



72nd Surveyors' Institute

January 27, 28 and 29, 2021

Virtual Conference Via Zoom



University of Wisconsin
Stevens Point

Welcome to Our First

Virtual WSL Institute!

Although the Institute may look and feel different, we are looking forward to continuing our more than 70 year tradition of providing quality education for those in the surveying industry. The 2021 Institute has a similar format with four concurrent sessions, providing a wide range of topics, along with a Virtual Exhibit Hall. This year, we are delighted to bring internationally recognized Elaine and Elly Ball from “Get Kids Into Survey” to kick off the Institute! We hope you enjoy your experience and we look forward to future years when we can again be together.

Wednesday, January 27

Opening Keynote Presentation | 8:30 a.m. – 9:45 a.m.



Elaine Ball, Founder
Get Kids into Survey,
United Kingdom

Elaine Ball works with small to multi-million dollar companies around the globe, within the Geospatial Sector

providing Strategic Marketing and Sales Implementation and coaching to surveyors and manufacturers. Since 2017, it has been Elaine's mission to get kids ages 12 years and under into survey by producing highly engaging posters. She works closely with Alison Watson at Class of Your Own who produces Design-Engineer-Construct Curriculum for schools (13 years +) as well as working alongside other major providers and universities.



Elly Ball, CEO
Get Kids into Survey
United Kingdom

Elly Ball runs the operations of 'Get Kids into Survey', an initiative founded in 2017 with one mission: to educate and excite the next generation of surveyors & geospatial experts. Elly started her career in 2009 as an architectural photographer, floor planner, and later, SketchUp 3D Modeler. Elly's passion has always come from property and architecture and continues to work as a Freelancer in this role alongside GKIS.

Get Kids Into Survey: Inspiring Future Geospatial Experts!

1.0 PDH, Category 3

Over 85% of UK surveyors said they have problems recruiting due to a lack of qualified applicants (RICS, 2015). In fact, “the skills shortage has now overtaken planning and regulation as the second biggest problem facing the industry” (Telegraph 2017). In the USA, POB Magazine reported a shortage of surveyors, full stop! The FIG and the NSPS both launched young surveyor’s networks to support surveyors aged up to 35 – but there’s a more basic challenge: to generate interest in surveying as a career while kids are still in school!



Wednesday, January 27 10 a.m. – Noon

1. The NEW 2021 ALTA/NSPS Land Title Survey Standards

Gary R. Kent, P.S., Meridian Land Consulting, LLC (owner/manager) and Schneider Geomatics (part-time). Chair of the Joint ALTA/NSPS Committee on the ALTA/NSPS Land Title Survey Standards, Indianapolis, Ind.

2.4 PDHs, Category 3

After 2 years of work on the part of two national committees, the proposed 2021 ALTA/NSPS Land Title Survey Standards were adopted by the Joint ALTA/NSPS Committee and sent to ALTA and NSPS for consideration. The new Standards will become effective on February 23, 2021. The changes from 2016 will be discussed and an explanation of what each means to the surveyor will be provided. In addition, along with an overview of the entire set of 2021 Standards, we will discuss the most common questions and requests from lenders that arise in the process of performing or completing a Land Title Survey and how the surveyor should or could respond.

2. Twenty Years – Twenty Lessons Learned Reviewing Plats and CSMs

Renee Powers, PLS, Supervisor, Plat Review, Department of Administration, State of Wisconsin, Madison, Wis.

2.4 PDHs, Category 1 or 3

What exactly are reviewer's thinking when they are examining my plat or map? And...what should they be thinking about?

3. NSRS Modernization Updates from the National Geodetic Survey ~ Part 1

2.4 PDHs, Category 1 or 3

Jacob Heck, Ph.D., Great Lakes Regional Geodetic Advisor, National Oceanic and Atmospheric Administration, Ann Arbor, Mich.

NGS is in the process of modernizing the National Spatial Reference System (NSRS). This talk will provide background on reference frames and geopotential datums and give an overview of the products and services that NGS provides to the Surveying community. It will then discuss NGS's efforts to modernize the NSRS including the latest news related to them. The talk will also show what you can do to help NGS improve the new NSRS through activities such as GPS on Benchmarks.

