





Next Monthly Meeting: Thursday, July 6th, 2017

The next meeting of the WIRELESS ASSOCIATION OF SOUTH HILLS, INC. will be on Thursday, July 6th 2017, in the Conference Room at the St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park, by South Hills Village & Village Square (map on the back page). The room is available at 6:30 PM. The meeting will be starting at 7:00 PM. Topics will include a recap of Field Day 2017, 2017 Pa QSO Party plans, and more. See you there!

> Cover Photos: Top: Club members gathered for the Picnic at Breezeshooters Bottom: A look at the Flea Market early on Sunday Morning. Photos courtesy of & © Copyright 2017 Ron Notarius W3WN

WASH 2017 OFFICERS

EXECUTIVE COMMITTEE:

President VP / Secretary VP / Treasurer Glen Roberts KE7FD Harold Rosenberger K3HCR Mark Stabryla N3RDV

AND WE COULDN'T DO IT WITHOUT:

N3SH Trustee WA3SH Trustee NP2SH Trustee N3SH WA3SH NP2SH/B QSL Manager Ron Notarius W3WN NP2SH 2ØØ9 QSL Manager VE Team Liaison Webmaster Asst. Webmaster Quartermaster WASH FM Net Manager WASHFest 2Ø18 Committee

Activities & Operating Events Ways & Means WASH 2M Contest Chair Field Day 2Ø17 Coordinatora Larry Comden K3VX Rich Danko N3SBF Paul Jordan NP2JF

Carl Schroeder K9CS Ron Notarius W3WN Sean Sleeman N3NWR Ben Williams KB3ERQ Harold Rosenberger K3HCR Chuck Bihun KC3ELA Carol Danko KB3GMN. Chairman Bill Hill W3WH, Co-Chair Rick Bell KB3IAC Carol Danko KB3GMN Jim Sanford WB4GCS Rick Bell KB3IAC Bill Hill W3WH

CLUB-AFFILIATED REPEATERS, BEACONS, & DIGIPEATERS:

Mt. Lebanon	N3SH / R	146.955 MHz (–)	PL 131.8
North Side	N3SH / R	442.550 MHz (+)	PL 131.8
Canonsburg	N3FB / R	443.650 MHz (+)	PL 131.8
St. Johns, VI	NP2SH / B	28.276 MHz	Propagation Beacon
Canonsburg	N3SH	144.390 MHz	APRS Digipeater

N3SH / WA3SH WASHNet, the weekly on-air net of WASH, meets every Monday Night, 8:00 PM ET, on the 146.955 & 443.650 repeaters. All radio amateurs, WASH members or not, are welcome to join in!

THE LEGAL STUFF

"The WASHRag™" (formerly "The Mariner ™") is the Official Newsletter of the WIRELESS ASSOCIATION OF SOUTH HILLS, INC. (WASH), a 501.C.3 not for profit organization.

Published Monthly with occasional Special Editions as warranted.

This issue is © Copyright 2017 by the WIRELESS ASSOCIATION OF SOUTH HILLS, INC

Editor & Publisher: Ron Notarius W3WN

Permission is granted to other Amateur Radio publications to reprint articles in this issue, provided the original author and "The WASHRag™" are given credit. Comments, articles, and requests for copies of or information about "The WASHRag™" should be mailed to the editor:

Ron Notarius W3WN

3395 Rosewood Drive, Castle Shannon, PA 15234-2546 e-mail[.] newsletter at n3sh dot org or w3wn at arrl dot net

"The WASHRag", "The Mariner", SHARCfest, South Hills Hamfest, WASHfest, WASHfest 2017, N3SH Net, WA3SH Net and WASHNet are ^M trademarks of the WIRELESS ASSOCIATION OF SOUTH HILLS, INC.

The WIRELESS ASSOCIATION OF SOUTH HILLS, INC. was founded on August 23rd. 1993, as the original SOUTH HILLS AMATEUR RADIO CLUB, and operated under that name through 1998. WASH was also known briefly in late 1998 as the N3SH AMATEUR RADIO CLUB. It is not in any way affiliated with the "South Hills Amateur Radio Club, Inc." and is not responsible for that group, it's members, or it's actions in any way, shape, or form.

As always, special thanks to the owners & operators of both the N3SH/R Repeaters and the N3FB/R Repeater System for permitting the WIRELESS ASSOCIATION OF SOUTH HILLS, INC. and it's members to use their repeaters for club purposes.

