

Credit Information

Improving Survey Services for Floodplains

This webinar is open to the public and offers 3.0 PDHs to professional engineers and land surveyors in most states. Land surveyor course approval is currently pending in Missouri and Tennessee. HalfMoon Education is not seeking approval for land surveyors licensed in Delaware, New Jersey, or Rhode Island.

This educational activity has been evaluated and accredited by The Practicing Institute of Engineering for 3.0 PDHs. It is deemed approved for New York Engineers and Land Surveyors via this accreditation (Regulations of the Commissioner §68.14(i)(2)) and §68.15(i)(2).

The Florida Department of Agriculture and Consumer Services has assigned this course number 10224 for Florida surveyors.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider No. 0004647), Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700) and North Carolina (S-0130).

HalfMoon Education is an approved continuing education sponsor for land surveyors licensed in Indiana (License No. CE21700059), Maryland and North Carolina (S-0130).

Using the State Plane Coordinate System

This webinar is open to the public and offers 6.5 PDHs to professional engineers and land surveyors in most states. Land surveyor course approval is currently pending in Tennessee. No credit is offered to land surveyors licensed in Delaware, New Jersey, New York, or Rhode Island, or for engineers licensed in New York.

The Florida Department of Agriculture and Consumer Services has assigned this course number 10223 for Florida surveyors.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider No. 0004647), Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700) and North Carolina (S-0130).

HalfMoon Education is an approved continuing education sponsor for land surveyors licensed in Indiana (License No. CE21700059), Maryland and North Carolina (S-0130).

The Past, Present, and Future of the NSRS: From NAD27 to NATRF2022 (and More!)

This webinar is open to the public and offers 6.0 PDHs to professional engineers and land surveyors in most states. No credit is offered to land surveyors licensed in Delaware, New Jersey, or Rhode Island.

This educational activity has been evaluated and accredited by The Practicing Institute of Engineering for 6.0 PDHs. It is deemed approved for New York Engineers and Land Surveyors via this accreditation (Regulations of the Commissioner §68.14(i)(2) and §68.15(i)(2)).

The Florida Department of Agriculture and Consumer Services has assigned this course number 10012 for Florida surveyors.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider No. 0004647), Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700) and North Carolina (S-0130).

HalfMoon Education is an approved continuing education sponsor for land surveyors licensed in Indiana (License No. CE21700059), Maryland and North Carolina (S-0130).

Tracking the Railroads

This webinar is open to the public and offers 4.0 PDHs to professional engineers and land surveyors in most states. No credit is offered to land surveyors licensed in Delaware, New Jersey, or Rhode Island.

This educational activity has been evaluated and accredited by The Practicing Institute of Engineering for 4.0 PDHs. It is deemed approved for New York Engineers and Land Surveyors via this accreditation (Regulations of the Commissioner §68.14(i)(2)).

The Florida Department of Agriculture and Consumer Services has assigned this course number 10136 for Florida surveyors.

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Completion certificates will be awarded to participants who complete these events, respond to prompts, and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

March Land Surveying Webinars

- Improving Survey Services for Floodplains
- Using the State Plane Coordinate System
- The Past, Present, and Future of the NSRS
- Tracking the Railroads

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Live, Interactive Webinars

Improving Survey Services for Floodplains

- Thursday, March 10, 2022 | 11:00 am - 2:30 pm CST

Using the State Plane Coordinate System

- Monday, March 14, 2022 | 9:00 am - 4:30 pm CST

The Past, Present, and Future of the NSRS: From NAD27 to NATRF2022 (and More!)

- Friday, March 25, 2022 | 9:00 am - 4:00 pm CST

Tracking the Railroads

- Thursday, March 31, 2022 | 11:00 am - 4:00 pm CST

To register, please visit: www.halfmoonseminars.org

or call our Customer Service Department at (715) 835-5900



HalfMoon Education Live Webinars

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Improving Survey Services for Floodplains

Thursday, March 10, 2022 | 11:00 am - 2:30 pm CST (incl. two 15-min breaks)

Tuition: \$159 per registrant

Credits: Land Surveyors: 3.0 PDHs (Pending in MO and TN), 3.0 Florida CE Credits
Professional Engineers: 3.0 PDHs

Agenda

Flood Zones and Water Surface Elevations in the NFIP – What They are and Why They Matter

- General land use regulation and specific federal minimum standards
 - Local land use and emergency planning
- Insurance rating in the NFIP
 - Recent changes in methodology and their effects
- Recognizing hazards and risks
 - How zones and elevations affect property owners

Sources of Base Flood and Other Water Surface Elevation Information

- Why water surface elevations beyond Base Flood Elevation (BFE) matter
- FEMA sources of BFE and how to use them (and when to be wary)
 - Other possible non-FEMA sources of BFE
 - “Best available data”
 - BFE in Approximate A Zones
- Design flood elevations

Using Elevation Data to Change Flood Zone Designations

- LOMAs and LOMR-Fs: distinctions between them, required data for each
 - The role of topography and the Elevation Certificate in flood zone changes
- Using FEMA’s platforms to submit data for zone and other map changes

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Using the State Plane Coordinate System

Monday, March 14, 2022 | 9:00 am - 4:30 pm CST (incl. a 30-min break)

Tuition: \$319 per registrant, \$289 per registrant for two or more

Credits: Land Surveyors: 6.5 PDHs (Pending in TN), 6.5 Florida CE Credits
Professional Engineers: 6.5 PDHs

Agenda

Why use the SPCS

- Local (ad hoc) coordinates are mutually incompatible
- When we want to stitch ad hoc maps together, we discover problems
- Maps cannot depict Earth’s surface without distortion

Geodesy

- Latitude and longitude
- Reference ellipsoids
- Earth’s shape
- Heights: gravity, the geoid, and Gauss
- The Inferno: distances (slope, geodesic, horizontal, topographic enlargement)

Map Projections

- Rectangular, Plate Carreé
- Distortions in distances and directions
- Conformal and authalic
- State Plane Coordinates

How to Map in the SPCS

- Directly from geodetic: USACE CORPSCON, NGS State Plane Tool
- From total-station observations
 - Reductions
- Worked out examples
 - Using total-station data
- The forward problem
- Some interesting case studies

Summary Comments

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The Past, Present, and Future of the NSRS: From NAD27 to NATRF2022 (and More!)

