

# 70<sup>th</sup> SURVEYORS INSTITUTE

January 23, 24 and 25, 2019

Kalahari Convention Center, Wisconsin Dells, Wis.



University of Wisconsin  
**Stevens Point**

Wednesday, January 23

10 a.m. – Noon

### 1. WATER AND RAILROAD 1800's Transportation = 2000's Litigation *Part 1*

Cheri Hipenbecker, General Counsel, Knight Barry Title, Inc., Milwaukee, Wis., William T. Stuart, Attorney at Law, Meissner Tierney Fisher & Nichols SC, Milwaukee, Wis.

**2.4 PDHs, Category 1 or 3**

History buffs – how do the decisions regarding Wisconsin transportation systems in the 1800's impact land ownership in 2019? Join us on a tour of Wisconsin expansion in the 1800's bringing our state from the vast no-lands to the largest producer of wheat in the 1850's (we think). How was this done? Water and Railroads. How was this paid? Land. Does this affect property owners today? YES. Is H2O always H2O? NO.

*Continued in Session 7.*

### 2. Hello Plat Review, I Have a Question... (The Sequel)

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

**2.4 PDHs, Category 1 or 3**

Questions are common when creating land divisions and preparing maps. This session picks up where we left off last year. Feel free to submit questions prior to the Institute.

### 3. Wading Through Professional Ethics

Devon Vanden Heuvel, Professional Land Surveyor and Civil Engineering Technology Instructor, Madison College, Madison, Wis.

**2.4 PDHs, Category 2**

Some days it feels like you are only knee deep in ethical decisions while on other days it may feel like you are drowning while trying to make the proper decision. The rules of professional conduct are intended to create and build trust and accountability to the public we serve by identifying the fundamental principles and practices that fellow professionals can adhere. We will review what plays a part in our ethical decisions and how to keep yourself out of deep water.

### 4. What it Takes to Collect Survey-Grade Data by Drone

Daniel Katz, Co-Founder, Aerotas, Costa Mesa, Calif.

**2.4 PDHs, Category 1 or 3**

Getting pretty pictures by drone is easy but getting consistent and high-accuracy survey data takes know-how. Aerotas has learned the hard way what it takes to get survey-grade accuracy by drone, from training hundreds of surveyors and processing thousands of drone surveys. This seminar reveals the best practices Aerotas has learned for collecting survey-grade data by drone. Attendees will walk away with concrete lessons on how to determine the right drone for their business, how to choose the right projects on which a drone should be used, including regulatory and business considerations, and how to set up and complete a drone survey project, including mission planning, aerial targets, and flight parameters. The talk will include real-life case studies to make the lessons concrete, including the most common mistakes surveyors make when using drones. This seminar will be most valuable for field surveyors, crew chiefs, survey business decision makers, and those responsible for making equipment and procedures decisions for their organizations.

### 5. Applying Boundary Law Principles

Andrew S. Cleveland, PLS, Mach IV Engineering & Surveying, Appleton, Wis.

**2.4 PDHs, Category 1 or 3**

In this session, we will be looking at several “every day” surveys and discusses the boundary law principles used to formulate the final opinion. We will also discuss the Professional Surveyor’s role, obligations, and duties to the client and the public.

### 6. Civil 3D Survey Database to Surface Creation

Russ Nicloy, Civil Solutions Specialist, MACER Technologies, Inc.

**2.4 PDHs, Category 3**

This session will help you take information from the Civil 3D survey database to surface creation, then to maintaining the surface through edits in the survey database. We will look at options for referencing data to surfaces, use of survey queries, as well as use of the survey database in WisDOT projects.



Wednesday, January 23  
1:30 – 3:10 p.m.

## 7. WATER AND RAILROAD 1800's Transportation = 2000's Litigation *Part 2*

Cheri Hipenbecker, General Counsel, Knight Barry Title, Inc., Milwaukee, Wis., William T. Stuart, Attorney at Law, Meissner Tierney Fisher & Nichols SC, Milwaukee, Wis.

**2.0 PDHs, Category 1 or 3**

*Continued from Session 1.*

*Please see Session 1 for description.*

## 8. Attracting Tomorrow's Talent: The Millennial Mindset *Part 1*

Steve Bench, Generational Consulting LLC, Madison, Wis.

**2.0 PDHs, Category 3**

This session focuses on the different generations over time and engages everyone in the discussion by building understanding of who we are, how we were raised, and how we view “work” as a part of our identity. Learn ways to build a work culture that is attractive to young professionals, and learn management strategies to engage Millennial talent and keep them from leaving! This session explains what Millennials want from our job, our manager, our employer, etc. Adulthood has changed and Millennials are no longer defined by our careers, but rather our lifestyles – so how do you manage and motivate someone who may not be as committed to their job as previous generations? This session is a crowd favorite and will provide insight and answers!