WASH Amateur Radio Club News Briefs

Next WASH VE Test July 20th

The Next WASH VE exam sessions will be Thursday, July 20th, 2017, 7:00 PM, at the WPXI Community Room, 4145 Evergreen Road, Pittsburgh, PA 15214, Talk-in on the 146,955 MHz and 443,650 MHz repeaters. All examiners are ARRL VEC affiliated.

Pre-registration is not required. Walk-ins welcome!

But if you plan on attending the test session, please contact VE Team Liason Ron Notarius W3WN:

Telephone (412) 572-6723 or E-Mail: w3wn at n3sh dot org

Please bring the following to your test session:

Picture ID or other suitable identification (2 forms of ID required) Pen / Pencil / Calculator Original FCC license plus a copy of license (if upgrading) Original CSCE plus a copy of CSCE (if upgrading) Check or Cash in the amount of \$15.00 (payable to: ARRL VEC)

Future test dates: October 19th, 2017



Please join us for the next WASH Breakfast! We usually get together on

the LAST Saturday of every month for a chance to informally sit down, shoot the breeze, compare notes, drink lots of coffee, and just have a good time!



Join us this month at Suzy B's, Route 910 at the intersection of Route 519 at US 19, 1 mile North of Downtown Canonsburg. .Start time is about 8 AM until ???? Monitor 146.955 & 443.659 for talk-in or any last minute changes.

All are welcome, WASH members or not, amateurs or not!

Wireless Association of South Hills Membership

AA3GM AB3ED AB3NM AC3AJ AE3DL K3HCR K3SGT K3VX KA3CX KA3VXM KB3DCO KB3GMN KB3GMU KB3IAC	KB3IVX KB3JHR KB3ORO KB3YCX KC3DOF KC3ELA KC3HNU KC3IRH KE7FD N1NCZ N3FB N3IDH N3JFQ N3RDV	N3RHT N3RIY N3SBF N3UE N3YQX NU3Q W3LE W3WH W3WN W8LEV WA3PYU WA3VSS WO3Z	WASH FL KA3UPY/M W4ZE WASH NE NØPEU WASH OR NØVLR NØVLR NØWPV KB3NVL KB3NVL KB3NVM WASH OH N8DPW	WASH TN K3OL KE3XB N3YPB WASH TX NB3C K3LGM KB3IJX Jane Wagner WASH VI NP2JF	Silent Keys AB3KA K3EED K3LIE KA3NMG KB3ENX KB3FNM KB3FQT KB3JHQ N3CZZ N3FZ N3FZ N3FZ N3FZ N3FZ N3FZ N3FZ
1) your cuit should be listed here & ish i, piedse contact Mark N3RDV					N3RNX N3SKR
Through May 29 th . 2017				N3SRC N3ZEL N3XFE	

1 nrougn May 29 °°, 2017 List complied by Mark Stabryla N3RDV, Vice President/Treasurer Hope everyone who attended the Breezeshooter's Hamfest earlier this month had a great time! With Field Day coming up, we decided to make a "special edition" to both cover the hamfest and remind everyone about Field Day. Many of our "usual features", of course, are absent, but will be back in the regular July issue -- which can be devoted specifically to Field Day activities.

And on that note, just a quick reminder that the next gathering of the WASH Breakfast Gang will be on Saturday, June 24th, as usual at Suzie B's, 950 South Central Avenue (Route 910 at the intersection of Route 519 at US 19), Canonsburg, officially starting at 8:00 AM. Our "usual" tables will be reserved, but please let Jim WB4GCS know ahead of time, so that Suzie & her crew will have enough space available for us. (We really don't want to fight the State Police for seats... we'd lose!) See you there?

For those who are planning to head straight for Field Day setup, there will also be a gathering at the **Eat'N'Park** restaurant on Library Road / Route 88, just north of the 5 way intersection with South Park Road and Corrigan Drive at the entrance to South Park, also beginning at 8 AM.

We will again be operating Field Day from Babcock Grove, off Sesqui Drive in South Park — see map on the last page. This year, we're using the call W3A, class 3A Some preliminary antenna work will take place on Friday, June 23rd — mainly getting ropes positioned in trees and things like that. If you are available and can help out, please contact Bill W3WH or Rick KB3IAC and let them know.