Continued in Session 7

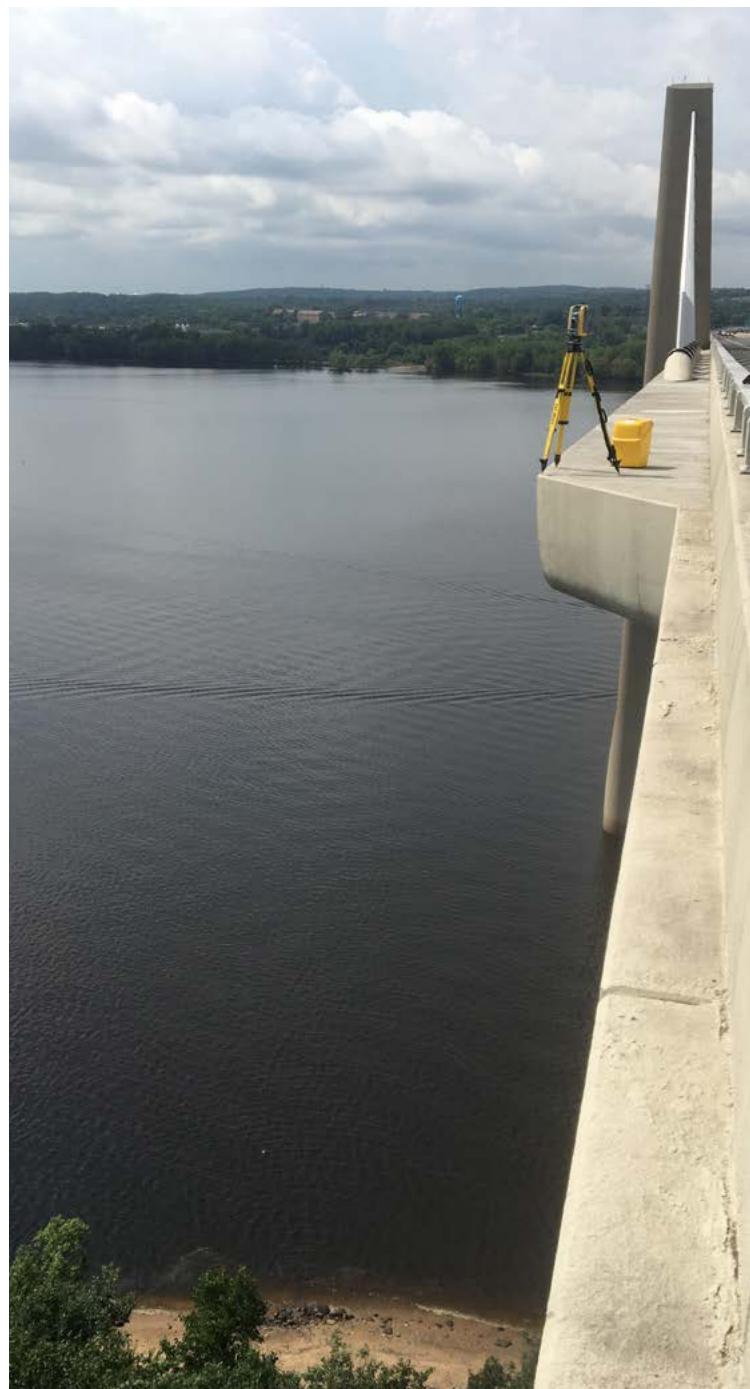


4. What I Learned in Switzerland - Rethinking Our Future

*Rich Leaver, PLS, Owner, Leaver Land Surveying, LLC,
Beaver Dam, Wis.*

2.4 PDHs, Category 1 or 3

Wisconsin surveyor Rich Leaver recently organized a delegation of U.S. surveyors to Switzerland on the first of what he hopes to be a series of fact-finding visits to countries with formal national cadastral systems. Leaver's goal is to examine such systems and produce materials and recommendations for potential cadastral system reforms for U.S. states.



