

Cleveland Surveying News

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March 2019
Issue 19 Vol. 2



Newsletter Features

April Chapter Meeting

Tuesday, April 16

Location: **Neff and Associates**
Parma, Ohio

Reports -

| | |
|-------------------------|-------|
| Chapter Delegate Report | N/A |
| Secretary Minutes | 10-11 |

Miscellaneous -

| | |
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Cleveland Chapter

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PRESIDENTS LETTER

Greetings fellow PLSO members, from your returning president. Most of you may not remember 25 years ago (1994) when I first served as president. It was a different Chapter back then... different members and a different Chapter structure, but our purpose has remained the same and even expanded somewhat. We're still an educational organization supporting and promoting the interests and welfare of the surveying community. Continuing education wasn't required to maintain licensure back then and CPD hours didn't exist. Now, the seminars we've always had have become more important to those of us who need to keep up with the state requirements. In addition, our Chapter has undertaken the task of providing invaluable survey data to our members on the PLSO.info website. 25 years ago, scanning was in its infancy and far too expensive and unrefined to use for such a project as we've embarked upon. Now we're able to use the technology to the benefit of all our members. If you think there's just no information out there to figure out that survey from hell, check the website. The data there has saved my butt more than once! Long story short...our membership has become more valuable than ever since 25 years ago.

Getting back to the subject of continuing education and "CPD" hours, we're hoping to get in a few more CPD seminars this year for those of us (myself included) who were unable to attend the state conference in Columbus this year. I know that for many of us it can be difficult to take 2 or 3 days off of work, drive across the state, and shell out up to \$50 per CPD hour when adding up registration and hotel fees. The conferences I've attended, other than those right here in the Cleveland Chapter area, usually don't have a terrific attendance by the 115 +/- members of our chapter. The farther away they are, the fewer Cleveland Chapter members seem to attend. Don't get me wrong, I'm not dishing the state conferences. If at all possible, it's absolutely the **best** PLSO function to attend...much more than just a source of "hours". They're a chance to meet our state officers, state board officials, presenters, exhibitors, and hundreds of our fellow surveyors from around the state. I've always felt like I've belonged there. Fact is that most of our chapter members don't or can't attend, leaving those in need to find other means to satisfy the continuing education requirement. That's where we're hoping to be of more assistance this year on a chapter level. In our last newsletter there were flyers for two local seminars: "Civil 3D for Surveyors" presented by our own Dino Lustri of AutoCad University & Imaginit fame and arranged with great effort by Steve Metcalf (Thanks Steve!), and the "Core-Ex Excavator Pipeline Safety Program" presented by Paradigm Liaison Services and the major pipeline companies for us "excavators". At our last executive committee meeting, other possible seminar topics that came up were ethics (2 hrs. now required), confined space entry, Cuyahoga / Lorain Co. GIS updates, and a host of others we'll be looking into. If any of you have an idea for a seminar you'd like to see or a possible speaker, please just shoot me a quick e-mail at dbruckner@roadrunner.com.

Before I close, let me thank the 2019 Executive Committee members for stepping up once again to keep our Chapter running. Mike Kral & Louise Veverka for staying on as Program & Communication chairmen, Tom Snezek for running the Golf Outing, and Rick Carlson for taking on the President Elect position. Remember that Ex. Comm. meetings are always open to all members at Neff's office right at Pearl & York Rd., and come with free pizza & soft drinks. And committee membership comes with 2 CPD hrs.!

"Wear your safety vest & don't go out in traffic without cones!" (I'm your mother this year.)

Dave Bruckner, PS
2019 Chapter President

GNSS Update — Robert Hoy, Arcadis. U.S.