Saturday setup will begin about the time everyone comes in from one of the breakfast gatherings, circa 9 to 10 AM. Past experience shows it shouldn't be too long. Lunch will be provided, primarily sandwich rings, macaroni salad, and whatever else people bring. If you haven't already done so, let Rick KB3IAC know if you are going to be coming, so that we can try to make sure we have enough without over buying. Saturday dinner will be burgers and dogs, and for those who were willing to pay for them, steaks. Again, if you are planning to be at the site for Saturday dinner, let Rick know so that we can make sure we have enough.

While there will be some water and other drinks, do plan on bringing along your own, again, just to make sure we don't run out.

In general, remember that ALL are welcome to come to Field Day, be they members of the club, friends of the club, or just curious. Rick and Bill would appreciate knowing when you are able to come, just for scheduling purposes — we don't want a lot of people hanging around waiting to operate, and later have more operating positions than operators, so it helps in the planning.

For those who are new hams or who are not familiar with HF, don't worry about it. Come and have fun, and there will plenty of us to "Elmer" you along. Yes, you'll mistakes. So what? That's how you learn! So — We're looking forward to seeing you there!

In other news, we must admit to a genuine delight in seeing Steve W3SRL at Breezeshooters. Steve told us that he retired from the Mt. Lebanon Fire Department earlier this year, and is now working a "regular job" in the private sector.

We've also learned that another long time club member will be returning to the area near the end of the summer. Paul NØVLR will soon be closing on a home in Imperial in late July. He's still going to be working for NuScale, but from home. And in Paul's honor, we must once again ask the question ...

Has Roadway found the tower yet?

2

2

Join WASH or Renew your Membership Today ! Membership Application on Page 13

W3ZLK

WA3JPP

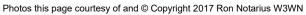
73

2017 WASH Upcoming Events Calendar

Club Meetings & Other Significant Events — Subject to Change

June 18 th	ARRL Kid's Day	http://www.arrl.org		
June 24 th — 25 th	ARRL Field Day	http://www.arrl.org		
July 2 nd	Somerset Co ARC Hamfest	http://www.k3smt.org		
July 6 th	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park		
July 8 th — 9 th	IARU HF World Championship	http://www.iaru.org		
July 15 th —16 th	PVGP Schenley Park	http://www.pvgp.org		
July 20 th	<i>WASH</i> VE Exams	WPXI Community Room, 4145 Evergreen Road, Pittsburgh PA		
August 3 rd	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park		
September 7 th	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park		
September 10 th	Butler Co ARA Swapfest	Unionville Fire Hall, Butler PA		
October 5 th	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park		
October 7 th —8 th	California QSO Party	http://www.cqp.org		
October 14 th —15 th	Pennsylvania QSO Party	http://www.nittany-arc.net/PAQSO.html		
October 19 th	WASH VE Exams	WPXI Community Room, 4145 Evergreen Road, Pittsburgh PA		
October 28 th —29 th	CQ WW DX Contest SSB	http://www.cqww.com		
November 2 nd	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park		
November 4 th — 6 th	ARRL Sweepstakes CW	http://www.arrl.org		
November 5 th	WACOM Hamfest	Washington County Fairgrounds		
November 18 th — 20 th	ARRL Sweepstakes SSB	http://www.arrl.org		
December 7 th	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park		

"Seen" at Breezeshooters 2017 Photos this page courtes of





"Seen" at Breezeshooters 2017

Photos this page courtesy of and $\textcircled{\mbox{c}}$ Copyright 2017 Ron Notarius W3WN



"Seen" at the WASH Picnic

Photos this page courtesy of and $\textcircled{\mbox{c}}$ Copyright 2017 Ron Notarius W3WN



Just a Few More... Photos this page courtesy of and © Copyright 2017 Ron Notarius W3WN



Federal Register Publishes Rules For New MF/LF Bands But — Operation is Not Legal Yet! American Radio Relay League

Newington, CT, June 15th, 2017 — The FCC Report and Order (<u>R&O</u>) spelling out operational rules to allow secondary Amateur Radio access to 630 meters and 2,200 meters <u>now has appeared</u> in the Federal Register, but radio amateurs still may *not* access the new bands. That's because specific procedures now under development to detail how radio amateurs will notify the Utilities Technology Council (<u>UTC</u>) of their proposed station location, prior to commencing operation, still must undergo approval. The FCC said the notification requirement is necessary to confirm that a station is not located within 1 kilometer of an active power line communication (PLC) system.