*Continued in Session 14.*

## 9. Panel Discussion on National Level Concerning the Land Surveying Profession

Curt Sumner, Executive Director, National Society of Professional Surveyors, Frederick, MD; Kim Leavitt, President, National Society of Professional Surveyors, Idaho Falls, Idaho; Lisa Van Horn, President Elect, National Society of Professional Surveyors, Green Bay, Wis.; Mark C. Sargent, Vice President, National Society of Professional Surveyors, Concord, N.H.; and Tim Burch, Secretary, SPACECO, Inc., Rosemont, Ill.

**2.0 PDHs, Category 3**

Curt Sumner and the Officers of NSPS will discuss what is happening at the national level and will be available to answer questions.

## 10. Construction Layout – Do's and Don'ts

Kevin Slotke, PLS, The Sigma Group, Milwaukee, Wis.

**2.0 PDHs, Category 3**

In this session, Kevin will provide a step-by-step layout setup and field procedures from plan to stake in the ground. Kevin will detail mistakes made and how to avoid them.

## 11. Young Surveyors Network

**2.0 PDHs, Category 3**

This session is a meeting of the WSLs Young Surveyors Network. Opportunities for young surveyors will be discussed as well as planning for the future of this group. All are welcome to attend and assist in growing the next group of future leaders within WSLs.

## 12. Vendor Sessions

### GeoSLAM Horizon: Scan Indoor, Outdoor, or on a Drone

Travis LeMoine, Seiler Instrument

**2.0 PDHs, Category 3**

The GeoSLAM Horizon is the latest evolution in SLAM (simultaneous localization and measurement). We'll discuss how SLAM works, review some collected data, and investigate the best applications for the technology.

### What's new: Trimble TSC7, Trimble Access 2018 and TBC 5.0

Steve Grady, Seiler Instrument

**2.0 PDHs, Category 3**

The power of a laptop in a rugged easy to use design, the new Trimble TSC7 along with Trimble Access 2018, provides the latest in field technology. Coupled with Trimble Business Center 5.0, this combination will meet any survey or engineering needs. This session will cover the TSC7 hardware, Trimble Access 2018 field software and what is new in TBC 5.0.

Wednesday, January 23  
3:30 – 4:30 p.m.

### 13. The Impact of Surveys in Real Estate Transactions

Mark C. Young, Attorney, Wauwatosa, Wis.  
**1.2 PDHs, Category 1 or 3**

Most buyers are unaware of the advisability of obtaining a survey when they purchase a residential property, unlike purchasers of commercial properties. A survey is one of the legs of a three-legged stool comprised of the survey, the title insurance description and the description in the deed. How lawyers and title companies deal with one of the legs being a bit wobbly.

### 14. Attracting Tomorrow's Talent: The Millennial Mindset *Part 2*

Steve Bench, Generational Consulting LLC,  
Madison, Wis.  
**1.2 PDHs, Category 3**

*Continued from Session 8.  
Please see Session 8 for description.*

### 15. NWTC's 2018 NSPS Student Competition Experience

Connor Christopherson, Survey Technician, Brian Frisque Surveys Inc., Sturgeon Bay, Wis.  
**1.2 PDHs, Category 3**

This session looks back at NWTC's 2018 NSPS Student Competition including the competition itself, our preparation, and what we learned. We will also discuss how important it is to know how to use rudimentary survey equipment and the calculations our data collectors do that we take for granted.

## Are You a CST? HERE'S YOUR OPPORTUNITY

The WSLs/CST Committee is offering a special testing opportunity on Friday, January 25, 2018, starting at 8:30 a.m. Tests will be given for CST Levels 1, 2 and 3. **You must apply for the testing.** Application and detailed information on the program can be obtained by going to [www.nsp.us.com/resource/resmgr/cst/cst\\_application\\_2016\\_New\\_Fee.pdf](http://www.nsp.us.com/resource/resmgr/cst/cst_application_2016_New_Fee.pdf) Applications and fees must be returned to Frank Thousand by January 8, 2019, at: WSLs, 5113 Spaanem Ave., Madison, WI 53716.



### 16. National Geodetic Survey (NGS): New Tools and Products; NATRF 2022 Task Force

John T. Ellingson, PE, PLS, NGS Regional Geodetic Advisor-Great Lakes Region, Black River Falls, Wis.  
**1.2 PDHs, Category 3**

Learn about the new NGS "Coordinate Conversion & Transformation Tool" (NCAT) that enables surveyors to easily transform coordinates from one realization of NAD 83 to another and more. This is especially useful for those using the WisDOT real time network. Every surveyor who is doing GPS work in Wisconsin should have this free program and understand how to use it. John will also explain details about the new GEOID18. This is the last geoid model that NGS will create for NAD 83/NAVD88 because new datums will be coming in 2022. Howard Veregin, State Cartographer Office and Richard Kleinmann PLS, Ayres & Associates will discuss the NATRF 2022 Task Force activities.

### 17. Vendor Session

#### Leica GS18/SmartNet

Bob Kilburn, Leica Geosystems  
**1.2 PDHs, Category 3**

Leica GS18T is the World's Fastest GNSS RTK Rover. Learn more about it.