Friday, March 25, 2022 | 9:00 am - 4:00 pm CST (incl. a 30-min break)

Tuition: \$319 per registrant, \$289 per registrant for two or more

Credits: Land Surveyors: 6.0 PDHs, 6.0 Florida CE Credits
Professional Engineers: 6.0 PDHs

Agenda

NGS Mission, Products, and Services

- The National Spatial Reference System (NSRS)
- Datum or reference frame?
- The NOAA CORS Network (NCN)
- What is an epoch?

Geometric Reference Frames

- International Terrestrial Reference Frame
- History/overviews - USSD, NAD27, and NAD83
- Four Terrestrial Reference Frames of Modernized NSRS (NATRF2022, et al)
- Euler Pole Parameters of 2022 (EPP2022)
- Intra Frame Velocity Model of 2022 (IFVM2022)
- Application of EPP2022 and IFVM2022
- State Plane Coordinate System of 2022 (SPCS2022) – it’ll be dynamic too

Geopotential and Vertical Datums

- History/overviews - NGVD29 and NAVD88
- Geoids, gravity, and equipotential
- Types of geoid models
- Gravity data collection
- Sea level change and the geoid

Space Geodetic Techniques

- GNSS, SLR, VLBI, DORIS

New Terminology in the Modernized NSRS

- New point types in a new database

The Online Positioning User Service (OPUS)

- Review of OPUS-RS, OPUS-S, and OPUS Projects
- OPUS shared solutions – GPS on bench marks; age-limiting of observations
- Future developments – OPUS projects for RTK/RTN/PPK

Other Aspects of Modernization

- Submitting data to the future NSRS Database
- NGS Coordinate Conversion and Transformation Tool (NCAT)
- Deprecation of the US survey foot

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Recordings of these webinars are available for purchase. Visit these course listings on our website for more information and please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

Tracking the Railroads

Thursday, March 31, 2022 | 11:00 am - 4:00 pm CST (incl. a 30-min break)

Tuition: \$209 per registrant, \$189 per registrant for two or more

Credits: Land Surveyors: 4.0 PDHs, 4.0 Florida CE Credits
Professional Engineers: 4.0 PDHs

Agenda

What is a “Railroad” by Law? (and why does it matter?)

- Highway or utility – public rights and railroad responsibilities
- The effects of railroads on development of the US
- The evolution of the regulatory framework affecting railroads in the US

Railroad Records and Regulation

- Finding information about physical, legal, and historical railroad aspects
- The birth of Rails to Trails
- Railroad abandonment
- What “abandonment” means, physically and legally
- The process for abandonment

Examining the Extent, Type, Location and Time/Duration of Railroad Rights

- Deciphering if railroads acquired ownership or easement or other rights
- The extent of railroad rights, and significance to landowners and railroads
- Shared uses of the railroad corridor
- Decisions relating to Rails-to-Trails conversions

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Faculty

Improving Survey Services for Floodplains and Tracking the Railroads

Wendy Lathrop, PLS, CFM *President and Owner of Cadastral Consulting, LLC*

Ms. Lathrop is licensed as a professional land surveyor in New Jersey, Pennsylvania, Delaware, and Maryland, and as a professional planner in New Jersey. She holds a master’s degree in Environmental Policy, and has been involved in surveying since 1974 in projects ranging from construction to boundary to environmental land use disputes. Ms. Lathrop is also a certified floodplain manager through the Association of State Flood Plain Managers (ASFPM).

Using the State Plane Coordinate System

Thomas H. Meyer, Ph.D. *Professor of Geodesy, University of Connecticut, Department of Natural Resources and the Environment*

Dr. Tom Meyer is a Professor of Geodesy in the Department of Natural Resources and the Environment at the University of Connecticut, where he teaches courses in geomatics, GNSS and plane surveying, geodesy, and geospatial analysis in Python. Dr. Meyer is a member of ASCE and the Connecticut Association of Land Surveyors. He is also a past president of the New England Section of the ACSM and a Fellow and the 2016/2019 president of the American Association for Geodetic Surveying.

The Past, Present, and Future of the NSRS: From NAD27 to NATRF2022 (and More!)

Jeff Jalbrzikowski, P.S., GISP, CFS

Appalachian Regional Advisor, National Geodetic Survey

Throughout his varied career he has been involved in a wide assortment of field and office functions, including structural deformation monitoring; geodetic control surveys around the globe; boundary/cadastral retracement; terrestrial lidar scanning; parcel and utility network digitization into GIS databases; single- and multi-beam hydrographic surveys; aerial lidar data processing; local/legacy datum resolution; plus contract selection, negotiation, & administration for an even wider variety of geospatial projects. His role as a Regional Advisor is to assist the public in utilizing the National Spatial Reference System (NSRS), and any other products and services that NGS provides.