



# WASHRAG™

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AUGUST 2012

N3SH  
WA3SH  
NP2SH/B

Wireless Association of South Hills

## Thoughts on .955

The 146.955 Mt. Lebanon repeater was for many years a mainstay of the club. Then it was forced to relocate due to circumstances beyond our control

Since the 146.955 went down for an extended time a couple of years, pending relocation to it's present site, it's really never been the same in terms of usage.

The Club would like your help in determining why, and if possible, your ideas on what should be done to restore to it's former popularity and utility.

How about giving this subject some thought and bring your ideas to this Thursday's Club meeting or send me your thoughts via email.

Please include the following:

- How often do you use the repeater?
- Do you have trouble "making the repeater"?
- If so, what areas cause trouble?
- Have you gone to another machine such as 443.65?
- If so, where did you go?
- Do you think we need 146.955?
- Would it be a good use of Club funds to improve and/or relocate 146.955?
- Are there other areas not included above that you feel have contributed to the .955's fall from grace?

Thanks for your help.

— 73, Bill Hill W3WH  
For the Repeater Committee

**N3HKQ Update**  
See Page 3

### Next Meeting: August 9<sup>th</sup>, 2012

The next monthly meeting of the WIRELESS ASSOCIATION OF SOUTH HILLS, INC. will be on Thursday, August 9<sup>th</sup>, 2012, at the Crossroads Ministries Church, 68 Walter Long Road of f Route 88, Finleyville PA, starting at 7:00 PM.

Meeting topics will include the annual club picnic, the repeater situation, fox hunting Pa QSO 2012, and other plans for the summer & fall.

Talk-in on the 146.955(-) N3SH/R and 443.650(+) N3FB/R Repeaters (131.8 PL). All members, guests and interested parties invited!

### Carol's Comments

Please remember that next month's meeting will be on Sept. 16<sup>th</sup> at Harbor Grove in South Park. I will be sending out more info but I bet Ron will beat me to it. It will start at 2 with a short meeting. As usual food will follow. More info to come in a couple of weeks as to what we will need. The club will supply the dogs and burgers.



Buy the way Richie and I attended WACOM picnic and a nice time. I am sure ours will be just as nice.

There will be a half MTC Marathon in Robison on Sept. 8<sup>th</sup>. It will start at 8 AM and end at 11 AM. If any one can help with this contact Bill Orr at 412-915-7901 for instructions.

There are 2 Hamfest coming up, Skyview Aug. 26<sup>th</sup> and Butler Sept. 9<sup>th</sup>. I plan on attending both as I am sure some of you will.

Also it is not to early to get ready for Pa. QSO, Oct. 13<sup>th</sup> and 14<sup>th</sup>. I can't wait. We have some antenna problems at camp due to a tree falling bit we plan to remedy that I hope. This is my favorite contest!

It is not to early to talk about our Christmas Party. It will be here before you know it. If anyone has any suggestions please let me know.

Time is going to fast and if it is going to be some where else we need to make plans.

And with that I will remind everyone

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# "Seen" at the WASH July Meeting



Photos courtesy of and ©Copyright 2012 Ron Notarius W3WN



## WASH 2012 OFFICERS

### EXECUTIVE COMMITTEE:

President	Carol Danko KB3GMN
VP / Secretary	Glen Roberts KE7FD
VP / Treasurer	Mark Stabryla N3RDV

### AND WE COULDN'T DO IT WITHOUT:

N3SH / WA3SH Trustee	Steve Lane W3SRL
NP2SH Trustee	Paul Jordan NP2JF
N3SH / WA3SH / NP2SH QSL Manager	(vacant)
NP2SH 2009 QSL Manager	Carl Schroeder K9CS
VE Team Liaison	Bud Plants N3TIR
Webmaster	Randy George N3ZK
Asst. Webmaster	Sean Sleeman N3NWR
Quartermaster	Harold Rosenberger K3HCR
WASH FM Net Manager	Kevin Smith N3HKQ
WASHFest 2013 Committee	Kevin Smith N3HKQ, Chairman
Activities & Operating Events	Carol Danko KB3GMN, Co-Chair
Ways & Means	Bob Timmins AB3ED
Field Day 2012 Coordinators	Carol Danko KB3GMN
	Larry Comden K3VX
	Rick Bell KB3IAC

### CLUB-AFFILIATED REPEATERS, BEACONS, & DIGIPEATERS:

Mt. Lebanon	N3SH / R	146.955 MHz (-)	PL 131.8
Mt. Lebanon	W3SRL / 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 Sunday Night, 9:00 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)**

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The **WIRELESS ASSOCIATION OF SOUTH HILLS, INC.** was founded on August 23<sup>rd</sup>, 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 of both the N3SH-W3SRL Repeater System 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 September 12<sup>th</sup>

The Next WASH VE exam sessions will be **Wednesday, September 12<sup>th</sup>, 2012, 6:30 PM**, at the **North Strabane Township Building**, 1929 Route 519, Canonsburg, PA. Talk-in on the 146.955 MHz and 443.650 MHz repeaters. All examiners are ARRL VEC affiliated.

Walk-ins are always welcome, but if you plan on attending the test session, please contact VE Team Liason Bud Plants N3TIR:

Telephone (724) 350-6745 or E-Mail: [bud@n3tir.com](mailto:bud@n3tir.com)

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:

2013 tentative dates & location to be scheduled

Saturday, July 28<sup>th</sup> was another beautiful mid-summer morning, so once again it brought together **the WASH Breakfast Gang** at it's monthly gathering at **The Beach House** in Finleyville. This month's collection included KB3GMN, N3DFK, WB4GCS, N3FB, KB3GMU, W9UK, W3WN, N3HKQ & Peg, and KB3YCX & Marie. Breakfast topics included Tanger Outlets, relatives passing, replacing microwave transmitters, lightning strikes, copper thefts, Zoltan!, watching the Olympics, visiting PNC Park & Heinz Field, replacing coax, the SCARC Corn Roast, the upcoming WPRC meeting, anti-rejection drugs, software license keys, Comcast weather crawls during the Olympics, there is no Wexford, *Hogan's Heroes* reruns, FCC inspection files, warnings about alligators & water moccasins, leasing towers, the WA3TTS 6 meter repeater, and a great deal more.