### 18. Vendor Session

#### Ranger 7 data collector from Spectra

Jim Nelson, Seiler Instrument  
**1.2 PDHs, Category 3**

Introducing the new Spectra Ranger 7 data collector with a 7" multi-touch screen, Dual hot swap batteries, Windows 10 professional operating system, Available with Survey Pro and Layout Pro Software.





Thursday, January 24  
8:20 – 10 a.m.

### 19. A Land Surveyor's Salad Bar *Part 1*

Richard F. Bales, Assistant Regional Counsel,  
Chicago Title Insurance Co., Lisle, Ill.

**2.0 PDHs, Category 1 or 3**

Richard Bales has worked closely with Illinois land surveyors for more than forty years. As a member of the ALTA/NSPS liaison committee, he will offer some comments on the current land title survey standards. In addition, he will discuss Copyright Law and the Land Surveyor, Illinois Boundary Law and Legal Description Interpretation.

*Continued in Session 25.*

### 20. Collateral Evidence Analysis *Part 1*

Stanley French, Chief Cadastral Surveyor for Idaho  
(retired), Land Boundary Solutions, LCC, Meridian,  
Idaho

**2.0 PDHs, Category 1 or 3**

Finding and evaluating collateral evidence for its ability to serve as proof of a corner point for boundary determination is the purview of the land surveyor. The surveyor should exercise "all means" in ascertaining the position of the original corner point. Challenges arise when the evidence is conflicting, and the surveyor must distinguish between evidence of the record title boundary versus some "other" unrecorded boundary.

*Continued in Sessions 26 and 32.*

### 21. FEMA and Flood Zones *Part 1*

Karol L. Grove, PS, CFM, Alpine Land Surveying,  
Inc., Hartland, Mich.

**2.0 PDHs, Category 1 or 3**

This session will cover the field procedures associated with properties and structures when located in or near FEMA Flood Zones. Additionally, we will tackle the Zone A non-studied areas and the many ways available to establish a Base Flood Evaluation in those areas. Lastly, we will cover the specifics of the Elevation Certificate and when one is needed.

*Continued in Sessions 27.*

### 22. Professional Ethics for the Surveyor

Gary Kent, The Schneider Corporation,  
Indianapolis, Ind.

**2.0 PDHs, Category 2**

Surveyors can readily find themselves in situations that place them in tenuous positions requiring careful consideration as to their conduct. In this program, we will examine rules on Professional Conduct (Code of Ethics), statutes that link to ethical conduct, the NSPS Creed and Canon, and other ethical considerations. Examples and scenarios rooted in the speaker's 14 years on the Indiana State Board of Registration for Professional Surveyors will be offered for discussion and contemplation.

### 23. Vendor Session

**HDS**

Brian Elbe, Leica Geosystems

**2.0 PDHs, Category 3**

The session demonstrates Mobile Mapping and the importance of each sensor for a final accurate solution.

### 24. Vendor Session

**Getting to know your Drone Land Surveying  
Solutions Options**

Logan Campbell, Aerotas

**2.0 PDHs, Category 3**



Thursday, January 24  
10:20 – Noon

**25. A Land Surveyor's Salad Bar *Part 2***

Richard F. Bales, Assistant Regional Counsel,  
Chicago Title Insurance Co., Lisle, Ill.

**2.0 PDHs, Category 1 or 3**

*Continued from Session 19.*

*Please see Session 19 for description.*

**26. Collateral Evidence Analysis *Part 2***

Stanley French, Chief Cadastral Surveyor for Idaho  
(retired), Land Boundary Solutions, LCC, Meridian,  
Idaho

**2.0 PDHs, Category 1 or 3**

*Continued from Session 20.*

*Please see Session 20 for description.*

*Continued in Sessions 32.*

**27. FEMA and Flood Zones *Part 2***

Karol Grove, PS, CFM, Alpine Land Surveying, Inc.,  
Hartland, Mich.

**2.0 PDHs, Category 1 or 3**

*Continued from Session 21.*

*Please see Session 21 for description.*

**28. Basic Boundary Resolution and Legal  
Descriptions for Field and Office Technicians  
*Part 1***

Gary Kent, The Schneider Corporation, Indianapolis, Ind.  
**2.0 PDHs, Category 1 or 3**

Field and office technicians will be much more effective when operating with a well-grounded, basic understanding of boundary law and legal descriptions. In this session, we will explain basic boundary law principles and how they tie directly to work being undertaken in the field. In addition, a primer on legal descriptions will be provided – the numerous types, how they are structured, how to understand what words are most important in their interpretation and why.

*This session can be attended as a stand-alone session but will also be continued in Session 34.*

**29. GNSS modernization**

Bob Kilburn and Burke Asay, Leica Geosystems

**2.0 PDHs, Category 3**

Learn about RTK GNSS best practices and more.

**30. Vendor Session**

**Drones, data collection and how to use it**

Josh Clawson, Mastergraphics.aec

**2.0 PDHs, Category 3**

There are multiple companies producing UAVs as well as applications to fly them and software to process the results. We will a workflow inside of the AEC Collection to obtain and process this data. We will also be exploring some of the different data outputs that you may receive from drone pilots. We will go through different options for bringing these various types of data into our design environment. And finally, we will compare the results of these different methods.

