

# The PLS GAZETTE

A newsletter of the Pennsylvania Live Steamers, Inc.

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## Green Signals Ahead

The past two plus years at PLS have been very difficult mostly due to the pandemic (COVID-19) that we had little control over; and just when we seemed to be gaining the upper hand along came Tropical Storm IDA. I think most of you know the cliché “Just when you thought things couldn’t get any worse, they got worse.”, or “When it rains it pours” - no pun intended. IDA gave us plenty of rain and our nearby creek rose to an unprecedented level, truly over the top! It was disappointing when we all but shut down PLS in 2020 and even more disappointing when we postponed our 75<sup>th</sup> anniversary celebration until 2022, but to have flood water enter all of our buildings has been even more devastating than the challenges of the pandemic. OK, enough crying and moaning about things we have little or no control over. It’s time to look to the future. The good news is the railroad part of PLS has had most of the damage repaired. The electric transfer tables are working and washed-out ballast has been repaired. Storage Buildings 3, 6 and 8 are dried out and are in working order. Most signals and switches are working and the track condition is very good. The only building on the railroad that will need significant work is Building 9 which is the club’s engine and work cars storage building. It was sitting on a full size railroad tie foundation. Both the ties and Building 9 floated and ended up on top of the ballast. The south side of the building is now about 6 - 10 inches higher, leaving the building tilted and twisted to the north. The two tracks leading into the building are no longer in the ballast as the stone shifted

when the ties and building floated out of the stone. The repair of this building will be an interesting challenge. We never expected Building 9 to ever see any flood water as it is outside of the published flood plain. The building is 30 plus feet long, 5 feet wide and about 4 feet high at the ridge. It has no floor to tie the building together at the bottom and is too fragile to jack up and too heavy and fragile to try and move in one piece. One possible fix would be to disassemble it, remove the roof and take apart the sides. Then remove the stone and replace with a floating concrete slab and re-assemble the building on the slab using anchor bolts to keep it secure. No final solution has been decided on at this time. If you have any good ideas on a fix, please float them by me.



Photo 1 - Original clubhouse in the 1970’s

We have plenty of work ahead of us as we approach the 2022 season, especially with the 75<sup>th</sup> anniversary planned around our fall meet tentatively scheduled to start on September 1<sup>st</sup>, 2022. Building 1, our clubhouse is pretty much gutted with no bathrooms, no kitchen, no wall covering, one slop sink for washing and clean up, no flooring and limited lighting. Right now

we are working on how to put the inside of our building back together. The Board of Directors had voted to keep the basic layout of the build as is. The reason is budget. This is a restoration not a redesign. We are looking at some minor changes that would allow our bathrooms to be more accessible to those with disabilities by installing new doors, grab bars, accessible sinks and a little more room. The renovations will be somewhat difficult as we are bound by existing piping in the concrete floor that fixies the toilet and sink locations, but it looks as if we can make the accommodations better than they are today for those using a walker or wheelchair. The good news, we were able to have a new roof put on the building. There are no more leaks or rotted wooden purlins and the oil burner was repaired and is up and running. Having the building dried out and heated will keep our piping from freezing and the space warm enough to make working through the winter tolerable. We are hoping to closeup one of the bathrooms and eliminate the Porta-Potty. In a few more weeks going to the outdoor toilet will be very uncomfortable! The renovation of Building 1 will take some time to complete as there is a lot of planning and work to do, but we will bring it back to good as new. Maybe Photo 1 will make you smile. If you could go back to the 1970’s this is what Building 1 looked like. It was a plain concrete block building with no paint, no front door porch covering, no water softener doghouse, and a garage door on the left side. This is where the PLS bulldozer was parked when not in us. It is also why the cement floor looks the way it does today with some sunken spots and cracks. Although our pre-flood Building 1 was not a

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## PLS Membership Renewals for 2022 Now Due

PLS renewal notices have been sent and are due by the end of December. Please complete the form in its entirety and return it with your payment in the envelope provided. Membership cards will be sent in early February to all those who renew. If you have not received your renewal notice, please email:

secretary@palivesteamers.org

Also, please consider completing the "ASSUMPTION OF THE RISK, RELEASE OF LIABILITY, AND INDEMNIFICATIONS" form for all family and guests. This will eliminate their having to do so at the gate each time they visit.

Questions on completing this form may be directed to: secretary@palivesteamers.org

Please keep your membership current. We value your support. Thank you.