The summer is almost over, and that leaves us one more get-together prior to Labor Day. So we hope to see you on Saturday, August 25<sup>th</sup> at **The Beach House**, Library Road, Finleyville, just south of Trax Farm. See you there!

**Kevin Smith N3HKQ** won't be at the August meeting, nor will he be around for awhile. The good news is that he's currently in the hospital. Why is that good news? Because a bone-marrow transplant match was found, and he is currently undergoing treatment. Kevin has to be in isolation immediately before and after the procedures, and then will be spending a lot of time near the hospital while he's undergoing additional treatments and monitoring.

Kevin is not going to be allowed visitors until further notice, but you can send him get-well cards at this address (Peg will make sure he gets everything!):

Kevin Smith, 2625 Hunter's Point Drive, Wexford PA 15090-7635

And please keep him in your thoughts and prayers.

**NP2SH/B**: The beacon transmitter & controller made a triumphant but brief appearance at the July meeting. It has since been sent on it's way to St. John's USVI. As soon as we know it's back on the air, we'll let you know!

**146.955**: As you probably saw on the front page, the club's Repeater committee needs your input. The new location has not worked out as well as all had hoped... but at the time, picking that location was Hobson's choice. Combined with the long downtime between relocation, and some needed repeater updates, the use of .955 has significantly dropped off. Of course, this isn't exactly news. The question is, what should be done about it?

And that's what Bill and the ad-hoc committee need to hear about. There are several options available to improve things. Some will cost money. Some will cost time and/or effort as well. Will these investments improve the system and bring club members back to using the machine? Is there something else that can be done? Or has the time for the machine passed? Give the matter some thought, then contact Bill or come to the meeting, and let's all hash it out.

**Pa QSO 2012** is only a few short weeks away, believe it or not. This has become one of the most fun fall events for many club members over the years. Single ops in the club have done well, and the friendly competitions between the club multi-op stations are a lot of fun.

Which team(s) will get a County Clean Sweep this year? Who'll bring home their County championship? Are we going to have any mobiles from the club this year? We'll be talking more about this at the next meeting & the picnic, so give some thought to operating, or joining up with one of the teams and join in the fun & excitement!

Speaking of contests, don't forget that with Ed N3ZNI leaving the area for good soon, we will need a new chair for the **WASH 2 Meter Simplex Contest** next January.

And we also need a **new QSL manager** for N3SH, WA3SH & NP2SH. Any volunteers? Give a buzz to Carol KB3GMN and let her know that you're interested.

On August 3<sup>rd</sup>, the FCC announced via a Final Rule in the Federal Register that the cost of an Amateur Radio vanity call sign will increase 80 cents, from to \$14.20 to \$15. The new fees take effect 30 days after publication, making September 4<sup>th</sup>, 2012, the first day the new fee is in effect.

## WASHNet 2012 NCS Schedule

01/01/2012	Dave N3DFK	07/08/2012	Carol KB3GMN
01/08/2012	Glen KE7FD	07/15/2012	Bob AB3ED
01/15/2012	Harold K3HCR	07/22/2012	Kevin N3HKQ
01/22/2012	Carol KB3GMN	07/29/2012	Dave N3IDH
01/29/2012	Bob AB3ED	08/05/2012	Sean N3NWR
02/05/2012	Kevin N3HKQ	08/12/2012	Dave N3DFK
02/12/2012	Dave N3IDH	08/19/2012	Glen KE7FD
02/19/2012	Sean N3NWR	08/26/2012	Harold K3HCR
02/26/2012	Dave N3DFK	09/02/2012	Carol KB3GMN
03/04/2012	Glen KE7FD	09/09/2012	Bob AB3ED
03/11/2012	Harold K3HCR	09/16/2012	Kevin N3HKQ
03/18/2012	Carol KB3GMN	09/23/2012	Dave N3IDH
03/25/2012	Bob AB3ED	09/30/2012	Sean N3NWR
04/01/2012	Dave N3DFK	10/07/2012	Dave N3DFK
04/08/2012	Glen KE7FD	10/14/2012	Glen KE7FD
04/15/2012	Harold K3HCR	10/21/2012	Harold K3HCR
04/22/2012	Dave N3DFK	10/28/2012	Carol KB3GMN
04/29/2012	Glen KE7FD	11/04/2012	Bob AB3ED
05/06/2012	Harold K3HCR	11/11/2012	Kevin N3HKQ
05/13/2012	Carol KB3GMN	11/18/2012	Dave N3IDH
05/20/2012	Bob AB3ED	11/25/2012	Sean N3NWR
05/27/2012	Kevin N3HKQ	12/02/2012	Dave N3DFK
06/03/2012	Dave N3IDH	12/09/2012	Glen KE7FD
06/10/2012	Sean N3NWR	12/16/2012	Harold K3HCR
06/17/2012	Dave N3DFK	12/23/2012	Carol KB3GMN
06/24/2012	Glen KE7FD	12/30/2012	Bob AB3ED
07/01/2012	Harold K3HCR	01/06/2013	Kevin N3HKQ

On Summer Hiatus

**Join WASH or Renew your Membership for 2012 Today! Membership Application on Page 11!**

## Minutes, July 12<sup>th</sup> Meeting

Glen Roberts KE7FD, VP/Secretary, **WASH**

Carol KB3GMN called the meeting to order at 19:08 hours. There were 16 members and guests in attendance.

The Pledge of Allegiance was recited by all, followed by introductions.

A moment of silence was observed for recent silent keys and other deserving persons.

A motion was made by Ben KB3ERQ to waive reading of the June minutes as published in the newsletter. Seconded by Larry K3VX and carried unanimously.

### Committee reports:

Treasurer (N3RDV): A balance on the bank account was read & accepted.

Secretary (KE7FD): No report.

VE Report (N3ZEL): Next VE session to be held on July 25<sup>th</sup> at the North Strabane Municipal Building. Bud N3TIR will be running the session.