Thursday, January 24  
2 – 4 p.m.

**31. Practical Application of UAS Photogrammetric  
Methods in Conventional Survey Projects**

Jon Chapman, Senior Project Manager,  
LiDAR | UAS | FAA Certified UAS Pilot and  
Shane Zodrow, P.L.S., P.E., Project Manager, R.A.  
Smith, Inc., Brookfield, Wis.

**2.4 PDHs, Category 1 or 3**

This session will cover the practical application of Unmanned Aircraft System photogrammetric methods in conventional survey projects. FAA CFR Part 107 regulations and data accuracy considerations will be discussed. Examples of a multitude of project types and deliverables will be shared.

**32. Collateral Evidence Analysis *Part 3*  
Record Title Boundaries vs “Other”  
Unrecorded Boundaries**

Stanley French, Chief Cadastral Surveyor for Idaho  
(retired), Land Boundary Solutions, LCC, Meridian,  
Idaho

**2.4 PDHs, Category 1 or 3**

*Continued from Session 20 & 26.*

*Please see Session 20 for description.*

### 33. Wisconsin Society of Land Surveyors Annual Meeting

2.4 PDHs, Category 1 or 3

### 34. Basic Boundary Resolution and Legal Descriptions for Field and Office Technicians Part 2

Gary Kent, The Schneider Corporation, Indianapolis, Ind.

2.4 PDHs, Category 1 or 3

*Continued from Session 28.*

*Please see Session 28 for description.*

*This session can be attended as a stand-alone session but will be a continuation of Part 1.*

### 35. GIS into Civil 3D Data

Adam Hammen, PE, Senior Professional Engineer,  
The Sigma Group, Milwaukee, Wis.

2.4 PDHs, Category 3

There is a renaissance happening with Geographic Information Systems (GIS) technology. Learn about the latest opportunities and methods to integrate GIS information into surveying and mapping CAD-based work flows and bring greater value and efficiencies to your organization. This presentation is intended for those who have a sound understanding of CAD-based work flows but are less familiar with GIS technology.

### 36. Vendor Session

#### GPI Geospatial – Surveying, the foundation of Geospatial Services 2-2:55 p.m.

Sonja Ellefson, GPI Geospatial

1.0 PDH, Category 3

GPI Geospatial is a premier geospatial provider of precision mapping, imagery, LiDAR, and surveying services. We understand the value and precision of geospatial data using state-of-the-art sensors, software, and methods to deliver accurate and complete information for design and planning purposes.

The base foundation for these geospatial services is surveying. Whether RTK, traditional level-circuit surveys, or paneling existing survey monumentation, geospatial data is built upon existing horizontal coordinate systems/vertical datums. This presentation will explore the geospatial services we provide and their creation in relation to existing or field surveyed control. Examples provided of high-precision mapping will re-enforce this critical symbiotic relationship.

### Least Squares Survey Adjustments with Carlson SurvNET 3:05-4 p.m.

Ladd Nelson, Carlson Software

1.0 PDH, Category 3

In this "101" session, we'll explore at least one approach of utilizing a least squares adjustment of both conventional robotic total station traverse data that is coupled with GNSS vectors from the WISCORS network.

Friday, January 25  
8:20 – 10 a.m.

### 37. The Role of the Surveyor Managing your Risk and Discomfort: What to do and say when Testifying Part 1

Steven Sorenson, Attorney/Shareholder, Von Briesen  
and Roper, S.C., Ripon, Wis.

2.0 PDHs, Category 1 or 3

Every surveyor at one time or another will become embroiled in a land description or land boundary controversy. This presentation will prepare you for the rigors of the battle. It will look at best practices in preparing for attorney inquires, depositions, mediation, arbitration or courtroom trials. The goal is to weave a pathway to follow to avoid unnecessary risks and to protect the integrity of your work while not being placed in a world of discomfort. Different scenarios will be explored to give practical insight as well as a sound legal footing to your next interaction.

*Continued in Sessions 44.*

### 38. Applying Boundary Law Principles

Andrew S. Cleveland, PLS, Mach IV Engineering &  
Surveying, Appleton, Wis.

2.0 PDHs, Category 1 or 3

In this session, we will be looking at several "every day" surveys and discussing the boundary law principles used to formulate the final opinion. We will also discuss the Professional Surveyor's role, obligations, and duties to the client and the public.

*This is a repeat of Session 5.*



### **39. Lobbying 101**

Bob Welch, President, The Welch Group,  
Madison, Wis.

**2.0 PDHs, Category 3**

This session will teach you the basics of how the legislative process really works, how you can best communicate with policy makers and how our organization can be most effective in influencing laws and regulations.

### **40. RTK Specifications in the WisDOT Facilities Development Manual**

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

**2.0 PDHs, Category 1 or 3**

This presentation will discuss and review the Wisconsin DOT Facilities Development Manual (FDM) Chapter 9-30 Real Time Kinematic (RTK) surveys. This chapter provides procedures and methods for using Real Time Kinematic (RTK) Global Navigation Satellite System (GNSS) to obtain consistent results for surveys performed by and for the Wisconsin Department of Transportation.

