ N., R. _____ E.

CITY [redacted] STATE North Carolina ZIP [redacted] — DATE 5/7/24

NRCS SOIL NAME & MAP SYMBOL Dillsboro Loam (DsC) — LLG CLASSIFICATION Dillard Clay Loam

SEASONAL HIGH WATER TABLE DEPTH 48 INCHES __ UNKNOWN — LANDSCAPE POSTION Low Terrace

OBSERVED GROUNDWATER DEPTH __ INCHES X NONE

REMARKS: Pit is 0 – 31 in. Boring: 31 - 60 in. — SAMPLING METHOD: Excavator

UNIFIED SOIL CLASSIFICATION

DEPTH (in.)	MAIN COLOR	USDA TEXTURE	UNIFIED GROUP: SYMBOL	STRUCTURE	MOIST CONSISTENCE	UNIFIED GROUP NAME
0 – 10	7.5YR 3/4	CL, 30	ML	2 VF, FSBK	FI	Lean clay with sand
10 – 23	7.5YR 4/6	CL, 35	CL	2 M SBK	FI	Lean clay with sand
23 – 31	7.5YR 5/6	CL, 30	CL	1 M SBK	FI	Lean clay with sand
31 – 48	5YR 5/6	SL, 18	ML	1 M SBK	FI	Sandy lean clay
48 – 53	7.5YR 6/4 7.5YR 6/2	SCL, 25	ML	SBK	FI	Silt with sand
53 – 60	7.5YR 6/2	SCL, 25	ML	MA	FI	Lean clay with sand

FIELDWORK AND SOIL CORE LOG BY: Larry L. Gramm, LSS #1286, CPSS #22538

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Basin 2 Soil Report

Biltmore Church

Asheville Road Waynesville, North Carolina

SATURATED HYDRAULIC CONDUCTIVITY SUMMARY 5/7/24

Diameter of auger hole = 2.4 inches (6 cm)

	Ksat #1 (Basin 1)	Bg Horizon Clay Loam 98-104 in	Ksat #2 (Basin 2)	BC1 Horizon Sandy Loam 31-48 in
V = Steady state reading (cm)	0.65	Steady State	1.43	Steady State
A = 20 or 105 cm^2 = Conversion Factor	20	1-reservoir on	20	1-on
Q = AV = Flow Volume (cm^3)	13		28.6	
Δ T = Time Interval (min)	20		2	
Q (cm^3 per min)	0.65		14.3	
Q (cm^3 per hour)	39		858	
Ksat = Q * Coefficient A				
H (Constant Water Level)	17		15	
Coefficient A	0.000879	17 cm head	0.001056	15 cm head
Ksat (cm/hr)	0.034281		0.906048	
Ksat (in/hr)	0.013496		0.356712	
Ksat (in/day)	**0.323915**		**8.561083**	

Conversion of Ksat (cm/day) to Longterm Acceptance Rate (e.g. wastewater application; gpd/ft2)

1 ft^2 = 30.5 x 30.5 cm = 930.25 cm^2

1 cm/day Ksat = 930 cm^3/ft^2/day

1 gallon = 3780 cm^3

So, 1cm/day = 930 cm^3/ft^2. Converting to gpd/ft^2:				
Conv. Factor = 930/3780 = 0.246	0.246		0.246	
(1 cm/day Ksat to 1 gpd/ft^2) Conv. Factor is 0.246				
Ksat (cm/hr) x 24	0.323915		8.561083	
Loading Rate=Ksat * Conv Fac	**0.1**		**2.1**	
*Long Term Acceptance Rate (gpd/ft^2)	**0.01**	10%	**0.21**	10%

Field Method Used: Amoozemeter

Coeff A derived from Table in Compact Constant Head Permeameter manual using hole diameter of 2.4 in (6cm) and H - height

Field Data to Ksat Calculation Using the Glover Solution:

Applying Darcy's Law: Ksat = Q * Coefficient A

Q = AV (determined in field)

A = area of water dropping through measuring reservoir (20 cm^2 or 105 cm^2)

V = steady state drop per given change of time (velocity of water): Ksat #1 is 0.65 cm per 20 min.; Ksat #2 is 1.43 cm per 2 min.