Wednesday, January 27

1:30 p.m. – 3:10 p.m.

5. The Art of Retracement:

Following in the Footsteps ~ Part 1

*Gary R. Kent, PS, Meridian Land Consulting, LLC
(owner/manager) and Schneider Geomatics (part-time).
Chair of the Joint ALTA/NSPS Committee on the
ALTA/NSPS Land Title Survey Standards, Indianapolis, Ind.*

2.0 PDHs, Category 3

Every professional surveyor across the United States knows the phrase “Follow in the Footsteps” as it relates to conducting a boundary retracement survey. But what does it really mean and what is the basis for following the footsteps? And exactly whose footsteps are we talking about? Surveyors also know the effect of the statute of frauds is that what is written in the conveyancing document is considered by the courts to be the highest and best expression of the parties’ intentions. But what happens when the evidence of the footsteps on the ground conflicts with the written title? What if there are seemingly no footsteps to follow? What then? In this program we will explore the concept of retracement, how it relates to and is dependent on the document of conveyance, and what controls when conflicts are inevitably encountered. When armed with a full understanding of the concept of retracement, surveyors will be much better equipped to help steer their clients (and their affected neighbors) away from the pain and cost of litigation, and towards an amicable solution based on well-placed confidence and understanding of their respective roles and responsibilities.

Continued in Session 9



6. Property Surveys: What You'll Find.

What To Do.

Kevin Slottke, PLS, Survey Department Head, The Sigma Group, Milwaukee, Wis.

2.0 PDHs, Category 3

This session will review several boundary surveys, what was encountered and the thought process behind decisions made in the field. These are real world examples of what a surveyor may encounter while retracing a property boundary.



7. NSRS Modernization Updates from the National Geodetic Survey ~ Part 2

Jacob Heck, Ph.D., Great Lakes Regional Geodetic Advisor, National Oceanic and Atmospheric Administration, Ann Arbor, Mich.

2.0 PDHs, Category 1 or 3

NGS is in the process of modernizing the National Spatial Reference System (NSRS). This talk will provide background on reference frames and geopotential datums and give an overview of the products and services that NGS provides to the Surveying community. It will then discuss NGS's efforts to modernize the NSRS including the latest news related to them. The talk will also show what you can do to help NGS improve the new NSRS through activities such as GPS on Benchmarks.

Continued from Session 3

8. Is It Ethical to Be Professional?

Kory Allred, Ph.D., PLS, EI, Parkland Community College, Champaign, Ill.

2.0 PDHs, Category 2

We will discuss what it means to be ethical as a land surveyor as well as court cases related to professional stature and licensure.

Repeated in Session 19

Wednesday, January 27

3:30 p.m. – 4:30 p.m.

9. The Art of Retracement: Following in the Footsteps ~ Part 2

Gary R. Kent, PS, Meridian Land Consulting, LLC (owner/manager) and Schneider Geomatics (part-time) Chair of the Joint ALTA/NSPS Committee on the ALTA/NSPS Land Title Survey Standards, Indianapolis, Ind.

1.2 PDHs, Category 3

Every professional surveyor across the United States knows the phrase "Follow in the Footsteps" as it relates to conducting a boundary retracement survey. But what does it really mean and what is the basis for following the footsteps? And exactly whose footsteps are we talking about? Surveyors also know the effect of the statute of frauds is that what is written in the conveyancing document is considered by the courts to be the highest and best expression of the parties intentions. But what happens when the evidence of the footsteps on the ground conflicts with the written title? What if there are seemingly no footsteps to follow? What then? In this program we will explore the concept of retracement, how it relates to and is dependent on the document of conveyance, and what controls when conflicts are inevitably encountered. When armed with a full understanding of the concept of retracement, surveyors will be much better equipped to help steer their clients (and their affected neighbors) away from the pain and cost of litigation, and towards an amicable solution based on well-placed confidence and understanding of their respective roles and responsibilities.