## Tropical Storm Ida Donations

PA Live Steamers is very grateful for the many monetary donations made to help repair our extensive storm damage. This includes those who gave to our Go Fund Me account and: Ken Evasew, Erich Boldt, Rich Stoughton, Ken Chermak, Robert Blackson, Thomas Diedrich, Allen Fisher, Roy Ganderton, Jerry Catanese, Vincent Sly, Debra Shulski, Wayne Baldwin, Patricia Hughes, Kathy & Paul Smolen, Patty & David Mattox, Boldt/Haggerty Solutions, Chesapeake & Allegheny Steam Club, Mayland Crosson, Cindy Smelser, David Taylor, Roy Nelson, Jeffrey Stahl, Morton Schoenberg, Kent Molerjack, Ross Magee, Dennis Hornberger, Joseph Kavanaugh, New Jersey Live Steamers, Robert Moser, Adam Madlinger, Jim Salmons, Richard Grutzmacher, Roman Pawlowski, Richard Poletto, Delaware Valley Triumphs Ltd, St. Croix Railroad, Ed Wagner, Beverly Buell, Douglas List, Patricia Heller, Wayne Huddleston, Doug Brooker and James Everett.

Also, thanks to the many members who have donated supplies and materials over the past few months. It is deeply appreciated.

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## Membership Gauge

As of November 30, 2021 PLS has:

**104 Regular Members**

**165 Associate Members**

**5 Honorary Members**

## PLS Tentative Events 2022

Sat, January 15 Board of Directors Meeting - 9:30 AM

Sat, February 19 Board of Directors Meeting - 9:30 AM

Sat, March 20 Board of Directors Meeting - 9:30 AM  
Membership Meeting - 12:30 PM  
**Annual Elections**

Sat, April 16 Board of Directors Meeting - 9:30 AM  
**SPRING CLEAN-UP in AM**  
Membership Meeting - 12:30 PM

Sun, April 24 Run Day - 9:00 AM  
**BOILER TESTING**  
Rain Date April 30

## Pertinent Dates for the 2022 Election

The 2022 election of all officers and 3 non-officer directors will take place at the Annual Business Meeting on March 19, 2022. Pete Brown and Pat Murphy have volunteered to be this year's Nominating Committee. They will contact all eligible members. Regular Members who attended at least half of the membership meetings in 2021 are eligible to be nominated for election to a seat on the Board and to any office except president, which requires prior service of at least one term as an officer or non-officer director. Nominations close on January 16, 2022 with Final Ballot to be posted in the clubhouse by February 13, 2022. Absentee ballots must be requested by March 4, 2022.

## Pennsylvania Live Steamers, Inc.

<b>President</b>	Frank Webb	77 Roundwood Circle, Collegeville, PA 19426	president@palivesteamers.org
<b>Secretary</b>	Mark Cahill	22 Tice Lane, Perkasio, PA 18944	mark.cahill@verizon.net
<b>Treasurer</b>	Robert Morris	3034 Black Swift Road, Norristown, PA 19403	rmorris1171@verizon.net
<b>Gazette Editor</b>	Lawrence Moss	815 Maplewood Drive, Harleysville, PA 19438	LarryMoss@outlook.com
<b>Board of Directors:</b>	Peter Brown, peteorivate@yahoo.com; Pat Murphy, patrickmurphy129@gmail.com; Steve Leatherman, steveleatherman@gmail.com Paul Rice, ricepaul@verison.net; Ross Magee, mrmww@gmail.com; Paul Miller, pava77@comcast.net		

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palace, it was considerably nicer than what early members had back in the day.

What's next? We will need some additional help as we take on the reconstruction project and continue the clean-up of the PLS property. As many of you know, we have 100 Regular Members. About a dozen of those members are the heavy lifters, meaning they show up at PLS on Wednesday and/or Saturday workdays and keep the property maintained. During the spring and summer months the grass needs to be cut every week. The basic cutting has been made faster and neater since we purchased a zero turn mower two years ago. However, even though the new mower lets us cut closer to obstructions, hand mowing is still needed and leaf blowing is still required especially in the spring and fall. Today was December 4<sup>th</sup> and the zero turn was out doing its job, sitting on that mower was one of those dozen members that show up on workdays. It is now time for Fall Cleanup and at this time of year we need to pick up fallen branches and leaves, the same will happen again in the spring. The point is those of us that are at PLS weekly are likely to be distracted by the reconstruction of the buildings and property along with many items on our property still needing repair. I mentioned that the railroad is ready to run, but that does not mean everything is working. We have three compressors that feed our steaming bays Two are always online. Right now we have one working compressor. Two still need to be repaired. In Building 2 the oil burner is offline. The oil tank flipped over as it tried to float away with IDA. The list of major repairs seems endless. To get ready for the 75<sup>th</sup>, we need additional sets of hands. We will be posting on the clubhouse bulletin board a list of things that need to be accomplished. Here are a few things that need to be completed:

- 1) Hair pin fence south of 7 1/4" gauge station. Needs: wire brushing and painting.
- 2) Brick walkway in front of 7 1/4" gauge station. Needs to be dug up, leveled and bricks reset. Currently has many of trip hazards.
- 3) Clean and repair drains around the property.

- a) Drain under Mercer Bridge needs work; Removal of heavy grate, clean out pit and fix the collapsing blocks under the concrete rim.
- b) Drain under the multi-gauge bridge, needs clean out, may require some digging.
- 4) Replace full size railroad tie curbing that has either washed out or has rotted away. Heavy work, help is needed, team of 4 will make job easier.
  - a) Ties missing just past top of the tunnel at the separation of track going back to Bldg. 6 and up the grade towards our driveway.
  - b) Ties rotted, North side of Bldg. 6 from signal Bldg. 4 to goal post signal at tunnel under our driveway.
  - c) Ties rotted, Stone bins near West side of tunnels, needs 4 partial ties replaced in the side of the bins and the top cap ties near the 7 1/4" grade track.
  - d) Missing and rotted ties just past the goal post signals just after the multi-gauge bridge.
- 5) Scrape, wire brush and paint the inside of the driveway tunnel leading to Bldg. 3. Norm L. fixed/patched the concrete spalling in the West and East side of the tunnel, we can than brush and repaint. Tunnels have been power washed.
- 6) Cleanup the turntable, remove weeds, dig up some more of the stump/roots from the old Sycamore tree.
- 7) Clean out the remainder of the mud/silt from the floor of the electronics room inside the South East side 7 1/4" tunnel.
- 8) Painting projects:
  - a) All steaming bay tracks need to be cleaned and painted, both those steaming tracks next to Building 3 and those located at the turntable.
  - b) Iron fence at the ramp at the 7 1/4" loading station.

The list above is just a sample of what needs to be done to be ready for the 75<sup>th</sup>, but even if we were not having the 75<sup>th</sup> we would still need to get this work done. If

you have interest in any of the work above please see me, Bob Morris, Mark Cahill or any of your Board of Director members. We will make sure we get you off to a good start, answer your questions and have the needed materials on hand for you to get the job going. If you have interest in any of the other work we are doing at PLS please talk to one of us to see how you can help. We have track work, carpentry, electrical, pumping and other things that also need to be worked on. We also have more than 100 Associate members, and all are welcome to come out and help. Thank you in advance for coming out and giving PLS a hand in making 2022 a great running season along with a great celebration of our 75<sup>th</sup> Anniversary in the fall of 2022.

We have been very fortunate in as much as almost all of our Regular Membership has been COVID-19 free. We will continue to monitor the progression of the virus and its variants and do our best to keep you advised and adjust our COVID protocols per the current state and federal guidelines with the goal of being safe and compliant.

We will get past the virus, we will get past the damage caused by IDA and we will do our very best to have a safe and great running season in 2022.

See you at the railroad,  
*Frank Webb – President*



## Club Membership News

PLS welcomes new Associate Member David Markley.



# Position-Light Signals of the PRR

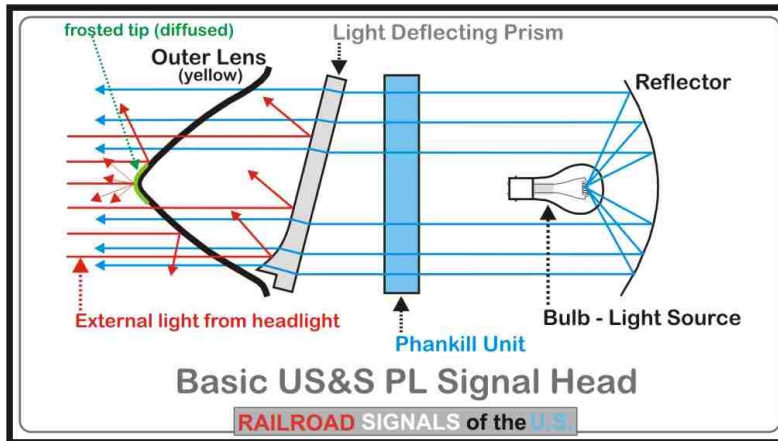
## More complex than you might have thought