Available Satellites

It's been a busy year for the emerging satellite constellations. The last time I was actively monitoring visible satellites was a year ago when observing pin locations for sending to [Trimble CenterPoint RTX Post-Processing](#), which uses all the satellite constellations - and is free to use. I was typically able to track 4 Galileo and 1 BeiDou satellites, while sometimes tracking 6 and 2 satellites respectively. Fast forward to March 2019 and available satellite count has grown! Here's a list for March 2018 and 2019 using www.gnssplanning.com

3/2018

3/2019

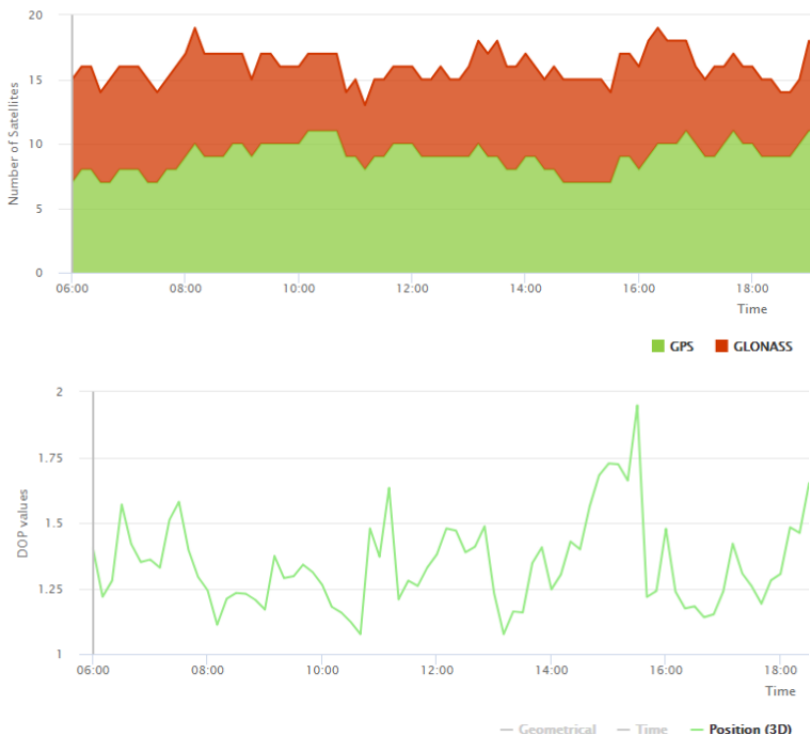
| System: active | | Satellites | |
|----------------|---|------------|---------|
| | | Selected | Healthy |
| GPS | ✓ | 30 | 30 |
| GLONASS | ✓ | 24 | 24 |
| Galileo | ✓ | 16 | 16 |
| BeiDou | ✓ | 23 | 23 |

| System: active | | Satellites | |
|----------------|---|------------|---------|
| | | Selected | Healthy |
| GPS | ✓ | 31 | 31 |
| GLONASS | ✓ | 24 | 24 |
| Galileo | ✓ | 22 | 22 |
| BeiDou | ✓ | 36 | 36 |

We've gained 20 satellites in just the past year! Galileo is nearly at full strength with 22 of their planned 24 satellites, with 3 units also planned to be in orbit as backups in case a satellite is deemed to be unhealthy needs to be turned off for corrections. Galileo's mission statement was to have their constellation at full strength by the year 2020 and they seem to be on track to meet that.

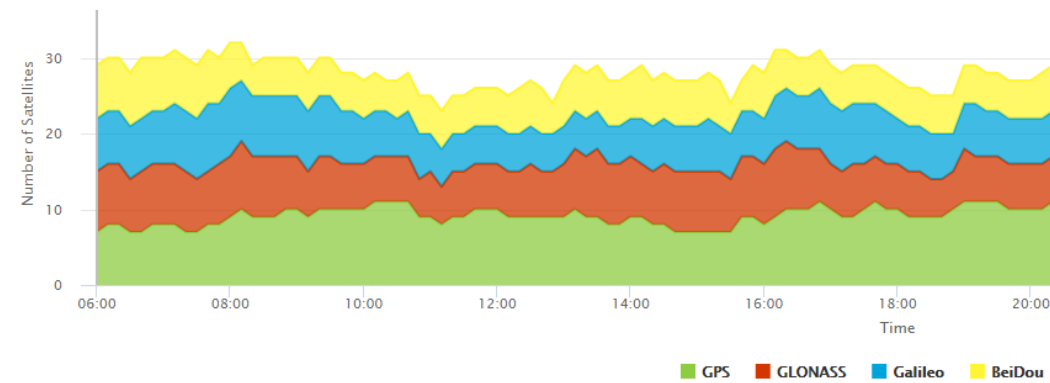
There's a great graphic describing the age and capabilities of the GPS (US satellite constellation) found at