### **41. Health and Safety in the Work Place Part 1**

Gary Kent, The Schneider Corporation,  
Indianapolis, IN

**2.0 PDHs, Category 3**

Survey field crews are routinely exposed to a wide variety of environmental and societal factors that compromise their safety. These can range from diseases such as Lyme disease, to poisonous plants like Giant Hogweed, to confined space issues, to construction-related hazards such as working in, on or around excavations and scaffolding. In this program, we will explore a number of the primary safety hazards that field crews encounter and how to recognize them by maintaining a constant awareness of one's surroundings. We will also review some of the primary safety-related metrics that clients may look at as part of their process of selecting a surveyor and steps companies and employees can take to help control them. Finally, we will outline a variety of good practices that companies should maintain in order to help their employees get home safely each night.

***This session can be attended as a stand-alone session but will also be continued in Part 2.***

### **42. County Surveyors Meeting**

**2.0 PDHs, Category 3**

This session provides discussions on a wide range of land surveying issues and includes educational components. Included are reports and presentations by the State Cartographers Office, National Geodetic Survey and the Wisconsin Department of Transportation. Attendees (including non-members) are encouraged to participate in discussion and ask questions during this annual membership meeting.

### **43. Principles and Practice Exam Prep Part 1**

Howard Herrild, Professional Surveyor and 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 Principles and Practices of Land Surveying exam. This land surveying refresher will focus on the public land survey system, study materials and exam format with a small focus on the licensing application process.

***Continued in Sessions 49.***

**Friday, January 25**  
**10:20 a.m. – Noon**

### **44. The Role of the Surveyor Managing your Risk and Discomfort: What to do and say when Testifying Part 2**

Steven Sorenson, Attorney/Shareholder, Von Briesen and Roper, S.C., Ripon, Wis.

**2.0 PDHs, Category 1 or 3**

***Continued from Session 37.***

***Please see Session 37 for description.***



#### **45. LiDAR 101: Inclusive of Aerial/Mobile/Static Spanning from Acquisition Through Processing Final Products**

Sonja Ellefson, Photogrammetry Resource Manager, Sheboygan Office Manager, GPI Geospatial, Sheboygan, Wis.

**2.0 PDHs, Category 3**

This presentation will inform you of the different LiDAR collection platforms. Covered will be fundamentals of LiDAR, starting with project planning, project acquisition, post processing and calibration to producing final project deliverables. Solutions can be customized to meet a variety of specifications and deliverables.

#### **46. Ethics for Surveyors: In the Field and In the Office**

Greg Gerbers, Risk Manager, Real Estate Attorney, Brown County, Green Bay, Wis.

**2.0 PDHs, Category 2**

This session will look at ethical issues faced by Surveyors when they are both in the office and the field. While there are obvious ethical concerns in the field, there are many ethical issues to be dealt with in the office as well. Looking at both areas is critical in order to maintain the ethical standards required for surveyors.

#### **47. SEWRPC Conversion from NAD 27 and NGVD29 to NAD 83/2011 and NAVD88 and The Preservation of Survey Monuments Versus Coordinates**

Rob Merry, Chief Surveyor, Southeastern Wis. Regional Planning Commission, Waukesha, Wis.

**2.0 PDHs, Category 3**

All of the 11,753 U.S. Public Land Survey System corners within the Region have been monumented and the coordinate positions and elevations of the corners determined to a high level of survey accuracy. The Commission developed cost effective procedures

converting the existing survey control network as referenced on NAD27 and NGVD29 to the latest federal datums, NAD83/2011 and NAVD 88. The Commission will discuss the process and procedures in readjusting these USPLSS corners within the Region. In addition, but in conjunction with the datum conversion, the Commission prepared a technical report reviewing the completed survey control system and the determined coordinate positions of the re-monumented corners of the USPLSS within the Region. This availability of coordinate values for the re-monumented USPLSS raised a question as to whether or not a need still exists for the maintenance of the monuments marking the corners of USPLSS within the Region, or whether this NAD83/2011 coordinates could replace the use of monuments to perpetuate the USPLSS. The presentation looks at this question based on legal, technical, and miscellaneous considerations.

#### **48. Health and Safety in the Work Place Part 2**

Gary Kent, The Schneider Corporation, Indianapolis, IN

**2.0 PDHs, Category 3**

*Continued from Session 41.*

*Please see Session 41 for description.*

*This session can be attended as a stand-alone session but will be a continuation of Part 1.*

#### **49. Principles and Practice Exam Prep Part 2**

Howard Herrild, Professional Surveyor and Instructor, Northeast Wisconsin Technical College, Green Bay, Wis.

**2.0 PDHs, Category 3**

*Continued from Session 43.*

*Please see Session 43 for description.*

## **Additional PDHs for Surrounding States**

Many of our sessions could fulfill the PDH or CEU requirements in many other states. Our ethics session may pertain to all surveyors and could qualify for many states requirements. We also have a wide variety of topics that may qualify for your state.