"While the *R&O* has been published in the *Federal Register*, amateurs may not begin using the new bands until after the FCC's Wireless Telecommunications Bureau issues a *Public Notice* outlining necessary procedures to notify UTC of pending operation, as the new rules require," ARRL Regulatory Information Manager Dan Henderson N1ND, said. "There is no timetable for that *Public Notice* to be released. Amateurs need to practice patience."

The FCC said the notification requirements it adopted "seek to strike a balance between amateur operations used for experimental purposes and PLC operation used by electric utilities for the reliability and security of electric service to the public." Once notification procedures are in place, radio amateurs intending to operate on either band will notify UTC of their geographical location. If UTC does not object within 30 days, amateur operation may commence. The FCC turned away an ARRL request for direct access to the PLC database that UTC maintains.

Once UTC has developed the new information collection procedures, the FCC must submit them for review to the Office of Management and Budget (OMB). "The Commission will publish a separate notice in the *Federal Register*, inviting comment on the new information collection requirements adopted herein," the FCC said in the *R&O*. "The requirements will not go into effect until OMB has approved [the notification procedures] and the Commission has published a notice announcing the effective date of the information collection requirements."

In an unrelated action, the FCC allocated 1,900-2,000 kHz to the maritime mobile service (MMS) on a primary basis for non-Federal use in ITU Regions 2 and 3, and limited the use of this allocation to radio buoys on the open sea and the Great Lakes. Amateur Radio was upgraded from secondary to primary in the 1900-2000 kHz segment in 2015.

Hamvention Reports Second-Largest AttendanceEver For 2017 ShowAmerican Radio Relay League

Newington, CT, June 15th, 2017 — The tally is in, and Hamvention® 2017, at its new venue in Xenia, Ohio, attracted 29,296 attendees, official spokesperson Mike Kalter W8CI, told ARRL. That is the second-largest reported attendance in the history of the event.

Hamvention attendance peaked in 1993 at 33,669, before the 1996 change in date from April to May while it was still being held at Hara Arena. Attendance in 2016 for the show's final year at Hara was 25,364. Hamvention relocated to the Greene County Fairgrounds and Expo Center this year, after Hara Arena announced last summer that it was closing. Hamvention General Chair Ron Cramer KD8ENJ, called 2017 "a most successful year."

"We knew this would be a big year but this was even beyond our expectations," Cramer said. "The challenge was great to reinvent Hamvention® at a new venue in a very short time period. From all the e-mails, letters, and calls I have received over the last few weeks, we have accomplished it successfully." Cramer expressed appreciation for all constructive criticisms and said each idea is being evaluated. Held May 19-21, Hamvention 2017 has received largely positive reviews, despite traffic problems on opening day and heavy rain during the weekend.

"We all recognize the traffic, rain, mud, and parking issues, but part of those issues were corrected even before show weekend was over," Cramer said. "Other issues are being worked on already for next year's show." He and Kalter said the Hamvention Committee has joined Greene County, municipal officials, and the Greene County Fairgrounds and Expo Center Advisory Board in addressing improvements for 2018. Kalter and Cramer also thanked the 657 volunteers who put in long hours to make Hamvention 2017 a reality. The Dayton Amateur Radio Association (DARA) sponsors Hamvention.

"We can't control the rain but we promise there will not be some of the other issues next year," Cramer said. "There may even be some new surprises in store," he added, pointing out that Hamvention has 3 more months to plan for the 2018 event than it did for this year's.

"We thank all who came to the show this first year in Greene County and hope to see you again next year," Cramer concluded. "For those that thought they would wait and see how we did, sorry you missed the show but look forward to seeing you next year. Our rough edges will be smoothed out for you by then."

South African Telecoms Regulator Cancels 2100 Amateur Radio Licenses American Radio Relay League & Southgate Amateur Radio News

Newington, CT, June 12th, 2017 — South Africa's telecoms regulator <u>ICASA</u> has cancelled 2100 Amateur Radio licenses — believed to be more than one-third

of the total number — for non-payment of license fees, South African Radio League (<u>SARL</u>) News has reported.

At a quarterly SARL/ICASA liaison meeting in April, ICASA confirmed that 2100 Amateur Radio licenses had been dropped from the rolls.