Continued from Session 5



10. GPS is Not Just a Magic Box!

*Howard Herrild, PLS, Associate Dean, Instructor,
Northeast Wisconsin Technical College, Green Bay, Wis.*

1.2 PDHs, Category 3

This session will cover the basic watch outs and information that needs to be known when working with GPS.

11. Catahoula Lake, Crooks vs The State of Louisiana

Elizabeth Schleif, PLS, Regional Surveyor, USDA, Forest Service Eastern Region, Milwaukee, Wis. and Lisa Van Horn, PLS, Past President, National Society of Professional Surveyors, Green Bay, Wis.

1.2 PDHs, Category 3

A look at the court case and Amicus Brief submitted by NSPS to protect the Public Land Survey System over a cartography map was held over the Original Government survey maps.

12. GNSS Observations on Passive Geodetic Survey Control Stations for 2022 Datum

Mick Heberlein, PLS, PS, CFedS, WisDOT, Office of Surveying and Mapping, Madison, Wis.

1.2 PDHs, Category 3

In July of 2020, NGS announced that passive geodetic survey control stations without recent GNSS observations will receive transformed coordinates rather than calculated coordinates in the 2022 datum. WisDOT built or utilized 9,000 survey stations for the Wisconsin Height Modernization Program and most lack current GNSS observations. This presentation will provide an overview of the GNSS on passive benchmarks program, review WisDOT's plan for observations, review requirements and submittals via OPUS Share and explain the local advantages of obtaining and submitting observations to encourage local surveyors to obtain as many observations as possible before the data submission deadline of December 31, 2021.

Thursday, January 28

8:20 a.m. – 10 a.m.

13. The Last Remaining GLO Evidence Stronghold: A History of the Sylvania Wilderness

Jordan Ketola, PLS, CFedS, Forest Land Surveyor, Hiawatha & Ottawa National Forests, Gladstone, MI

2.0 PDHs, Category 3

The Sylvania Wilderness is part of the Ottawa National Forest in the Upper Peninsula of Michigan and is comprised of 18,000 acres of pristine lakes and virgin timber. We'll explore its rich history related to surveying and otherwise and discuss why it's one of the last remaining places in Michigan where original GLO evidence recovery chances are still fairly good!

14. Railroad Surveying 101 ~ Part 1

Charlie Tucker, LS, Manager, Denver Railway Services, Denver, Colo.

2.0 PDHs, Category 3

The course begins with the "dirty dozen", a list of the 12 most common blunders, poor assumptions and bad guesses that railroad professionals see on an everyday basis coming to them from non-railroad professionals and agencies that kill or delay projects that involve crossing or bordering a railroad. Upon completing this seminar, the surveyor should be much more aware of the issues and requirements to be addressed prior to tackling a railroad-related project. The surveyor should now be more confident that railroad related work and railroad boundary skills can be managed under his area of expertise.

Continued in Session 18 and 22



15. Civil 3D Drafting and Production Workflows: After the Survey

Russ Nicloy, Civil Solution Specialist, Macer Technologies, Waukesha, Wis.

2.0 PDHs, Category 3

In this session we will look at how to use Civil 3D after survey data has been brought in to the project. We will cover the basics of controlling points in the file, surface creation, alignment and profile creation, and parcel creation.



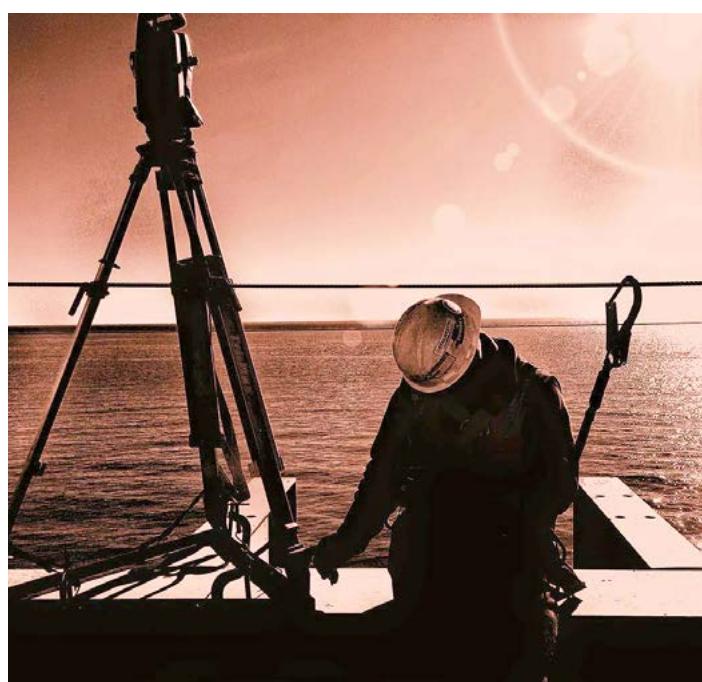
**Thursday, January 28
10:20 a.m. – Noon**