Repeaters (N3FB): Bill W3WH spoke on the .955 repeater & how to make it more reliable. Frank N3FB says that all we need to do is use remote receivers. Larry K3VX can locate one at his QTH.

Net Report (N3HKQ): On summer hiatus

Contests (K3VX): Field Day:

- 2012 Pa QSO Party coming up.
- Field Day reports have been turned in. Do we want to change our future designation to 3A?
- Discussion on Special Event stations as a launching pad for future Field Day operations.
- Future FD locations to consider: Pa Trolley Museum, Mineral Beach.
- Carol KB3GMN: Had a nice time at FD, but feels that we could have had more participation.

Public Service (N3IDH): Pittsburgh Vintage Grand Prix weekend in Schenley Park upcoming on the 21<sup>st</sup> of the month.

Ways and Means: 50/50 tonight, with a bonus drawing.

Newsletter (W3WN): Published. Lots of pictures from Field Day.

President's Report (KB3GMN): Went to the Somerset hamfest, had a nice time.

Old Business: Trailer storage still in the plans

New Business:

- Carol is looking for prize ideas for **WASHFest 2013**, please email her
- Club picnic coming up in September.
- AB3ED is doing better.
- N3BSQ reports that the NP2SH/B Beacon is done & ready to be deployed to the USVI. He brought the rebuilt units to display for everyone. (Thanks Mike!)
- Mark N3RDV requests that all new/renewal applications in 2013 include a membership app.

Blood drive for Kevin N3HKQ on May 26<sup>th</sup>.

Good of the order:

- W3WH: Very disappointed in the level of participation at FD 2012, but perhaps the OT's need to share their enthusiasm more.
- K3VX: QST reports about the 2011 SEC, 2012 SEC coming soon.
- The ARRL is offering EMCOM training.
- WB4GCS suggested that **WASH** members need to do training for on directed nets, in & out of an emergency, and how to contest.

Motion to Adjourn by Bill W3WH, second by Jan KB3IVX and carried.

Meeting adjourned at 20:01 hours.

## Carol continued from page 1

that elections are coming up before you know it.

See you at the picnic.

— 73. Carol Danko KB3GMN  
President, Wireless Association of South Hills  
N3SH / WA3SH / NP2SH

## WASH Spotlight: NP2SH/B



Mike N3BSQ brought the rebuilt NP2SH/B beacon transmitter & controller to the July meeting. It's now been shipped to its permanent home in the USVI.

Photo courtesy of and ©Copyright 2012 Ron Notarius W3WN

Every month we're going to feature a **WASH** club member, something about them, something they're involved in or a club-related activity that we're involved in, in the **WASH Spotlight**. Submissions for the Spotlight should be sent to Ron W3WN at [newsletter at n3sh dot org](mailto:newsletter@n3sh.org)

## Monthly WASH Breakfast

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 **The Beach House**, on Route 88 in Finleyville, just south of Trax Farms and adjacent to Mineral Beach. Start time is about 8 AM until ????? Monitor 146.955 & 443.650 for talk-in or any last minute changes.

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

## Wireless Association of South Hills Membership

AB3ED	KC4WTT	N3UE	WASH FL	WASH VI	<b>Silent Keys</b>
AB3EN	KE7FD	N3YJJ	KA3UPY/M	NP2JF	
AB3KA	KJ3D	N3ZK	W4ZE		K3EED
AC4KU	N2QIV	N3ZNI	WASH GA		K3LIE
AE3DL	N3AWF	W3LE	K3OL		KA3NMG
K3HCR	N3CZZ	W3RWS	KB3JX		KB3ENX
K3SGT	N3DFK	W3VFA	WASH NE		KB3FNM
K3VX	N3FB	W3WH	NØPEU		KB3FQT
KØLIN	N3FPF	W3WN	WASH OH		N3FZ
KA3TWI	N3HKQ	WA3BOJ	N8DPW		N3KEH
KB3DCO	N3IDH	WA4ONC	WASH SC		N3OBD
KB3ERQ	N3KFD	WB4GCS	N3RNX		N3SKR
KB3GMN	N3NWR	WO3Z	WASH TN		N3SRC
KB3GMP	N3OVO	Darryn	KE3XB		N3ZEL
KB3GMU	N3RDV	Sleeman	N3YPB		N3XFE
KB3IAC	N3RHT		WASH TX		W3ZLK
KB3IVX	N3SBF		K3LGM		WA3JPP
KB3MHM	N3TIR		Jane Wagner		
KB3SPD					
KB3SPE					
KB3SRC					
KB3TOA					
KB3WRO					
KB3YCX					

Through July 19<sup>TH</sup>, 2012

List compiled by

Mark Stabryla N3RDV, Vice President/Treasurer

# 2012 WASH Upcoming Events Calendar

Meeting Topics & Other Significant Club Events — Subject to Change

August 9 <sup>th</sup>	WASH Meeting	@ Crossroad Ministries Church
August 26 <sup>th</sup>	Skyview RS Hamfest	<a href="http://www.skyviewradio.net">http://www.skyviewradio.net</a>
September 8 <sup>th</sup> -10 <sup>th</sup>	ARRL VHF Contest	<a href="http://www.arrl.org">http://www.arrl.org</a>
September 9 <sup>th</sup>	BCARA Butler SwapFest	<a href="#">Unionville Fire Department, Butler PA</a>
September 13 <sup>th</sup>	WASH Meeting	@ Crossroad Ministries Church
October 13 <sup>th</sup>	WASH Meeting	@ Crossroad Ministries Church
October 6 <sup>th</sup> & 7 <sup>th</sup>	California QSO Party	<a href="http://www.cqp.org/Rules.html">http://www.cqp.org/Rules.html</a>
October 13 <sup>th</sup> & 14 <sup>th</sup>	Pennsylvania QSO Party	<a href="http://www.nittany-arc.net/PAQSO.html">http://www.nittany-arc.net/PAQSO.html</a>
October 15 <sup>th</sup> & 19 <sup>th</sup>	ARRL School Roundup	<a href="http://www.arrl.org">http://www.arrl.org</a>
October 27 <sup>th</sup> & 28 <sup>th</sup>	CQ World Wide DX Contest SSB	<a href="http://www.cqww.com/">http://www.cqww.com/</a>
November 3 <sup>rd</sup> & 4 <sup>th</sup>	ARRL Sweepstakes CW	<a href="http://www.arrl.org">http://www.arrl.org</a>
November 4 <sup>th</sup>	WACOM Hamfest	<a href="http://www.wacomarc.org/hamfest.html">http://www.wacomarc.org/hamfest.html</a>
November 8 <sup>th</sup>	WASH Meeting	@ Crossroad Ministries Church
November 17 <sup>th</sup> & 18 <sup>th</sup>	ARRL Sweepstakes SSB	<a href="http://www.arrl.org">http://www.arrl.org</a>
November 24 <sup>th</sup> & 25 <sup>th</sup>	CQ World Wide DX Contest CW	<a href="http://www.cqww.com/">http://www.cqww.com/</a>
Nov 30 <sup>th</sup> —Dec 2 <sup>nd</sup>	ARRL 160 Meter Contest	<a href="http://www.arrl.org">http://www.arrl.org</a>
December 8 <sup>th</sup> & 9 <sup>th</sup>	ARRL 10 Meter Contest	<a href="http://www.arrl.org">http://www.arrl.org</a>
December 16 <sup>th</sup>	ARRL Rookie Roundup CW	<a href="http://www.arrl.org">http://www.arrl.org</a>