<https://www.gps.gov/systems/gps/space/>



What can these additional satellites do for your surveying? Let's look at the DOP (dilution of precision) chart relative to number of satellites, from www.gnssplanning.com

First we're looking at using a receiver able to track only GPS and GLONASS satellites. This is a chart from 6am to 6pm in Ohio for 3/11/2019. The peak PDOP at 5:30pm is 1.95. With these two constellations we average about 15 satellites, *but remember: this is without plotting obstructions such as trees and buildings of which will decrease the satellite count being tracked and increasing your PDOP respectively.* Our PDOP looks to be an average of about 1.4. The lower the PDOP the better!



Now we've turned on the Galileo and Bei-Dou constellations and we're averaging about 28 satellites tracked up from 15, or nearly doubling the count tracked! You can think of this as Galileo and BeiDou being full fledged constellations.



The PDOP looks to average about 1.05 which is outstanding! The same 5:30pm PDOP here is 1.28 which was 1.95 with just GPS and GLONASS. Note on the chart page of the planning website, you

can click on the different DOP names to turn them off like I have and their names become grey as I have circled in red here.

You might think "These PDOPs are real low even without Galileo or BeiDou". But remember that these charts are without obstructions, which would simulate a wide open field on a hill without other taller hills, or ideal conditions. I don't know about your projects, but my site locations are rarely ideal.

This GNSS planning website I'm referring to is a great tool to at least see when you should *avoid* using GNSS if you can help it when there are tall peaks in PDOP. These are times when satellite geometry is poor, such as satellites being very near each other and not well spaced out in the sky. The website works great on a mobile phone, so you can see when the PDOP peaks will be that day when you arrive to your site.

www.plso.info

Chapter Members can visit our Online Survey Database to search and view about 10,000 surveys mostly within Cuyahoga County.

Forgot your log-in info?
Email Website Committee Chair
Dino Lustri: dino@dlengineeringllc.com



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Cleveland Area CPD Workshop: Civil 3d for Surveyors!!



AUTODESK
CIVIL3D

Date: Saturday, April 13 - (8 total CPD hours)
Location: Holiday Inn - 6001 Rockside Rd, Independence, OH. 44131
Schedule: 7:30 am – 4:30 pm ** Noon - 1 (LUNCH) ** 1:00 pm – 4:30 pm
 (LUNCH - included for full day registrants ONLY)

Program Sessions are progressive & will build further between AM & PM sessions

Presenter: Dino Lustri, P.S., P.E. of D.L. Engineering & Surveying

Bio: Presenter at Autodesk University in Las Vegas for the past 8 years.
 Former Senior Application Engineer and Trainer at IMAGINiT
 Owner/ Operator of D.L. Engineering & Surveying
 Consultant for to transition to Civil3d & training
 Special Projects Engineer – Cleveland Airport Systems



**Submit your Civil3d Questions by April 1 to Dino
 for presentation consideration! Email: dino@dles.co**

Lunch: Tossed Salad bar, & Two Seasonal Salads
 Buffet to include: Bourbon Glazed London Broil & Pretzel Chicken, Vegetable Medley & Sour
 Cream and Chive Baked Potatoes - Coffee, Decaf, Hot Tea, & Iced Tea – provided
 Sodas and other beverages – available at additional cost.
 Dessert Table - *(if you have a special food requirement – please include in email).*

Registration:

PLSO Member Rates:

| | | |
|-------------------------|------|--|
| Morning session only | \$75 | (CPD form, does NOT include lunch) |
| All Day (both sessions) | \$90 | (includes refreshments, lunch, and CPD form) |

PLSO Non-Member Rates:

| | | |
|-------------------------|-------|--|
| Morning session only | \$85 | (CPD form, does NOT include lunch) |
| All Day (both sessions) | \$100 | (includes refreshments, lunch, and CPD form) |

Company Bundle Package:

All Day sessions only **\$90 per – (must include at least 1 PLSO Member attendee (up to 4 total))**
 (includes all day refreshments, lunch, and CPD form)



RSVP by no later APRIL 5 at noon:

RSVP - Must include attendees name, email address, & PLSO Chapter membership status for sign in.
 These will be checked with PLSO State membership rosters

First come/ First Serve – up to 100 participants only – NO HOLDS

RSVP: with Steven J. Metcalf email: sjmincleveland@yahoo.com

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Payable by Cash or Check only
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 See PLSO State website for details as well.