16. Trans 233 Restrictions and Driveways on State Highways: What Surveyors Need to Know When Dealing with WisDOT

Michael Roach, Jr., Statewide Access Engineer, Bureau of Technical Services, Wisconsin Department of Transportation, Madison, Wis. and Stephen Sydow, WisDOT Access Management Specialist, Bureau of Technical Services, Wisconsin Department of Transportation, Madison, Wis.

2.0 PDHs, Category 1 or 3

Surveying lands that abut a state highway means additional laws and regulations come into play. Does this lot have a right to access the highway? Where can they get access? Are there setback restrictions? Can these restrictions be removed? WisDOT has the answers to these questions and more.



17. Pivoting Your Business Due to Covid: Make Changes Using Financial Analysis and Marketing Avatar Tools

Melissa Meschke, Director, Small Business Development Center, University of Wisconsin-Stevens Point, Stevens Point, Wis. and Mark Speirs, Consultant, Small Business Development Center, University of Wisconsin-Stevens Point, Stevens Point, Wis.

2.0 PDHs, Category 3

Learn how consumers have changed due to the pandemic and how you can adjust. Employ financial analysis models such as cash flow to sort through your numbers and look for areas you can improve and plan for the future.

18. Railroad Surveying 101 ~ Part 2

Charlie Tucker, LS, Manager, Denver Railway Services, Denver, Colo.

2.0 PDHs, Category 3

The course begins with the “dirty dozen,” a list of the 12 most common blunders, poor assumptions and bad guesses that railroad professionals see on an everyday basis coming to them from non-railroad professionals and agencies that kill or delay projects that involve crossing or bordering a railroad. Upon completing this seminar, the surveyor should be much more aware of the issues and requirements to be addressed prior to tackling a railroad-related project. The surveyor should now be more confident that railroad related work and railroad boundary skills can be managed under his area of expertise.

Continued from Session 14.

Continued in Session 22.

19. Is It Ethical to Be Professional?

Kory Allred, Ph.D., PLS, EI, Parkland Community College, Champaign, Ill.

2.0 PDHs, Category 2

Holding a license as a Professional Land Surveyor is truly a privilege and an honor. However, such a distinction also carries with it obligations. One such obligation is to practice professionally and ethically. This seminar will cover professionalism and ethics from a general viewpoint, and from that of a land surveyor. In addition to reviewing and discussing published standards relative to the practice of land surveying in Wisconsin, the seminar will include discussions of various situations involving professional ethics. Wisconsin has submitted to the National Geodetic

Repeated in Session 8

20. Wisconsin's Piece of the State Plane Coordinate System of 2022 (SPCS2022): Practical Aspects of Adoption of New Reference Frames, Datums, and Coordinate Systems

Dan Rodman, PLS, City of Madison Parks Division, Madison, Wis. and Alan Vonderohe, Professor Emeritus of Civil and Environmental Engineering, University of Wisconsin-Madison, Madison, Wis.

2.0 PDHs, Category 1 or 3

Survey requests, proposals, and designs for two 'layers' of map projections to be included in the new State Plane Coordinate System. A statewide single zone, as well as a new set of low-distortion projections (LDPs), similar but not identical to WISCRS, will be described. Practical considerations, from a surveyor's and spatial data manager's perspective, of implementing the new coordinate systems and their underlying new reference frame will be described with examples of potential coordinate differences and alternatives for dealing with them.