By Bob Thomas

Anyone living in PLS territory certainly has been aware of those imposing position-light (PL) signals of the late Pennsylvania Railroad. Prior to 1915, the railroad relied on mechanical upper quadrant semaphore signals to indicate track occupancy, some with colored lights that changed in coordination with the position of the semaphore arm. Semaphore signals suffered from poor reliability due to dependence on mechanical contrivances to move the arm and, more importantly, poor visibility of the signal aspect in bad weather. Those limitations were daunting to the PRR as traffic increased and routes became too complex for signaling with semaphores. In response to those challenges, the PRR developed an entirely new kind of signal based upon the position of lights arranged in patterns to simulate semaphore positions. This article is limited to a description of the construction of Pennsy PL signal heads: interpretation of signal aspects (light patterns) for train operation has already been covered *ad nauseum* in prototype and model railroad literature.

Position light signaling was co-invented in 1916 by A.H. Rudd, PRR Signal Engineer and Dr. William Churchill, scientist at Corning Glass Company. Rudd conceived the basic concept and design details, and implemented PL signaling on the Pennsy. Churchill conducted research that revealed light having a yellow hue was optimum for fog penetration and he designed a light yellow cover with frosted tip and integral aspheric lens that discriminates against interfering external light sources. PL signals were first installed for evaluation on the PRR main line between Overbrook and Paoli in 1915. What emerged from those tests was subsequently refined and became standard practice on the Standard Railroad of the World. PL signal heads initially were mounted on an open "spider" support but later were enclosed in rectangular boxes known as "tombstones". Around 1934,

tombstones were abandoned and individual signal housings were mounted on a support structure behind the circular target we recognize today. Large numbers of simplified PL signals were also employed in ground level dwarf housings for use in slow-speed areas such as yards and stations.



The geometry and construction of each PL signal, as shown in the illustration,<sup>1</sup> was a sophisticated combination of optical elements designed to compensate for the most arduous operational circumstances imaginable. Referring to the illustration, on-axis stray light (shown in red) that would impair visibility is partially eliminated by frosting on the tip of the Corning cover lens. Some other stray light (also shown in red) is reflected aside by the outer surface of the cover lens. Remaining stray light (as from the locomotive's headlight) that would dilute visibility of the signal display and has not otherwise been attenuated, passes directly through the cover lens to a thin prism, where it is refracted outward and away from signal head.

A *Phankill* unit is a crucial element in the PL optical system. It consists of a fine honeycomb structure finished in flat black that allows desired on-axis light from the signal's lamp (blue lines in the diagram) to pass straight through, but it eliminates off-axis random light from the lamp that causes artificial (phantom) images to appear to an observer of the signal. Those phantom images were a dangerous and nagging problem for Mr. Rudd in the early stages of PL development until he finally elimi-

nated them by the techniques described above. Without his innovations, phantom images could cause misinterpretation of PL aspects and possible inappropriate response by train crews.

Please note that the illustration is intentionally distorted to clarify the contribution of each individual element in the PL signal head. The optical assembly in front of the lamp is actually only about one inch thick. It is housed with the lamp in a sealed cast iron box of about nine inches on a side. On an assembled signal, individual signal heads for each light are supported independently of each other and of the circular target, which is nothing more than a 4-ft.

disc perforated at each PL location to allow passage of the signal head's light. That method of construction enables signal heads to be mounted in various PL patterns and even alone in locations where only one or two signals are required, as at draw bridges and interlockings.

PL signaling enabled introduction of cab signals to display a limited number of trackside aspects. This was accomplished by use of low frequency impulses in the running rails to represent various signal aspects. Coils mounted on locomotive lead trucks close to the rails, picked up the data which was then processed for the cab display. An advertisement by Union Switch and Signal Company<sup>2e</sup> shows an early display made by that company. Those basic principles have been refined into modern automatic train control, rather beyond the scope of this article, but it all began with Mr. Rudd's PL signal system.