FCC Amateur Radio Licensing Trends - information compiled by Jim Miccolis N2EY

License Class	May 14, 2000		February 22, 2007		August 21, 2010		July 31, 2012	
Novice	49,329	7.31%	22,896	3.50%	16,134	2.32%	14,022	1.99%
Technician	205,394	30.44%	293,508	44.83%	341,643	49.22%	343,582	48.67%
Tech Plus	128,860	19.10%	30,818	4.71%	0	0.00%	0	0.00%
General	112,677	16.70%	130,138	19.88%	154,598	22.27%	161,772	22.92%
Advanced	99,782	14.79%	69,050	10.55%	59,867	8.62%	56,841	8.05%
Extra	78,750	11.67%	108,270	16.54%	121,879	17.56%	129,655	18.37%
<b>Total</b>	674,792		654,680		694,121		705,872	

## A \$5 Swap Meet Find

I got up at 2:30 AM to make it to the Chino Hills CA Swap Meet in (imagine that!) Chino Hills (up near Chino, or Riverside). I arrived well before dawn and scored a Heathkit HM-102 wattmeter the President of our Radio club had asked me to look for him. But not much for myself yet. Slowly, sellers began to appear, each swarmed on like Piranhas on a carcass. Most could barely get their trunk or tailgate open before the RAVENOUS buyers started throwing money at them! And so along came this pickup truck which I hightailed it over to. I was too late for the deal of the day. A NICE Kenwood TS-570D went for \$250! Not that I needed one of those, but \$250?!!!! Someone got a DEAL!!!

I spied a Kenwood MC-60 Mic which I dove into the pickup bed to seize. I had to wrestle my way for it, much like a live fumbled football in the Superbowl! But I had both hands on it and prevailed, much to the anger of fellow buyers. The seller wanted \$60 for it, not too great a deal, but I held on to it. A Kenwood speaker went for \$40. I guess i didn't need that too bad. Just one that matches the TS-430S. I would have liked to pay \$20 for it. As bits of debris were uncovered, I spied a mobile rig which I DIVED FOR! The RBs around me wanted it too, but I held onto the Kenwood mic and successfully came up with a Kenwood TM-733A, a very nice and fairly recent Dual Band rig. The seller noted it DIDN'T WORK and wanted \$5 for it. That was SURE fine with me. It was missing one knob and no mic. OK, that was enough squandering. But on the way out, I nailed an original Bird wattmeter case (that holds 6 slugs) for \$10. Time to head back to San Diego! And it wasn't even 7 AM yet!!!

The swapmeet box ALSO held a 1919 Popular Mechanics issue and an ARRL power amp using 2 MRF475s for an unknown band. Marked A&A 492-115-A. The Low Pass filter on the output looks to be around 40 or 75 meters. Blown? Who knows, but for a DOLLAR!

Since I arrived back to San Diego before 9 AM, I was able to stop at work and plug the TM-733A in. I was delighted to see the display light up, but no sound or actions were heard from the rest of the radio. I would investigate it after Church tomorrow...

SUNDAY, after Church, I downloaded the service manual and went after the rig. There was plenty of RUST and the rig probably was underwater for awhile. (Photo 1, Top)

But it was dry now. I found a SMT fuse at the input was blown, a 1.8A device. I replaced that with a 1.85A PTC resettable fuse that was in the stockroom. Now the radio showed some life.

For some reason, the 450 side was always in transmit, so I removed the Power Amp module and tacked the 2M side. Sure enough, it worked great on 2M, as much as I could test it without a mic. I will try and score one of those on EBAY. But repeated attempts to find what was messed up on the 450 side were fruitless. Kenwood did a great job of making it impossible to trace around the PTT circuit. And, all the associated parts are on the UNDERSIDE of the PCB, impossible to get at powered up.

I left the 450 module out and removed the 450 RF cable. OK, now it is a 2M radio!!! (Photo 2, Center)

I printed out the schematics and will study them in my free time to see if I can figure out what and where is messed up on 450. OH yes, the radio draws 500 mA when turned off, so there is still lots of cooked components somewhere, but water damage can do that kind of thing. Especially when it is powered up at the time.

So here is my \$5 2 meter rig! Would be GREAT for monitoring 146.52 or APRS!

(I can use the 450 module to fix another broke radio I have!)

Pat Bunsold WA6MHZ



Last night I am tuning around on 20 Meters and I heard a station in Qatar, which would be a new one for me. With 100w and a vertical in VA, I settled in for what I thought would be a long wait.

I rarely use VOX and typically use a footswitch. I decided to switch VOX on and after the current contact ended and the DX called QRZ, I threw my callsign into the mix. I got through on my 1st call and after a quick contact, and forgetting that VOX was on, I said out loud, to myself, and the world, "and that is how you do it, woohoo".

Someone was kind of enough to respond with "thanks for the lesson".