Program to include Giveaways & Raffle Items

Delegates Report
March 2019
State Executive Committee Meeting

There was no meeting



D.L. Engineering, L.L.C. dba

D.L. Engineering & Surveying – Dino Lustri, P.E., P.S.

475 Cahoon Road, Bay Village, Ohio 44140 ♦ 216-387-3781 ♦ dino@dles.co

Civil 3D for Surveyors - Fundamentals

April 13, 2019

Holiday Inn – 6001 Rockside Road, Independence, OH 44131

The purpose of this class is to familiarize the attendees with the function and operation of Autodesk's AutoCAD Civil 3D. At the end of this class you should know the following:

- 1) Civil 3D interface and function,
- 2) Transparent and other commands that are purposefully used for Civil 3D rather than AutoCAD,
- 3) How to import data collector points to develop linework and surfaces, and
- 4) Field collection techniques to optimize your base mapping efforts.

A fundamental understanding of AutoCAD is recommended to fully benefit from the training in this course.

| Topics | Place of Beginning |
|---------------|---|
| I | Acquiring the software: Owning Civil 3D, AEC Collection, purchase options, VAR's, installation and shared use. |
| II | The Civil 3D Interface: Menu Browser, Application Menu, Quick Access Toolbar, InfoCenter, Ribbon, Tooltips, Transparent Commands, Drawing Window, Command Line, Status Bar, Toolspace. etc... |
| III | Starting: Templates, Coordinate systems, Workspaces, tabs on the Toolspace and their purpose for Surveying efforts. |
| IV | Points: Description Keys, Point Styles, Point Label Styles, point elevations and the use of DIST command. |
| V | Surfaces: Creation, manipulation, breaking old habits, TIN tweaking, boundaries. Comparing surfaces for volume calculations. |
| VI | Bearings & Distances: Drawing lines from bearings and distances, labeling lines, advanced label styles for offsets and crows feet, labels for objects that aren't there, etc... |
| VII | Survey Database: Importing points, converting FBKs, generating linework, automatic breaklines, etc... |
| VIII | Field Collection: Workflows, commands and general field techniques to benefit automatic linework and surface creation. |
| IX | GIS/LIDAR Information: (Time Permitting) Ohio and its Counties have a wealth of information that can benefit your efforts for base mapping. We will review a handful of them and bring them into our drawings. If we run out of time for this topic, I will provide links to where you can download step by step processes to accomplish them. |
| X | Open: Questions and Answers |



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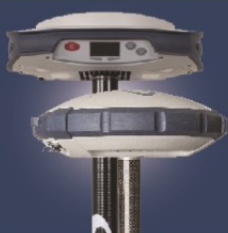
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Undgnd./Mag./Leak

Mech./Robotic
Total Stations



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Data
Controllers



Ranger 3

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Cincinnati, OH: 513.539.0022
Akron, OH: 330.633.4900
Charleston, WV: 304.776.1831
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July 28, 2018
46th William Haas
Memorial Golf Outing
at Springvale Golf
Course

Executive Committee Meeting Minutes – March 12, 2019 at 5:30 PM

Neff & Associates: 6405 York Road, Parma Heights, OH 44130

In attendance: Dave Bruckner, Richard Carlson, George Hofmann, Tim Feller, Michael Kral, Dino Lustri, Tom Snezek and Mike Ackerman

Secretary's minutes:

Executive Committee meeting minutes from November 13, 2018 and Annual Meeting minutes accepted with revisions.