**We welcome you to our annual Institute – you will not be disappointed.**



## Guest Program

**Wednesday, January 23**

### **Outlet Mall Shopping**

**1:30 - 3:30 p.m.**

Join us for a shuttle to the Outlet Mall. You will have ample time to shop the Outlets at the Dells.

**Thursday, January 24**

### **Jewelry Making Workshop**

**9-11 a.m.** Elaine Villeneuve, Menomonie, Wis.

Create a beautiful necklace and post earrings to match with crystals, quality beads and/or gemstones. Using your expertise you will make a unique project to wear or give as a gift.

### **Getting Started with Essential Oils**

**2 - 4 p.m.** Elaine Villeneuve, Menomonie, Wis.

An amateur's approach to Essential Oils! What is Essential Oils? Why do we use them? What are the Benefits? Learn with me, share with me and you will receive information in handouts.

## Foundation Auction

### **Raffle items to include:**

**Join us after the banquet for the Foundation Raffle. This entertaining event offers attendees a chance to bid on great items including survey instruments, vintage surveying magazine covers, pre-season Packer tickets and many others.**

**View the items in the Foundation Booth!**

## Special Event | Bucky's Challenge WLSL Foundation FUNdraiser ...

Get set for the twelfth annual big event – Wednesday evening, January 23, 2019, in conjunction with the Annual Surveyors' Institute. Bucky's Challenge is a trivia contest covering such topics as surveying (of course!), math, sports, television, movies, history, geography and whatever else comes to mind. Join up to 24 teams of three to eight people, representing firms, vendors, local chapters, alumni from our technical colleges, county surveyors and other groups that can find a sponsor. To learn more about "Bucky's Challenge," contact contest chairman Dan Birrenkott at 608-837-7463, [dbirrenkott@birrenkottsurveying.com](mailto:dbirrenkott@birrenkottsurveying.com), or visit the Society's website at [WLSL.org](http://WLSL.org).

## Seminar Information

**Registration:** The full Institute fee includes: program materials, program souvenir, certificate of participation, refreshments, two luncheons, and the banquet. The registration fee is completely refundable through Friday, January 11, 2019. After that, a \$25 administrative fee will be charged per participant. Substitutions may be made at any time, but no-shows will be responsible for the full registration fee. On-site registrants will not be guaranteed meals, conference materials and/or complimentary items. Please contact UWSP Continuing Education if you have not received confirmation of your registration.

**Location and Lodging:** A block of rooms is reserved at the Kalahari Resort, Wisconsin Dells, Wis. until Sunday, December 23, 2018. Reservations should be made directly with the Kalahari Resort at 877-253-5466. Please make sure to identify that you are with the WLSL/UWSP Continuing Education Block. Two room types are available: Huts are \$99 per night up to quadruple occupancy; Lodges are \$119 for up to quadruple occupancy. For more information on the room types, please visit the Kalahari website at [www.kalahariresort.com](http://www.kalahariresort.com), pick the Wisconsin Dells link, click "Resort" and then click "Room Type."

**State Rate Lodging Available:** A block of rooms has been reserved at the Wintergreen Resort and Conference Center for registrants employed by government agencies who are required to stay at state rate hotels. Room rates are \$82 per night for single occupancy. To receive this rate, you must provide the appropriate documentation for rate eligibility, including tax exempt documentation. Reservations can be made by calling Wintergreen at 608-254-2285; please reference the WLSL Institute room block.

**Banquet space is limited. Tickets may not be available on site for purchase. Please indicate your desire for an additional ticket in the space provided on the registration form. Appropriate banquet attire is requested.**

**Schedule:** The starting times for daily programs:

**Wednesday 10 a.m., Thursday and Friday 8:20 a.m.**

Due to speaker illness or poor weather conditions, schedule may change without notification.

### **Exhibits:**

**Wednesday, 1 - 6:30 p.m. Thursday, 7 a.m. - 4 p.m.**

**ABSOLUTELY NO ADMISSION PRIOR TO 1 p.m.  
ON WEDNESDAY, JANUARY 23.**

**Questions? Call UW-Stevens Point Continuing Education at 715-346-3838.**

# ANNUAL SURVEYORS' INSTITUTE REGISTRATION FORM — JANUARY 23 - 25, 2019

**Pre-Registration Deadline: January 11, 2019** (Only one person may register per form. Please photocopy for additional registrations.)