Over the past few months, SARL has been reminding radio amateurs to make sure their license fee payments are up to date. Last December, the SARL e-mailed members who were in arrears and whose licenses were about to be cancelled. More recently another 143 members were notified.

ICASA sends invoices at the beginning of each year, but many do not reach their destination, most often because mailing addresses have not been updated. Those whose licenses have been voided will have to reapply with ICASA.

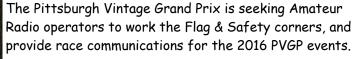












This year, Amateur Radio Operators are needed for these race weekends:

The Historic Race Weekend on July 7th - 9th, at Pitt Race (formerly BeaverRun Motorsports Complex) in Beaver Falls, featuring Muscle Cars & European Racers

from the 60's & 70's,

The Vintage Race Weekend on July 15th & 16th, in Schenley Park in the Oakland section of Pittsburgh, featuring sports cars from the

early days of automobiles through the 1950's.

For More Information or to Volunteer, please call Corky Bennet N3MJP at (724) 217-5458





Somerset County ARC 14th Annual Hamfest

Sunday, July 2nd, 2017, 8:00 AM—1:00 PM (Date Change)

Vendor Setup beginning at 6:00 AM

Somerset County Technology Center

281 Technology Drive, Somerset PA 15501



Talk-in on 147.195 and 443.250 PL 123.0

Admission \$5

More Information at http://www.k3smt.org

The North Hills ARC 32nd Annual Hamfest *Has Been Cancelled for 2017*



Due to a lack of a suitable venue this year More Information at <u>http://nharc.org</u>



Skyview Radio Society Swap'n'Shop



Sunday, August 27th, 2017, 8:00 AM—1:00 PM Grounds Open at 6 AM for Vendors & Tailgaters Skyview Radio Society Clubhouse 2335 Turkey Ridge Road, New Kensington, PA Talk-in on 146.640 PL 131.8 Admission \$5 More Information at http://www.skyviewradio.net

Uniontown ARC GabFest 67th Annual Hamfest

Saturday, September 2nd, 2017, 8:00 AM—1:00 PM

Setup Time at 6 AM for Vendors & Tailgaters

W3PIE Clubhouse, 433 Old Pittsburgh Road (just off State Route 51 & US 119 or State Route 43), Uniontown Talk-in on 147.045 PL 131.8



Free Admission — Free Parking — Free Swap-N-Shop Setup With Registration

More Information at www.w3pie.org/gabfest.htm

Butler County ARA Swapfest 2017



Sunday, September 10th, 2017, 8:00 AM—3:00 PM Grounds Open at 6 AM for Vendors & Tailgaters Unionville Volunteer Fire Department 102 Mahood Road (at Route 8 North), Butler, PA 16001 Talk-in on 147.360 PL 131.8 Admission \$5 More Information at <u>http://www.w3udx.org</u>

WACOM Hamfest 2017



Sunday, November 5th, 2016, 8:00 AM—3:00 PM Vendors Setup starting at 6 AM Washington County Fairgrounds 2151 North Main Street, Washington, PA 15301 Talk-in on 146.790 PL 131.8 Admission \$5 More Information at http://www.wacomarc.org





The South Hills Hamfest — *Now in our Twenty Third big year! Sponsored by the* Wireless Association of South Hills Amateur Radio Club, Inc.

Sunday, February 25th, 2018 8:00 AM until 3:00 PM Rain or Shine (or Snow!)

Home Economics Building, South Park



3735 Buffalo Drive, South Park Township, PA 15129 Behind the Allegheny County Police Station on Brownsville Road Talk-In on 146.955(-) and 443.650(+) 131.8 PL Donation \$5



(800) 545-8881

Breakfast & Lunch will be available!



FREE Coffee for the entire Hamfest courtesy of HAM RADIO INSURANCE ASSOCIATES of Canonsburg, PA

MAIN PRIZES TBA — You've Got to Play to WIN!

Additional Hourly Door Prizes! Special Black Box Prize (Separate Drawing)! Main Prize tickets are \$2.00 each, 3 for \$5.00, 7 for \$10, 15 for \$20 All Prizes Subject to last-minute changes

For Table Reservations, or More Information, Please Contact: Carol Danko KB3GMN at (412) 884-1466 <u>n3sbf@comcast.net</u> E-mail us directly at <u>washarc@yahoo.com</u> Check out our website too! <u>www.n3sh.org</u> **Please Note**: Early Table Reservations must be paid in full <u>on or before January</u> 31st, 2018.