Development and refinement of PL signaling occurred forty years before widespread use of computers during an era when advanced railroad signal technology was purely a product of the human mind supported by enlightened American corporations. We should be so fortunate today!

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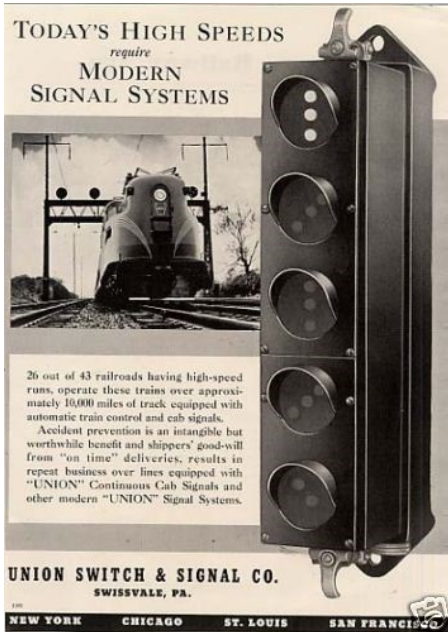
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**REFERENCES:**

1. Signal Head Cross Section and general signal information: <https://railroadsignals.us/signals/pl/index.htm>

2. US&S Cab Indicator Ad and PRR Signal Files: <https://mysite.du.edu/~jcalvert/railway/prr/prrsig.htm>

The author is indebted to both internet sites listed above for their enormous amount of information on railroad signaling, which provided the foundation for this article.



# For Sale

## Complete Train and Trailer

Reading GP 30 7¼" gauge w/extra Features

Electronic Hand Control and Detailing

- Bulkhead flat, w/brakes, 2 seats and vacuum gauge, setup as engineer's car.
- Reading Boxcar, w/brakes, fully lined with carpeting and Thomas seats for small riders.
- Flat car w/brakes and two seats.
- Santa Fe boxcar w/brakes used as tool car.
- PRR hopper w/brakes and coal load that contains covers for all cars.
- "76" tank car w/brake pass-through, set up as cooler car w/drain.
- Flat car w/brakes and reclining low beach chair for conductor.
- "Rahway River RR" cabin w/brake pass through, vacuum gauge, strobes at both ends and interior lighting.
- 7'x14' dual axel trailer w/brakes, set up to carry above equipment plus tracks for smaller cars. Extra space and shelf in front. Weight distribution hitch included.
- Price is negotiable. Would like to sell as complete package.

**Contact Ronald Heller, NJLS**

**[rwheller2@comcast.net](mailto:rwheller2@comcast.net)**

**for details and photographs**

*Health requires downsizing. Not leaving the hobby.*

## A Final Whistle Blast

It is with the deepest regret that we inform you that a former Regular Member of PLS, Philip (Phil) Paskos, 83, died peacefully on Thursday, November 11, 2021. Phil was born on July 27, 1939 and lived in Reading, PA. Phil was an engineer until his retirement. He enjoyed bowling and model railroading. Phil operating several 1 inch scale, 4 ¾" gauge engines while at PLS, one of those engines being a 1" scale Pennsylvania Railroad class M-1, with a 4-8-2 "Mountain" wheel arrangement. Phil will be missed by all that knew him.