— PLEASE PRINT CLEARLY! —

Name \_\_\_\_\_  
First Middle Initial Last

Phone \_\_\_\_\_  
Work Mobile

PLS  YES  NO Which States \_\_\_\_\_

Are you a CST?  YES  NO Level \_\_\_\_\_

Professional Title \_\_\_\_\_

Company \_\_\_\_\_

Company Mailing Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Home Mailing Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Email Address \_\_\_\_\_

**Please indicate which session by number you attend in each time slot.**

**JAN. 23** 10 a.m.-Noon \_\_\_\_\_ 1:30-3:10 p.m. \_\_\_\_\_ 3:30-4:30 p.m. \_\_\_\_\_

**JAN. 24** 8:20-10 a.m. \_\_\_\_\_ 10:20 a.m.-Noon \_\_\_\_\_ 2-4 p.m. \_\_\_\_\_

**JAN. 25** 8:20-10 a.m. \_\_\_\_\_ 10:20 a.m.-Noon \_\_\_\_\_

**SINGLE DAY:** Non-Member Member

(doesn't include banquet ticket)

Wednesday  \$225  \$145

Thursday  \$225  \$145

Friday (no lunch)  \$155  \$105

(Single day registration includes continental breakfast and lunch for that day. Banquet tickets are not included in the single day fees, but can be purchased below.)\*

**TOTAL INSTITUTE:** Non-Member Member

Pre-registration by 1/11/19  \$450  \$250

Registration after 1/11/19  \$500  \$300

**STUDENT:** Non-Member Member

Student fee received by 1/11/19  \$ 55  \$ 35

Student fee received after 1/11/19  \$ 60  \$ 40

(Student fee requires copy of student ID for proof of current enrollment in a full-time surveying/engineering or related curriculum. Student registration includes all meals.)

\*Additional Banquet Ticket  \$ 40  \$ 40

(availability limited)

**TOTAL** \_\_\_\_\_

**ON-SITE REGISTRANTS WILL NOT BE GUARANTEED MEALS, CONFERENCE MATERIALS AND/OR COMPLIMENTARY ITEMS.**

**BECOME A MEMBER! Take advantage of the lower Institute registration fee by joining WSLs. Contact: Frank Thousand, 5113 Spaanem Avenue, Madison, Wis. 53716 608-770-9759**

First time participant

Special needs accommodations \_\_\_\_\_

Do you have any special dietary restrictions or needs?  YES  NO

Please describe \_\_\_\_\_

I do not wish to be photographed?  YES  NO

**Complete and send registration form and fee, payable to UW-Stevens Point to:**

University of Wisconsin Stevens Point  
 Continuing Education  
 2100 Main St, 032 Main Bldg.  
 Stevens Point, WI 54481-3897

**1-715-346-3838 Fax: 715-346-3504**

**Register online at [www.uwsp.edu/conted/confwrkshp/pages](http://www.uwsp.edu/conted/confwrkshp/pages) Click on "70th Annual Surveyors' Institute"**

## GUEST REGISTRATION FORM

Name \_\_\_\_\_  \$80

Address \_\_\_\_\_

Phone Number \_\_\_\_\_

**Fee includes:** Wednesday and Thursday presentations listed under Guest Program, Wednesday lunch, Thursday lunch and Banquet.

**Please indicate the sessions you plan to attend:**

**Outlet Mall Shopping**

**Jewelry Making Workshop**

**Getting Started with Essential Oils**

## PAYMENT METHOD:

**TOTAL AMOUNT ENCLOSED:** \_\_\_\_\_

Check

PO Number \_\_\_\_\_

MasterCard  Visa  Discover

Cardholder's name \_\_\_\_\_

Cardholder's signature \_\_\_\_\_

Cardholder's phone # \_\_\_\_\_

Card number \_\_\_\_\_ Expires \_\_\_\_\_



## Wednesday, January 23, 2019

<b>1.</b> 10 a.m. – Noon WATER AND RAILROAD 1800's Transportation = 2000's Litigation <i>Part 1</i>	<b>2.</b> 10 a.m. – Noon Hello Plat Review, I Have a Question... (The Sequel)	<b>3.</b> 10 a.m. – Noon Wading Through Professional Ethics	<b>4.</b> 10 a.m. – Noon What it Takes to Collect Survey-Grade Data by Drone	<b>5.</b> 10 a.m. – Noon Applying Boundary Law Principles	<b>6.</b> 10 a.m. – Noon Civil 3D Survey Database to Surface Creation
<b>Lunch Noon – 1:15 p.m.</b>					
<b>7.</b> 1:30 – 3:10 p.m. WATER AND RAILROAD 1800's Transportation = 2000's Litigation <i>Part 2</i>	<b>8.</b> 1:30 – 3:10 p.m. Attracting Tomorrow's Talent: The Millennial Mindset <i>Part 1</i>	<b>9.</b> 1:30 – 3:10 p.m. Panel Discussion on National Level Concerning the Land Surveying Profession	<b>10.</b> 1:30 – 3:10 p.m. Construction Layout – Do's and Don'ts	<b>11.</b> 1:30 – 3:10 p.m. Young Surveyors Network	<b>12.</b> 1:30 – 3:10 p.m. Vendor Sessions: Seiler Instrument
<b>13.</b> 3:30 – 4:30 p.m. The Impact of Surveys in Real Estate Transactions	<b>14.</b> 3:30 – 4:30 p.m. Attracting Tomorrow's Talent: The Millennial Mindset <i>Part 2</i>	<b>15.</b> 3:30 – 4:30 p.m. NWTC's 2018 NSPS Student Competition Experience	<b>16.</b> 3:30 – 4:30 p.m. National Geodetic Survey (NGS): New Tools and Products; NATRF 2022 Task Force	<b>17.</b> 3:30 – 4:30 p.m. Leica Geosystems Leica GS18/SmartNet	<b>18.</b> 3:30 – 4:30 p.m. Vendor Session: Seiler Instrument