Treasury:

- February 2019 treasury report submitted by Tim Feller, acceptance of report is subject to review.

There are still a few advertising invoices that have not been paid at this time.

The funds have been transferred to the Scholarship Fund. The number of scholarships to award for the 2019 Cleveland Chapter Scholarship was discussed. The final decision has been tabled to the next meeting after the Scholarship Committee has met.

Chapter Delegate:

George Hofmann stated there was not a March 8th meeting – No report.

Membership Committee:

There are two new members for the Cleveland Chapter, Benjamin Stafford and Ryan Snezek.

Newsletter Committee:

No report.

Website / Records Archival Committee:

Dino Lustri reported due to cost he is looking into a new domain host for the website. There is a concern over the yearly cost. We will need to find a way to fund it as it will exceed our budget.

The committee is in the process of updating the web site. A new site is needed for the recent scans we have made of donated surveys.

The Cleveland Chapter has expressed an interest in obtaining old County Plats, but there will be an undetermined cost to scan. We are looking for a cost-effective solution.

Program Committee:

Topics for possible CPD seminars were discussed

Excavator Program

Ethics

County GIS Research

Safety and Confined Spaces

Looking at June and September each for a meeting and possibly more.

Education/ Scholarship Committee:

The Scholarship Committee presently includes Joe Gutosky, Ken Hejduk, Dan Engle, Benjamin Stafford, and Mike Ackerman.

Four scholarships from the University of Akron have been submitted.

Finance:

Discussed during Treasurer's report.

Continued on next page

Tom Snezek updated the status of the golf outing- details to be posted in the newsletter.

The date is June 28th, 2019 at Springville Golf Course in North Olmstead.

Executive Committee Meeting Minutes – March 12, 2019 at 5:30 PM (Con't)

Golf:

Tom Snezek updated the status of the golf outing- details to be posted in the newsletter.

The date is June 28th, 2019 at Springville Golf Course in North Olmstead.

There was a discussion about having a possible CPD seminar after the dinner.

New Business:

Nominees for the “Surveyor of the Past” and “Surveyor of the Year” have been tabled to the next meeting.

Michael Ackerman, PS

Secretary Cleveland Chapter PLSO



PAR 5 - NUMBER 11 AT SPRINGVALE GOLF COURSE.

HOME OF THE 46TH ANNUAL

WILLIAM J. HAAS MEMORIAL GOLF OUTING.

LET ALL OF US WHO MAKE OUR LIVING BEHIND A TRIPOD TAKE A BREAK THIS JUNE 28TH AND ENJOY A DAY OF FUN TO RELAX WITH OUR CO-WORKERS, CLIENTS AND FRIENDS WITH A DAY OF GOLF.

YOU COULD WIN PRIZES, HAVE A FEW COLD-ONES, ENJOY A GOOD MEAL AND HELP SUPPORT THE ISSUES OF OUR TRADE BY ENTERING THE “PUTTING FOR THE P.A.C.” COMPETITION.

INSIDE THIS NEWSLETTER ARE BOTH THE FOURSOME REGISTRATION FORM AND THE HOLE SPONSOR FORM. PLEASE TAKE A MINUTE AND FILL ONE OUT AND PLAN TO BE THERE FOR A GOOD TIME!

WELCOME TO THE 46TH ANNUAL
WILLIAM J. HAAS MEMORIAL GOLF OUTING

RESERVATION FORM

Make your reservations early.

Friday June 28, 2019

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City _____ Zip _____ State _____ Phone No.: _____

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_____ Yes No

_____ Yes No

_____ Yes No

_____ Yes No

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Additional Donation = _____

TOTAL AMOUNT ENCLOSED = _____

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| 48" x 1 1/2" x 7/16" | \$0.38 ea |
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|---------------|--------------|
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| 22" x 2" x 2" | \$0.38 ea |