Whoops.

— Zach Zinman-Hillerson N4ERZ



### DXCC-EAST CONVENTION BY NCDXA

Saturday, August 25, 2012

8:15 AM to 9:00 PM

Registration: [www.DXCCEAST.com](http://www.DXCCEAST.com)

Raffle Drawing Prize: IC-7000HF Transceiver

Vendor Prizes: Numerous other prizes from Vendors

#### Location:

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FORM NCDXA-2012 Rev. A

Mars Science Laboratory, Curiosity Rover vehicle tires have tread patterns that imprint the acronym JPL in Morse Code in the dusty soil of the Mars surface. The wheel tread pattern is made by square and rectangular holes in the wheels. When in motion riding around the sandy Gale Crater, this pattern is viewed by the driver using some of the 17 cameras aboard this interplanetary SUV. It takes about 14 minutes for radio waves to travel from the red planet to earth, through the Mars Odyssey orbiter relay satellite using UHF. Since there is a more than a 30 minute round trip delay between the driving commands and finding out the result of the measured moves, there is a need for the earth-bound drivers to maintain visual orientation and checks of distance traveled... this can be gauged by incremental count of the tread pattern repeats.

# A Propagation Primer

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## Part 1: Beyond the Numbers

Many new hams...or at least hams new to H.F. are mystified or intimidated by solar forecasts. Although solar numbers are important, they fail to take into account local variables....most importantly local MAGNETIC variables. In fact, most propagation software totally ignores the Earth's magnetic field, which only leads to the confusion.

The Earth's magnetic field does two major things, which cannot be ignored. Solar numbers do nothing to address these issues.

- 1) Magnetic fields create non-reciprocal propagation paths.
- 2) Magnetic fields invalidate the great circle "path of least resistance."

At moderate latitudes, these factors are often not noticed....at high latitudes they become all-important factors in H.F. Propagation.

Forgot to mention. The magnetic field not only makes the Absorption non-reciprocal, but it also makes the azimuth skewing (departure from Great Circle direction) non-reciprocal! It can get pretty radical up here!

## Part 2: The geometry of propagation

The surface of the Earth is much, much closer to the upper reaches of the ionosphere than it is to the center of the Earth. Although this may seem obvious, it's easy to forget when calculating how many skips it takes to get from point A to point B. To get a realistic perspective of this, imagine a large orange. If the inside of the peel is the surface of the earth, the outside of the peel is the outer limits of the usable ionosphere.

This means that the maximum distance you can get with a single skip, assuming you launch a truly horizontal (zero angle) signal is about 3000 kilometers. This is the maximum skip distance presented on any Digisonde.

If we ignore magnetic effects, ionospheric propagation is like bouncing a ball down a hall with a very low ceiling.; For all practical purposes, we can consider the "ceiling" as being horizontal, with little consideration for the curvature of the earth.

With this grossly over-simplified model, skip distance is a direct function of the height of the ionosphere at the midpoint and the launch angle. Of course, launch angle is a bit difficult to define, since we aren't launching laser beams, we're launching beams with very wide lobes. As an expedient, we can consider the launch angle as being the MAXIMUM power angle of any particular radiation pattern.

The "height" of the ionosphere is equally "rubbery" since the reflection does not take place suddenly at one altitude, but is a slow process, taking place over many wavelengths of propagation. A highly derived figure known as "virtual height" is an attempt to arrive at a usable reflection height.

## Part 3: Why frequency dispersion works

If you were ask a fairly scientifically savvy person what property makes a prism work, he'd probably say, "Refraction." Well, that's not really correct. Refraction is the ability of a material to BEND light rays. However, the DIFFERENT angle of bending for different wavelengths is not refraction per se, but rather DISPERSION. A color corrected telescope lens, for instance, intentionally removes the dispersion while retaining the refractive properties that make the lens work in the first place.

Actually, it's a peculiar property of glass that causes dispersion....it's NOT an inherent property of the refractive index of a given material.

The ionosphere, likewise is both refractive AND dispersive. But even beyond that, the magnetic field of the Earth causes the ionosphere to be BIREFRINGENT....that means it has a DIFFERENT refractive index depending on which way a radio wave is traveling through it...whether the radio wave is parallel to or perpendicular to the magnetic field! As you can see, this can get pretty complicated pretty fast!

The actual frequency DISPERSION of the ionosphere is caused by the fact that the ions are very sluggish...the amount of "wobble" they undergo in response to a radio wave is inversely proportional to the frequency....while the electron acceleration is relatively independent....they respond nearly instantaneously.

This is why Sporadic E reflections are nearly frequency independent over a very wide range of H.F. They consist almost entirely of free electrons, while the F layer is a soup of ions and electrons.

The technical specification for **NXDN™**, a FDMA digital voice technology supported by ICOM and Kenwood, is being opened to the public domain.

For the past 5 years both ICOM and Kenwood have been producing VHF/UHF mobiles, handhelds and repeaters to the NXDN™ standard. The equipment has a transmitted bandwidth of 4.0 kHz and is typically used in 6.25 kHz channel spacing systems.

The specification is currently available in response to an email request but the NXDN™ Forum indicates it will be available for direct download later in the year.

The NXDN™ press release reads:

*The Chair of the NXDN™ Forum announced that the Forum Steering Committee will open the NXDN technical standards to the industry public.*

*Interested companies can obtain the information for the NXDN technical standards by following the instructions on the NXDN Forum web site <http://www.nxdn-forum.com/instructions/>*

*NXDN Digital products are deployed throughout the world in hundreds of thousands of professional radio applications. As NXDN's popularity continues to grow it will easily become the primary next generation narrowband two-way radio digital protocol and increase demand in the market for products from multiple vendors. To accelerate the spread of NXDN and to expand on the opportunities it provides, the NXDN Steering Committee has agreed to open the technical specification to the public domain.*

*The NXDN Forum will continue to accept new members after opening the technical specifications and will govern the NXDN specification and related interoperability testing and certification.*

*NXDN™ Forum: <http://www.nxdn-forum.com/>*

# The Mystery of KH5K

KY6R [The DXCC Sleuth](#)

The last time Kingman Reef was activated was the last week of October 2000, with Garry Shapiro NI6T and Tom Harrell N4XP as co-coordinators.