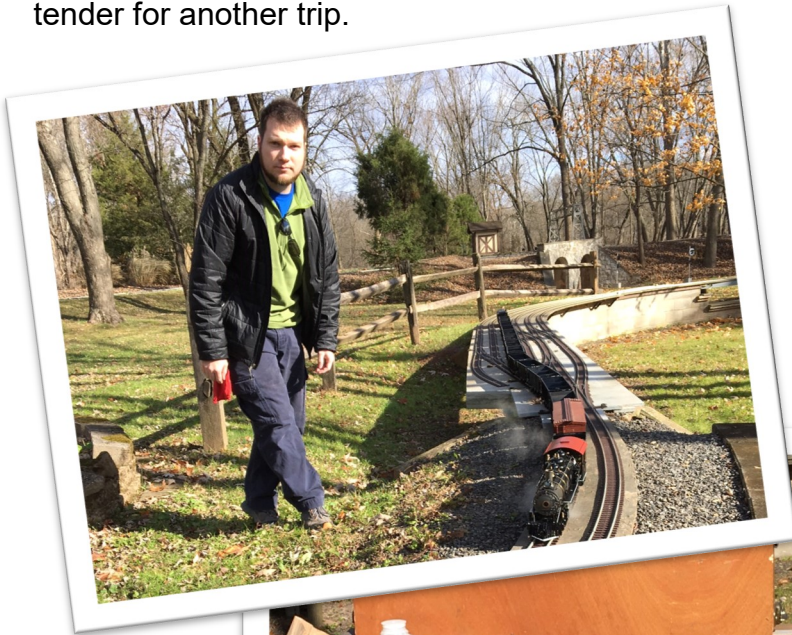






# 2021 Gauge 1 Turkey Trot

Joseph Rue runs the EBT coal train while Harry Quirk, Jr. watches his grandson water the tender for another trip.





# Tentative PLS Calendar for 2022

## January

Saturday Jan. 15 Board of Directors Meeting - 9:30 AM

## February

Saturday Feb. 19 Board of Directors Meeting - 9:30 AM

## March

Saturday Mar. 19 Board of Directors Meeting - 9:30 AM

Membership Meeting - 12:30 PM  
**Annual Elections**

## April

Saturday Apr. 16 Board of Directors Meeting - 9:30 AM  
**SPRING CLEAN-UP in AM**

Membership Meeting - 12:30 PM  
Afternoon/Evening Run (See Note)

Sunday Apr. 24 Run Day - Members & Guests -  
**BOILER TESTING**  
(Rain Date May 1)

## May

Saturday May 21 Board of Directors Meeting - 9:30 AM  
Membership Meeting - 12:30 PM  
Afternoon/Evening Run (See Note)

Sunday May 22 Run Day - Members & Guests

Friday May 27 **SPRING MEET** - Members & Guests

Saturday May 28 **SPRING MEET** - Members & Guests

Sunday May 29 **SPRING MEET** - Members & Guests

## June

Saturday Jun. 18 Board of Directors Meeting - 9:30 AM  
Membership Meeting - 12:30 PM  
Afternoon/Evening Run (See Note)

Sunday Jun. 26 Run Day - Members & Guests  
(Rain Date July 3)

## July

Saturday Jul. 16 **Annual PLS Picnic - 12:00 Noon**  
(Train rides will be available from Noon until 3 PM)  
(Picnic Rain Date Sunday July 17)

Sunday Jul. 24 Run Day – Members & Guests  
(Rain Date July 31)

**Note: No meetings in July**

## August

Saturday Aug. 6 **Perkiomen Community Day**  
Run Day - Township Residents

Saturday Aug. 20 Board of Directors Meeting—9:30  
Membership Meeting - 12:30 PM  
Afternoon/Evening Run (See Note)

Sunday Aug. 28 Run Day - Members & Guests  
(No Rain Date)

## September

Thursday Sept. 1 **75th Anniversary MEET**

Friday Sept. 2 - Members & Guests

Saturday Sept. 3 - Members & Guests

Sunday Sept. 4 - Members & Guests

Sunday Sept. 17 Board of Directors Meeting - 9:30 AM  
Membership Meeting - 12:30 PM  
Afternoon/Evening Run (See Note)

Sunday Sept. 25 Run Day - Members & Guests  
(Rain Date October 2)

## October

Saturday Oct. 15 Board of Directors Meeting - 9:30 AM  
**FALL CLEAN-UP in AM**  
Membership Meeting - 12:30 PM  
Afternoon/Evening Run (See Note)

Sunday Oct. 23 Run Day - Members & Guests  
(Rain Date October 30)

## November

Saturday Nov. 19 Board of Directors Meeting - 9:30 AM  
Membership Meeting - 12:30 PM

Friday Nov. 25 Turkey Trot Run – Gauge 1 only -  
(Rides not available)

## December

Saturday Dec. 10 Board of Directors Meeting - 9:30 AM

**Note:** Rides may not be available at afternoon/evening run days following membership meetings due to possible limited participation by equipment owners. All members and their guests are welcome to attend with the understanding that rides are not guaranteed at these events.

**SPECIAL NOTE:** This is a proposed schedule subject to change due to the ongoing cleanup and reconstruction.

Also, rides may be limited or not available should the club engine remain out of service.



**The  
PLS GAZETTE**

P.O. Box 26202

Collegeville, PA 19426-0202

**FIRST CLASS**



**How Railfans  
get their start**