Ksat Calculation Conversion to Long Term Acceptance Rate:

*LTAR assumes a 10% safety factor of Ksat in gpd per ft2 (set to account for long-term deterioration of performance)

LLG Soil Consultants, LLC
1435 Fleming St. #209
Granger, Indiana 46530

Office: (574) 248-5955
Cell: (470) 696-5654
Email: *lgramm@outlook.com*

Field data of Basin 1 & 2.

Conclusion

Severity or *degree* of compaction cannot be measured with field estimates only. For instance, Basin #1 appeared to a "somewhat limited degree of compaction" with firm consistence and subangular blocky structure in underlying Ap horizon at 94-98". To our surprise, the Ksat of 0.01 in/hr indicated that the soil is very slow to transmit water, which can affect aspects such as agricultural productivity, drainage, and potential runoff management while a Ksat of 0.36 in/hr is an indicator of a soil with good permeability, which is beneficial for drainage but may require careful water management to prevent nutrient loss or soil drying. When put in terms of a soil loading rate for wastewater, 0.1 gpd/ft^2 makes for an extremely large system. Hope the lot is over-sized!

Those Were the Days…

Photo & Article Submitted by Gary Hudson

This picture was taken on the front steps of the Life Sciences Building at Purdue in July of 1975 during a two-week training session for new soil scientists. This coming summer will be the 50th anniversary of that event. Five of these people are still working today as soil consultants in Indiana. How many of the training session participants do you recognize?

See the end of the Pedestal to find the list of names in the above photo!

“The soil tells a story”

Article submitted by Mike Wigginton

Grant County Courthouse.

Community members gathered August 7, 2020 at the northeast corner of the Grant County Courthouse square to remember events that took place August 7, 1930. On the 90th anniversary of the lynching of Thomas Shipp and Abraham Smith, and the attempted lynching of James Cameron, members of the Marion Community Remembrance Project collected soil to be sent to the Equal Justice Initiative’s (EJI) National Memorial for Peace and Justice in Montgomery, Alabama. Community Soil Collection Projects have proved incredibly impactful to those who have participated, and community partners who have completed soil collections express the deep meaning and emotional impact of these experiences. Pastor Andrew Morell who was present at the Marion, Indiana ceremony said, “The soil tells a story”.

More than 4,400 black men and women were lynched in the U.S. from 1877 to 1950. EJI reports that at least 18 people were victims of racial terror lynching in Indiana. But it was not until March 29, 2022 that President Joe Biden signed into law The *Emmett Till Anti-lynching Act* making lynching a federal hate crime.

In 2015, EJI began working with communities across the country to commemorate and recognize the traumatic era of racial terror by collecting soil from lynching sites. The soil collection serves as an opportunity for communities to remember and memorialize the victims of lynching and engage in conversation about racial violence in America. The process begins by forming a committed and diverse community coalition to submit a project proposal. Approved coalitions then work collaboratively with EJI staff to research victims’ stories, identify potential locations for the soil collection, facilitate community education opportunities, and plan a meaningful soil collection ceremony. This project is also a great starting point for communities interested in erecting historical markers. Jars of collected soil are displayed in Montgomery, Alabama at the Legacy Museum: From Enslavement to Mass Incarceration, the Peace & Justice Memorial Center, and in the EJI office. Some communities choose to establish permanent local exhibits with the jars of soil. These exhibits express an ongoing commitment to confronting our history of racial injustice. EJI says that “soil acts as a living witness to racial violence”.