As of this writing, Kingman Reef shows up on the 2011 DX Publishing Top 100 Needed list as #18, and on the July 2012 Clublog Top 100 as #8. It is obvious that the K5K Team did a really fantastic job – because 12 years is a long time without another activation, and that it isn't higher in need on the list. It had been activated before – in 1974, 1977, 1980, 1981, 1988 and 1993. Garry, NI6T reports that there were also several one man activations, including Chuck Brady, N4BQW (SK) in February, 1998 and May, 2000.

I had heard about this DX-pedition while studying this very fine paper by Kenny, K2KW as part of Team Vertical: <http://www.k2kw.com/k5k/dxcomp.htm>

I missed this most recent activation because I had been an inactive ham from 1977 – 2001 and didn't get seriously into DX-ing until sometime late in 2001. So, needing this entity, and it seeming like it was "close" to Hawaii I started asking why it hadn't been activated for so long. The first answers I got from "those in the know" did not add up – and seemed more like conjecture and rumor than fact. I heard these rumors:

1. It is going to be deleted from the ARRL's DXCC List because its status has changed and it no longer meets the criteria that grandfathered it on the list in the first place
  2. It might be under water
  3. The US Fish and Wildlife's stringent requirements add too much cost to the trip
  4. Getting there is nearly impossible – or at least prohibitively expensive
- Number 3 and 4 are correct, but when I checked with the ARRL, they said they know of no plans to delete Kingman Reef off the list. That rumor probably got started because when it was added to the list, it was under the jurisdiction of the US Navy, and that the jurisdiction change is clearly posted on several web sites. But as is always the case regarding the internet – not all of the facts are presented in one place.

By today's DXCC Rules (and they have changed many times over the years) – Kingman Reef is too close to Palmyra to be a valid DXCC. The status sure seemed to change in September, 2000 – one month before the K5K landed:

<http://www.fws.gov/kingmanreef/> "On September 1, 2000, the Department of the Interior accepted restoration of its administrative jurisdiction over Kingman Reef from the Department of the Navy; Secretary's Order 3223 signed January 18, 2001, established Kingman Reef National Wildlife Refuge."

Lucky for the K5K Team – it was still safe and sound on the DXCC list when they landed – and it still is today. But I wondered "why this paradox – why isn't it deleted today?"

I did some sleuthing and found out that while the K5K Team was on their way to Kingman Reef, the Navy ordered that they not land. Garry, NI6T has graciously supplied the details, which are documented in the QST Article (August 2001, pp47-52). This article won NI6T and N4XP the QST Cover Plaque Award:

Page 48: "Dave Johnson, WB4JTT, an attorney, would prove invaluable in dealing with the Navy, as well as taking charge of our generators." Dave was an active team member.

Page 50: "Meanwhile Dave, WB4JTT, negotiated landing permission for Kingman with the Navy at Pearl Harbor."

Page 50: "Then, a day after Machias' departure from Honolulu, the Navy informed WB4JTT that our landing permission for Kingman Reef had been rescinded!

"Undaunted, Dave hurried to Pearl Harbor to renegotiate with the Navy, which had unresolved concerns about its liability in the event that something went awry on the reef. Dave's calm assurances that we accepted responsibility for our actions and the serendipitous fact that—at N4XP's insistence—we had all purchased travel insurance, won the day, and Dave emerged with a new landing permit."

As it turns out, even today – you need permission from both the US Navy and the US F&W, and that's why we are seeing permission granted to very sensitive entities like ZL9 – Auckland / Campbell, but not Kingman Reef. Sadly, there are a number of entities like this in the Pacific, all of them US Possessions, and all becoming difficult to activate – but not any more difficult than what the K5K Team had to go through! There is more to the "back story" regarding Kingman Reef access. Garry, NI6T reports:

Before WWII, the Fullard-Leo family of Honolulu owned nearly

Continued  
on page 11

## DX News Briefs

**VK9C/VK3BF** is QRV **now** from Cocos-Keeling Island. There was no prior notice of the operation, and the length of stay is unknown. It may be a week, it may be more. QSL via VK3BF — VK2DX



On August 3<sup>rd</sup>, the ITU updated its Table of International Call Sign Series to reflect a **call sign change for Niue**. The island will now have the entire **E6** prefix block. Niue — an island approximately 1700 miles northeast of New Zealand — is a self-governing island nation that has been in free association with New Zealand since 1974. Prior to the change, the island used **ZK2** — ARRL WebExtra

The Araucaria DX Group & the TX3A Team, has announced a DXpedition to **St. Peter and St. Paul Rocks, PYØS**, under the call sign **PTØS**, ~10—22 November (depending on weather conditions). There has been an official ban on Amateur Radio activities from PYØS, for environmental and safety reasons. The Araucaria DX Group was given a special permit by Brazil's SECIRM (Secretaria da Comissao Interministerial para Os Recursos do Mar), the Brazilian Navy, Ministry of Environment and LABRE to conduct a two week long operation. More information at <http://pt0s.com/>. QSL via HA7RY — Araucaria DX Group

I2YSB has announced on his web site that there "Italian DXpedition Team" will be QRV as **TT8TT** in October 2012. As of deadline, information on the trips was incomplete. More information at <http://www.i2ysb.com/joomla5/i>. QSL via I2YSB — I2YSB

DJ7RJ will be QRV as **FR/DJ7RJ** on AF-016 Reunion Island 26 September - 21 October 2012. QSL via DJ7RJ — DJ7RJ

Several Indian amateurs will be QRV as **VU7M** AS-106 Lakshadweep, 13—22 August. QSL via VU2JHM — DX World

AB7FS is presently QRV as **E51AND** from OC-014 through 25 August. QSL via AB7FS — NG3K

OH3WS is also presently now QRV from Market Reef EU-002 as **OJØW**. through 10 August. QSL via OH3WS — OH3WS

K9HZ is now QRV as **J68HZ**, 40 - 6 M, CW & SSB with a focus on RTTY, through 19 August. QSL via K9HZ — VA3RJ