Reservations received <u>after</u> February 1st, 2018 must include payment in full.

Reserve now... we have sold out in advance <u>eight</u> years running!

Hamfest Table Reservation Form—Please PRINT LEGIBLY ALL INFORMATION
Name:_____ Email: _____

Address:		_ Phone: ()
City:	State: Zip:		Please make all checks payable to: WIRELESS ASSOCIATION OF SOUTH HILLS
Call Sign:			PLEASE MAIL RESERVATION TO: WASHFEST 2017
Tables WITH Electricity:	X \$15.00 =		C/O CAROL DANKO KB3GMN 4246 Seton Drive
Tables WITHOUT Electricity:	X \$12.00 =		Pittsburgh, PA 15227-1244
5 Or More Tables w/o:	X \$10.00 =	W	e reserve the right to resell any tables not occupied by 8 AM, unless prior arrangements have been made!



WIRELESS ASSOCIATION OF SOUTH HILLS, INC.

Membership Application, New or Renewal



I would like to join WASH! I am interested in	the following type	of membership:	🗆 New Membership	D Membership Renewal		
(check quarter	☐ 1st Qtr Jan-Mar	☐ 2nd Qtr Apr-Jun	☐ 3rd Qtr Jul-Sept	☐ 4th Qtr Oct-Dec		
□ (F1) Full Membership:	\$20.00	\$15.00	\$10.00	\$5.00		
\Box (F2) Full Membership < 18 or > 65 yrs of age:	\$10.00	\$7.50	\$5.00	\$2.50		
□ (A1) Associate Membership:	\$10.00	\$7.50	\$5.00	\$2.50		
□ (FM1) Family Membership (\$3.00 x No. of household	family members): \$	5				
Name(s):						
Name:		Call Sign:				
Address:		License Class:	License Class:			
City, State:		Expires On:				
Home Phone:		Work Phone:				
Email Address:		Birthday:				
New Members Only: I do NOT want to be added to the Club E-Mail Reflector I do NOT want to be added to the Electronic Newsletter Mailing [If you have an Email address, you Will be added to both lists UNLESS you club to the the test of t		Date:		y ARRL Member? □ Yes □ No		
Signature:			Ψ			
N3RDV has requested that The Wireless A	ssociation of South turn completed mer	n Hills, Inc. reserves the mbership form along v /IRELESS ASSOCIATI c/o Mark Stabryla 1120 Mot	ne right to accept or i with check/money or			
Daily DX Get a free t and The We	wo weel		The Dail			

you of all the DX news! Send an email to <u>bernie@dailydx.com</u> or go to <u>www.dailydx.com</u>

> The Daily DX, 3025 Hobbs Road, Glenwood, MD 21738 Phone: 301-854-5650









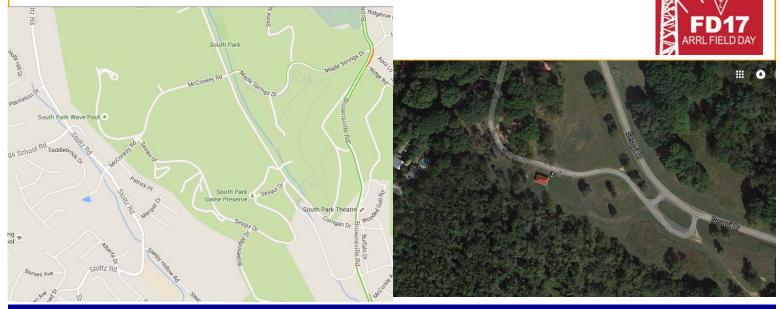
Directions to the W3A Field Day 2017 Site

Babcock Grove is located on Sesqui Drive in South Park. (See map below left)

Enter South Park (from either Library Road or Brownsville Road) and proceed to Corrigan Drive.

From Corrigan, turn onto McConkey (opposite side of the light is Maple Springs Drive), head towards the Wave Pool.

At the entrance to the Wave Pool parking area (on the right), turn LEFT onto Sesqui Drive Follow Sesqui Drive to Babcock Grove (on the right side)



The WASHRag

Wireless Association of South Hills, Inc. Ron Notarius W3WN, Editor 3395 Rosewood Drive Castle Shannon, PA 15234-2546



N3SH / WA3SH NP2SH/B www.n3sh.org www.washarc.org