## Thursday, January 24, 2019

<b>19.</b> 8:20 – 10 a.m. A Land Surveyor's Salad Bar <i>Part 1</i>	<b>20.</b> 8:20 – 10 a.m. Collateral Evidence Analysis <i>Part 1</i>	<b>21.</b> 8:20 – 10 a.m. FEMA and Flood Zones <i>Part 1</i>	<b>22.</b> 8:20 – 10 a.m. Professional Ethics for the Surveyor	<b>23.</b> 8:20 – 10 a.m. Vendor Session Leica Geosystems	<b>24.</b> 8:20 – 10:00 a.m. Vendor Session Aerotas
<b>25.</b> 10:20 a.m. – Noon A Land Surveyor's Salad Bar <i>Part 2</i>	<b>26.</b> 10:20 a.m. – Noon Collateral Evidence Analysis <i>Part 2</i>	<b>27.</b> 10:20 a.m. – Noon FEMA and Flood Zones <i>Part 2</i>	<b>28.</b> 10:20 a.m. – Noon Basic Boundary Resolution and Legal Descriptions for Field and Office Technicians <i>Part 1</i>	<b>29.</b> 10:20 a.m. – Noon Leica Geosystems: GNSS modernization	<b>30.</b> 10:20 a.m. – Noon Vendor Session Mastergraphics.aec

**Past President's Luncheon Noon – 1:45 p.m.**      **NSPS Update and Map Contest Winners (Noon – 12:30 p.m.)**

<b>31.</b> 2 – 4 p.m. Practical Application of UAS Photogrammetric Methods in Conventional Survey Projects	<b>32.</b> 2 – 4 p.m. Collateral Evidence Analysis <i>Part 3</i> Record Title Boundaries vs "Other" Unrecorded Boundaries	<b>33.</b> 2 – 4 p.m. Wisconsin Society of Land Surveyors Annual Meeting	<b>34.</b> 2 – 4 p.m. Basic Boundary Resolution and Legal Descriptions for Field and Office Technicians <i>Part 2</i>	<b>35.</b> 2 – 4 p.m. GIS into Civil 3D Data	<b>36.</b> 2 – 4 p.m. Vendor Sessions: GPI Geospatial <i>2-2:55 p.m.</i> Carlson Software <i>3:05-4 p.m.</i>
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## Friday, January 25, 2019

<b>37.</b> 8:20 – 10 a.m. The Role of the Surveyor Managing your Risk and Discomfort: What to do and say when Testifying <i>Part 1</i>	<b>38.</b> 8:20 – 10 a.m. Applying Boundary Law Principles <i>Repeat</i>	<b>39.</b> 8:20 – 10 a.m. Lobbying 101	<b>40.</b> 8:20 – 10 a.m. RTK Specifications in the WisDOT Facilities Development Manual	<b>41.</b> 8:20 – 10 a.m. Health and Safety in the Work Place <i>Part 1</i>	<b>42.</b> 8:20 – 10 a.m. County Surveyors Meeting	<b>43.</b> 8:20 – 10 a.m. Principles and Practice Exam Prep <i>Part 1</i>
<b>44.</b> 10:20 a.m. – Noon The Role of the Surveyor Managing your Risk and Discomfort: What to do and say when Testifying <i>Part 2</i>	<b>45.</b> 10:20 a.m. – Noon LiDAR 101: Inclusive of Aerial/Mobile/Static Spanning from Acquisition Through Processing Final Products	<b>46.</b> 10:20 a.m. – Noon Ethics for Surveyors: In the Field and In the Office	<b>47.</b> 10:20 a.m. – Noon SEWRPC Conversion from NAD 27 and NGVD29 to NAD 83/2011 and NAVD88 and The Preservation of Survey Monuments Versus Coordinates	<b>48.</b> 10:20 a.m. – Noon Health and Safety in Surveying <i>Part 2</i>	<b>48.</b> 10:20 a.m. – Noon Principles and Practice Exam Prep <i>Part 2</i>	

The registration fee is completely refundable through Friday, January 11, 2019. After that, a \$25 administrative fee will be charged per participant. Substitutions may be made at any time, but no shows will be responsible for the full registration fee. On-site registrants will not be guaranteed meals, conference materials and/or complimentary items.

If you have any special needs that require assistance, please notify us two weeks in advance of the program. Indicate on the registration form.

### Sponsors:



**University of Wisconsin  
Stevens Point**

UW-Stevens Point provides equal opportunities in employment and programming, including Title IX requirements. Please advise at the time of registration if you have a disability and desire special accommodations. Requests will be kept confidential. **No state tax revenue supported the printing of this document.**