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| | |
|----------------|-------------------------|
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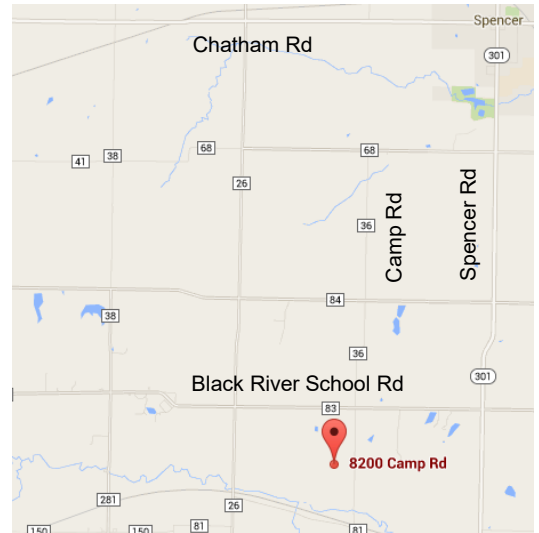
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(Cont'd on Page 8)

HOLE SPONSORSHIP FORM
WELCOME TO THE 46TH ANNUAL
WILLIAM J. HAAS MEMORIAL GOLF OUTING

(18 hole four-man scramble format)
(Tee off scheduled for 8:00 AM)

FRIDAY JUNE 28, 2018

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- ☐ All sponsors recognized on the Sponsor Board displayed in the clubhouse.

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Phone: _____ Email: _____

Hole Sponsor \$ 125.00
(does not include greens fees or meals)

Representative at the sponsored hole? Yes ____ No ____

General Sponsor \$ _____ (Gets your name on the Sponsor Board)

Total Enclosed: \$ _____

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**Contact Alex Cherchian
for more info:**



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alex.cherchian@leicaus.com



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Akron University Happenings

The Akron NSPS team prepares for their upcoming competition. Laser scanning.



Cleveland Chapter & State 2018 Schedule

Dates, times and locations subject to change, emails will be sent out with notification of any changes

Friday, January 11 - State PLSO Executive Meeting

Thursday - January 24 – Cleveland Chapter Annual General Meeting and installation of officers
(newsletter 1 deadline 1/31)

February 22 PLSO State conference

Friday, March 8 – State PLSO Executive Meeting

Tuesday, March 12 – 5:30 p.m. Cleveland Chapter Executive Meeting (newsletter 2 deadline 3/20)

Friday, April 12 – State PLSO Executive Meeting

SATURDAY April 13, 7:30 a.m. Civil 3D (CE) Holiday Inn Rockside

Tuesday, April 16– 5:30 p.m. Cleveland Chapter Executive Meeting (newsletter 3 deadline 4/26)

April (TBA) – Cleveland Chapter General Meeting & CPD

Friday, May 10 – State PLSO Executive Meeting

Tuesday, May 14 – 5:30 p.m. Cleveland Chapter Executive Meeting (newsletter 4 deadline 5/22)

Friday, July 12 – State PLSO Executive Meeting

Fri. July 28, 46th Annual William Haas Memorial Golf Outing at Springvale Golf Course

July (TBA) - Clev. Chapter Education Recognition Meeting (newsletter deadline 5 7/26)

Friday, September 13 – State PLSO Executive Meeting

Tuesday, Sept. 17 – 5:30 p.m. Cleveland Chapter Executive Meeting (newsletter 6 deadline 9/27)

October 10 & 11 - PLSO State Fall Seminar Mason, Ohio

Tuesday, Oct. 15 – 5:30 p.m. Cleveland Chapter Executive Meeting (newsletter 7 deadline 10/25)

Friday, November 8 – State PLSO Executive Meeting

Tuesday, Nov. 12 – 5:30 p.m. Cleveland Chapter Executive Meeting (newsletter 8 deadline 11/22)

Tuesday, Dec. 10 (if needed) – 5”30 p.m. Cleveland Chapter Executive Meeting (newsletter deadline 12/15/17)

4th Thursday in January 2020 – Cleveland Chapter General Meeting & Installation of officers

2018 State PLSO Officers

President—Tom Silva, PS

Secretary—Richard Frederickson, PS

President –Elect—Terrence Wright, PS/PE

Treasurer—Josh Mehilicic, PS,

Imm. Past Pres.—Curtis Deibel, PS

NSPS Director—Robert L. Akins, PS,