**9H3EA** is a holiday-style op by IKØPEA through 17 August. QSL via IKØPEA — IKØLNN

**9M4SLL** from AS-051 Pulau Layang Layang in the Spratly Islands is expected 7 - 13 August , 80 - 10 CW SSB & RTTY. QSL via MØURX & OQRS — 9M6XRO

**FP/VE2XB** will be QRV 10 - 20 August, 160 - 6 meters, SSB & CW. QSL via VE2XB — VE2XB

## QSL Routes

3DAØFC via ON4CJK — JA1HGY	HKØNA via N2OO — LU2DKN
5R8UI via IZ8CCW — W2JU	J79XB via VE2XB — KG4W
5TØSP via SP6IXF — SP6IXF	OHØE via OH2MM — KQ3F
5WØDP via KT8X — TA3J	OM7M via OM3PA — W5TFW
8P9NX via W3HNC — KG4W	PZ5T via VE3DZ — JA1HGY
9LØW via DK2WV — JA1HGY	R1ØØWWS via RV3YR — RV3YR
9QØHQ/7 via UV5EVJ — WC6DX	R1ANF via RK1PWA — VE3EXY
A35JC via KIØSO — WO2N	TX1B via LZ1JZ — KG4W
A35YZ via DL7UFR — W4DN	T2T via VK4FW — PY2YP
A5A via JH1AJT — JA1HGY	TX8CW via ZLL3CW — JA1HGY
A52JY via JA1JQY — JA1HGY	UE95K via RV3YR — RV3YR
A52KJ via JA1KJW — JA1HGY	V31IZ via JO1CRA — JA1HGY
AH8A via AC7DX — KG4W	V44KAI via W5TFW — W5TFW
E51M via DJ8NK — JA1HGY	VP9I via N1HRA — VP9I
ED1R via EC1KR — KQ3F	XU7FMZ via JA3AVO — TA3J
FK8CE via LZ1JZ — KG4W	XX9E via EB7DX — MMØBQN
FK8DD via LZ1JZ — KG4W	YI9EO via N4EO — AA5AM
FP/NM7N via VE7YL — KG4W	YJØVK via VK2CA — JA1HGY
GQ7VJR via MØOXO — JA1HGY	ZA1G via ZA1FD — KG4W
GR1ØØMGY via G3SXW — G3SXW	ZA1QA via HAØDU — KG4W

Thanks to the NJDXA DX News & DX Chat Reflectors, the DX-QSL Reflector, 425 DX News, OPDX News, Diamond DX Club News, ICPO Bulletin, & ARRL DX Bulletin for our DX News information. Thanks also to Bill Moore NC1L / ARRL DXCC Desk, & Bernie McCleeny W3UR / The Daily DX for confirmations & additional information.





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### KH5K Continued from page 10

all of Palmyra Atoll as well as Kingman Reef. The Navy appropriated both Palmyra and Kingman by Executive Order in 1938 and had not willingly restored them to

the Fullard-Leos post-war, leading to a noted court case won by the family—mostly. They got back Palmyra, but Kingman's status was unresolved. They were in the process of selling Palmyra to The Nature Conservancy (TNC) during our planning, and TNC was actively showing the atoll to potential major contributors. The deal was closed shortly after our expedition concluded.

We decided to obtain landing permission for Kingman from both the Navy and the family, to avoid any permissions issues with ARRL.

As you can see, it is a complicated story. And, yes, due to revoked landing permission and losing our team doctor (N4BQW), there was definitely some pressure felt by the leaders. We did persevere, however.

Oh – and to see if it is under water, I turned to Flickr and found photographs as recent as April 2012, and photos of the reef taken just about every year going back. This means that people are landing, and one was a NOAA scientific expedition. So – I would suggest that if anyone really wants to activate Kingman Reef, I might suggest teaming up with a scientific mission or

a diving mission there. I can tell that people in sailboats land there and dive there often – but I have no idea if they have legal landing permits or not.

Finally, Ann, WA1S provided some very interesting first person perspective on the K5K operation, and what it was like to actually be on that "shell spit:

"It's not impossible to get there it just takes the right person to handle the legal part. If not done correctly it can spoil it for future DXpeditions. Time & patience is what I've been told. When a DXpedition happens on these islands the natural wildlife can not be disturbed and the island must be left as if we were never there.

Kingman Reef I remember at high tide was measured at about 600 feet long and 55 feet wide at its widest point. There is nothing there except for coral. At the time I was told the reef was shrinking and would eventually disappear into the Pacific. When walking around it sounded like you are walking on a bunch of sea shells. There is no sand. I do remember these bugs what I called "biting crickets". They would get into your sleeping bag at night and bite you. The only way to avoid them was to take the cot & move it outside of the tent & pray for no rain. For some reason the wind was strong enough to keep them away. Yes it did rain.

Kingman is expensive to get to. One can only get there by boat. The surrounding reef is full of spiny sea urchins (red and black) so you have to clear a path for a zodiac to pass using a shovel. One of the guys just barely touched one of the spines with his finger and OUCH!! I never did get to do any diving there although I would have loved to.

I had heard some scuttlebutt about a year ago that there were others trying to go to Kingman but nothing recently. I know that Navassa is even more sought after than Kingman and since I am not involved in dealing with the US Fish and Wildlife I am just patently waiting in the sidelines hoping something will happen."

So the "Kingman Reef Mystery" is solved. It remains on the list – and it is possible to activate. It is no more difficult than other difficult places to activate – you just have to be creative and have the right legal counsel and connections.

## FCC News

ARRL Web Extra courtesy of the American Radio Relay League

Newington, CT, July 31<sup>st</sup>, 2012 — Saying that it believes that the Amateur Service "allows flexibility to provide emergency communications in a way that takes into account channel availability and other local conditions," the FCC [denied a Petition for Rulemaking](#) to create a nationwide emergency calling frequency. The [Petition](#) — filed by Bryan Boyle, WBØYLE, of Morrisville, Pennsylvania, and Jim Dixon, WB6NIL, of Alhambra, California — called upon the FCC to designate 146.550 MHz as a "non-exclusive nationwide Amateur Radio Service emergency communications channel using FM wideband modulation."