Thursday, January 28

2 p.m. – 4 p.m.

21. Title: Covid-19 and the Workplace: Where Have We Been and Where Are We Headed?

*Jonathan R. Edien, J.D., von Briesen & Roper, S.C.,
Neenah, Wis.*

2.4 PDHs, Category 1 or 3

Most employers have adapted to a new way of operating in light of Covid-19. This program will discuss the main policy changes implemented by employers to keep employees engaged and productive. There will also be a discussion about anticipated policy changes as the country's response to Covid-19 continues to evolve. Likewise, this program will discuss the impact of the Families First Coronavirus Response Act (FFCRA) which is set to expire on December 31, 2020, and the new or anticipated legislation for 2021.



22. Railroad Surveying 101 ~ Part 3

*Charlie Tucker, LS, Manager, Denver Railway Services,
Denver, Colo.*

2.4 PDHs, Category 3

The course begins with the “dirty dozen”, a list of the 12 most common blunders, poor assumptions and bad guesses that railroad professionals see on an everyday basis coming to them from non-railroad professionals and agencies that kill or delay projects that involve crossing or bordering a railroad. Upon completing this seminar, the surveyor should be much more aware of the issues and requirements to be addressed prior to tackling a railroad-related project. The surveyor should now be more confident that railroad related work and railroad boundary skills can be managed under his area of expertise.

Continued from Sessions 14 and 18.



23. Wisconsin Society of Land Surveyors Annual Meeting

2.4 PDHs, Category 1 or 3

This session is the WSL Annual Meeting and will include items typically addressed during the Institute Banquet. We will recognize new licensees, Map/Plat contest winners, Trig-Star winners, and the Annual Awards. The Foundation will present scholarships. Per usual, it will include committee and chapter reports and the current President will address the membership concerning the Society's accomplishments. The Tellers Committee will announce the new officers for 2021. The President will pass the gavel to the new President, followed by the new President addressing the membership on their plan for 2021.

24. Drones! What Are They Good For?

Kory Allred, Ph.D., PLS, EI, Parkland Community College, Champaign, IL

2.4 PDHs, Category 1 or 3

This session will focus on court cases involving drones and their operators. We will also discuss tips on passing the Part 107 exam and include a short review of the topics covered in the exam.



25. Principles and Practice of Land Surveying (PLS) Exam Prep ~ Part 1

Howard Herrild, PLS, Associate Dean, Instructor, Northeast Wisconsin Technical College, Green Bay, Wis.

2.4 PDHs, Category 3

This session is for the person who is looking to take the Fundamentals of Land Surveying exam and the Principles and Practices of Land Surveying exam. This land surveying refresher will focus on the things you need to know about the exams, public land survey system, study materials and exam format. With a small focus on the licensing application process.

Continued in Session 30



Friday, January 29

8:20 a.m. – 10 a.m.

26. Practical Applications, Control & Techniques for Using UAS Mapping Systems

JT Holcombe, P.E., The Sigma Group, Inc., Milwaukee, Wis. and Daniel Schwartz, UAS Specialist, P.E., Ruekert & Mielke, Lannon, Wis.

2.0 PDHs, Category 3

Unmanned Aircraft System (drone) technology has become an indispensable data acquisition tool for the modern engineer and surveyor. While many lofty claims have been made regarding the accuracy and efficiency of these systems, this presentation will focus on down to earth techniques to produce reliable data for your team and your clients.

27. Parcel Maps vs. Survey Maps vs GIS Legal Status

Steve Sorenson, J.D., Von Briesen and Roper, S.C., Ripon, Wis.

2.0 PDHs, Category 1 or 3

This program will look at the different uses of different maps. It will identify the impact of the map in the big picture. Most importantly the program will identify what the difference is between a map and a survey both from the legal as well as the practical perspective. A careful look at the conflict that often develops between the tax lister, register of deeds and the surveyor who often see their jobs as the same but which are in fact very different with each having an important role.