Ripples outward from Marion Indiana

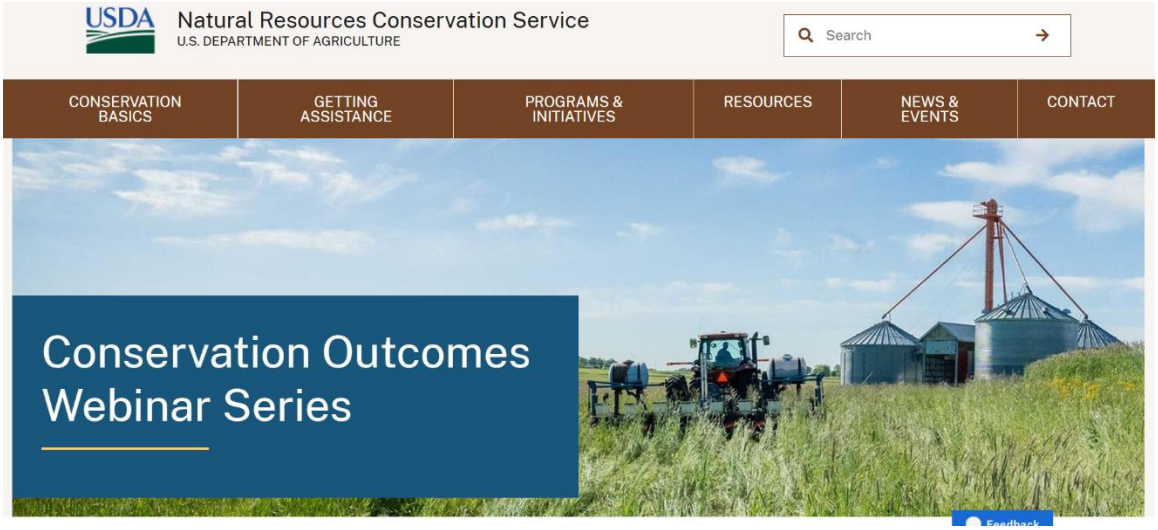
Abel Meeropol taught English at a High School in the Bronx, New York. Meeropol was disturbed by systemic racism in America. After seeing a photo depicting the lynching of two Black teens in Indiana in 1930 he wrote the poem “Bitter Fruit”. Meeropol later turned the poem into song lyrics and set it to music. The song came to the famous blues singer Billie Holiday’s attention, but she was hesitant to sing the song because she didn’t want to politicize her performances. But positive audience response and frequent requests for “Strange Fruit” soon prompted Holiday to close her performances with the song. Despite strong resistance, especially from radio stations in the South who refused to play “Strange Fruit,” the song rose in the charts, eventually selling 1 million copies and became the best-selling record of Holiday’s career. In the December 31, 1999 issue, Time magazine named "Strange Fruit" the "Best Song of the Century". In 2002 the Library of Congress honored the song as one of 50 recordings chosen that year to add to the National Recording Registry. In 2010 the New Statesman listed it as one of the "Top 20 Political Songs".

Lynching in Indiana

CEUg Educational Opportunities

The NRCS has upcoming conservation education webinars as well as an archive of all past webinars. Great resource for further education as well as CEUg credits.

https://www.nrcs.usda.gov/conservation-outcomes-webinar



Another great resource is the USDA's YouTube channel.
https://www.youtube.com/@nrcssoilandplantscience/videos

Indiana Association of Professional Soil Classifiers

2025 Membership Dues Statement

Membership status/fee

Actively Consulting Soil Classifier	$100.00*
Regular (non-consulting) Member	$25.00
Student	$10.00

*This fee is valid through the 2026 cycle (2 years)

Please remit payment c/o
Dena Anderson IAPSC Sec./Treas at:
6939 S. Majors Rd
Hanover, IN 47243
OR at Annual Meeting in February

Please correct any contact information **as needed**

Name:_____

Address:_____

Phone:_____

Email:_____

Left to right
Front row: Roger Kolezar, Gary Hudson, Tom Bauer, Susan Fischer, Eric Langer, Larry Osterholz
2nd row: Tom Ziegler, Larry Huber, Phil Kempf, Steve Kleuss, Brian Fink
3rd row: Terry Stephenson, Greg Henderson, Steve Neyhouse, Jerry Heltsley, Steve Strenger, Jack Coulter
4th row: Dave Tuszynski, Bruce Petersen, Bob Dancker