Doyle and Dixon noted in their Petition that other services, such as the Citizens Band Radio Service, the Aviation Service and the Maritime Service have specific channels set aside for emergency communications. They claimed that use of these channels "to good effect by those in distress [and that this] is a testament to the need for individual services to have a readily accessible and publicized" emergency communications channel. In denying the Petition, the FCC said in part that Boyle and Dixon "had not shown an existing problem that would be addressed by a rule change designating a nationwide Amateur Service emergency calling frequency."

The FCC told Boyle and Dixon that the rules of the Amateur Radio Service allow "an amateur station to transmit one-way messages necessary to providing emergency communications," maintaining that these messages may "be transmitted on any frequency authorized [by] the control operator of the amateur stations transmitting the messages. Additionally, the rules require that, at all times and on all frequencies, each control operator must give priority to stations providing emergency communications. Administration of these rules is accomplished primarily through voluntary frequency planning by, and cooperation among, Amateur Radio operators."

Pointing out that the its Wireless Telecommunications Bureau had previously considered establishing a nationwide common calling or distress channel "in a service where transmission of such communications is permitted but not required...and the channels are shared by all users," the FCC said that it had concluded that "it was not necessary to designate a Family Service Radio (FRS) channel for establishing emergency communications because emergency communications have a priority on all FRS channels and the record did not demonstrate that FRS users were having any difficulty establishing communications."

The FCC observed that under the current rules of the Amateur Radio Service, operators can use "multiple channels on the same or different amateur band if needed for an event, or use multiple channels in the same band when multiple, but different events occur." It also mentioned that the Boyle and Dixon's proposal "that the channel be a 'non-exclusive nationwide' channel is, substantively, no different from current channel priorities because all Amateur Service channels are shared and may be used for providing emergency communications. If such a 'non-exclusive nationwide' channel is needed, nothing in our rules prevents the amateur community from voluntarily agreeing to designate a channel for this purpose. We conclude, therefore, that you have not shown an existing problem that would be addressed by a rule change designating a nationwide Amateur Service emergency calling frequency."

**Has Roadway found the tower yet?**

# "Seen" at the 2012 PVGP

Photos courtesy of & ©Copyright 2012 Ron Notarius W3WN





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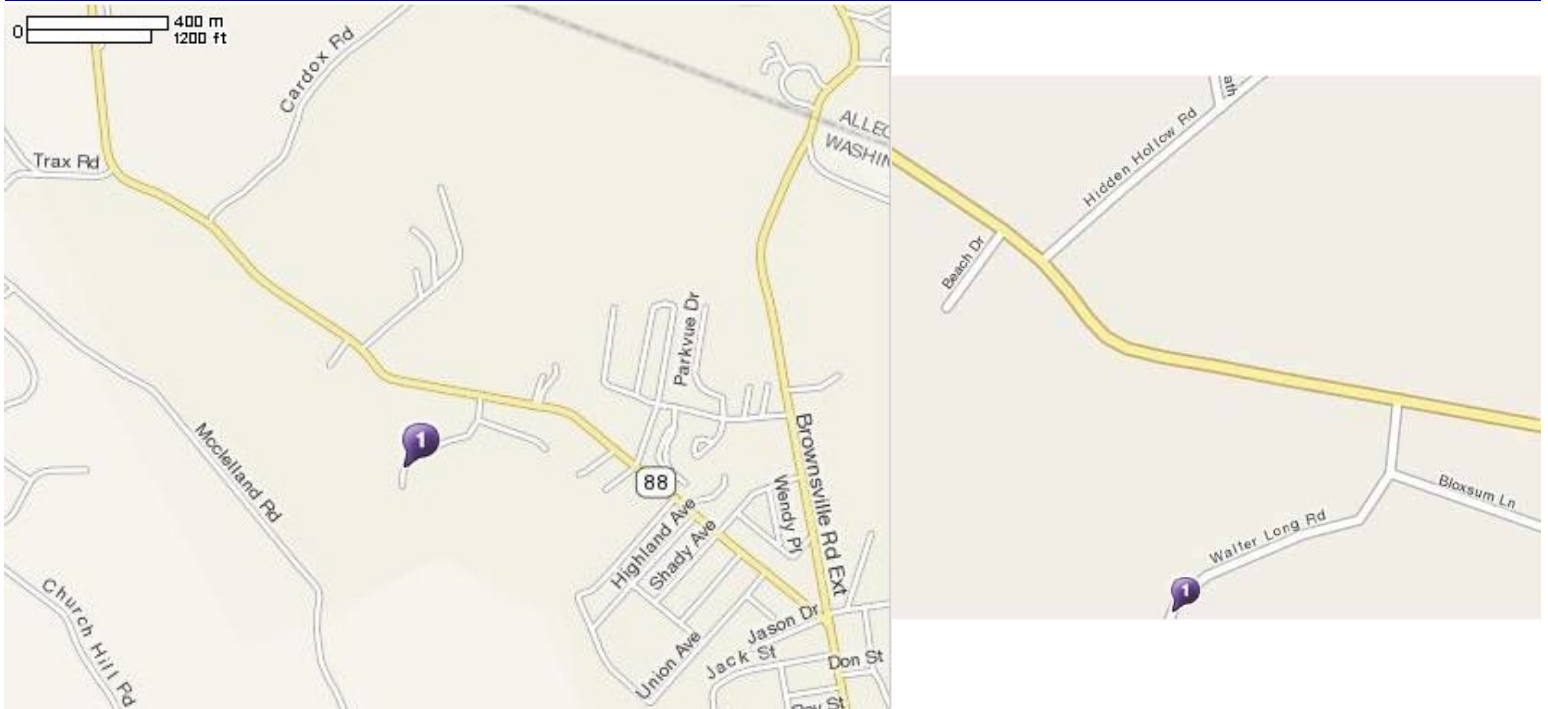
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# *Directions to Crossroads Ministries Church*



Take Library Road / State Route 88 to Walter Long Road (just past Mineral Beach & The Beach House), North of Finleyville. Turn onto Walter Long Road, follow it back to the church (which should be visible from the road).

## The *WASH*Rag

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