28. Endemic Diseases and Outbreaks in Wisconsin

Angelo Kolokithas, Ph.D., Program Director, Biology, Northeast Wisconsin Technical College, Green Bay, Wis.

2.0 PDHs, Category 3

There are many diseases that make Wisconsin their home, while others come from different places. This presentation will cover diseases that are commonly acquired while outdoors, with special focus on diseases carried by ticks and mosquitos. Topics include disease spread, risk factors, signs and symptoms, treatments and prevention.

29. Riparian Boundaries

Kory Allred, Ph.D., PLS, EI, Parkland Community College, Champaign, Ill.

2.0 PDHs, Category 1 or 3

We will review the basics of riparian boundaries as well as discuss several court cases where water boundaries are at issue.

30. Principles and Practice of Land Surveying (PLS) Exam Prep ~ Part 2

Howard Herrild, PLS, Associate Dean, Instructor, Northeast Wisconsin Technical College, Green Bay, Wis.

2.0 PDHs, Category 3

This session is for the person who is looking to take the Fundamentals of Land Surveying exam and the Principles and Practices of Land Surveying exam. This land surveying refresher will focus on the things you need to know about the exams, public land survey system, study materials and exam format. With a small focus on the licensing application process.

Continued from Session 25.

Friday, January 29

10:20 a.m. – Noon

31. Wisconsin County Surveyors Association (WCSA) Annual Membership Meeting

Ryan Duckart, PLS, President, Wisconsin County Land Surveyors Association, Brown County Surveyor, Brown County Planning and Land Services, Green Bay, Wis. and Tom Leslie, PLS, Wisconsin County Land Surveyors Association, De Pere, Wis.

2.0 PDHs, Category 3

This session provides a unique learning opportunity on a wide variety of land surveying topics. While this session serves as the annual membership meeting for the Wisconsin County Surveyors Association, all WSLS members are invited to join in on the discussions and ask questions on the various topics. Representatives from the State Cartographers Office, National Geodetic Survey and the Wisconsin Department of Transportation will be in attendance to deliver reports and answer questions. The "Friend of Wisconsin Land Surveying Award" will be presented along with recognition of WCSA members accomplishments.



32. Recent Court Cases of Interest to Surveyors

Steve Sorenson, J.D., Von Briesen and Roper, S.C., Ripon, Wis.

2.0 PDHs, Category 1 or 3

Overview of all the important and interesting cases from the past year concerning surveying, land use, zoning, boundary disputes, riparian rights and other stimulating topics that will have you on the edge of your seat. From the float bog case to the eroding shoreline this program will take a look at how courts are interpreting the role of surveyors and the laws we are asked to follow. A special part of the program will be the regular stump the presenter segment where participants will be allowed to recite their own fact situation and we will look at how the current case law would interpret those facts.

33. COVID in the New Year: The Science Behind the Pandemic

Angelo Kolokithas, Ph.D., Program Director, Biology, Northeast Wisconsin Technical College, Green Bay, Wis.

2.0 PDHs, Category 3

The United States and the World are faced with a Pandemic, the likes we haven't seen in over 100 years. From politics to social media, there is much misinformation spread to the public. This presentation will separate facts from fiction, and present the real science behind the virus. Topics include viral spread, disease, epidemiology, medicine, and future outlook.

34. Code of Ethics and Discrimination and Harassment Prevention Training

Robin Waier, Senior Professional in Human Resources (SPHR), Human Resources Generalist, raSmith, Brookfield, Wis.

2.0 PDHs, Category 2

This presentation discusses the basics of professional ethics, with examples specific to the Survey industry, in addition to the importance, both legally and morally, of preventing discrimination and harassment in the workplace.

35. Financial Planning for the Young Surveyor

Howard Herrild, PLS, Associate Dean, Instructor, Northeast Wisconsin Technical College, Green Bay, Wis. and Kerri Herrild, Business Teacher, De Pere High School, De Pere, Wis.

2.0 PDHs, Category 3

This session will highlight important financial decisions that need to be made by young professionals. Topics will include retirement savings, importance of insurance, and budgeting to meet financial and personal goals

