



PROPAGATOR

The Monthly Newsletter of the South Orange Amateur Radio Association

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General Meeting
October 16,
2017
7:00 PM

NP Murray Center
 Veterans Way
 Mission Viejo

The DX Engineering Story



Please join us at the Norman P. Murray Center in Mission Viejo, CA on Monday, 10/16 at 7:00 pm for our General Meeting.

This Month's meeting speaker (via Skype) is **Bob Naumann, W5OV**, and he will be presenting the DX Engineering story.

Bob is DX Engineering's Sales Manager. He is responsible for all sales activities and manages the sales and tech support team. Bob has been licensed since 1973. He is well-known in the world-wide contest and DXing communities through many on-air activities. Bob operates from both domestic and DX locations including K3LR and K8AZ. He is an active DXer (DXCC Honor Roll). In addition to contesting & DXing on SSB, CW, and RTTY, he also enjoys VHF weak signal work and HF digital modes. Bob was a member of the CQ Contest Committee for over 20 years. Bob is a life member of ARRL and is also a member of both the Radio Club of America, and the Quarter Century Wireless Association.

and dry weather, a key factor contributing to the huge loss of life and property will be communications issues and failures. The stories are being written in the media, and the pundits are already pointing out the failures in the area communications system. eWeek has an article published on the 12th pointing out how this disaster emphasizes how "fragile" the cell and wireless systems are. The article even hypothesizes that the early failure of the cellular systems probably contributed to the loss of life: Modern community alert systems used to order evacuations, etc. rely on the wireless phone system to place emergency warning calls to all residents. Because of the early infrastructure damage to the phone systems, these systems were totally ineffective: Many residents never got their word, and probably were trapped as they slept.



From the President

Firestorms: Ham Radio Comes Through

As I write this, the death toll in the California wine country firestorms has climbed to 36, over 250 people remain unaccounted for, and the New York Times, through satellite imagery, estimates that over 5,100 structures have been destroyed. Inevitably, as the detailed post incident analyses are prepared, other than the high winds

Public safety radio and communications, in the digital age, increasingly rely on infrastructure such as land telephone lines to link communications towers, comm centers, and police and fire stations. Orange County public safety uses a cell type radio system that relies on multiple towers linked by telephone landlines to achieve county

(Continued on page 3)



South OC Prep
Expo
Oct 21

CQWW
SSB
Oct 28-29

SOARA
Fall Auction
Nov 20

CQWW
CW
Nov 25-26

SOARA
Holiday Party
Dec 3

VEC License Exams

6pm—before
the General
Meeting

Please see our
[website](#) for
more info.

Walk-ins ok.

Extra | General |
Technician

SOARA Raffle

The \$5 raffle is a Yaesu FT-7900R Dual Band 2m/70cm 50/40W Mobile Transceiver.

The 1\$ raffle will be a combination of HF and HRO. I will try and split it up for 2 from HRO and 3 from Harbor Freight.

73.....Hal WB6WXO



SOARA Holiday Party - Save the Date!

This year's holiday party will be held on Sunday December 3rd at Claim Jumper in Mission Viejo (Near Los Alisos and Rancho Santa Margarita Pkwy). The festivities will begin at 5:00 pm. There will be a fixed menu with 10 mouth watering options to choose from. Cost will be \$30 per person and includes your first glass of wine as well as unlimited non-alcoholic beverage options. If you care to bring a bottle of wine for you and your guest there will be a \$10 corkage fee added to your total. Payments can be made by check or through PayPal to SOARA. Looking forward to seeing you all there!



Best, Dana, KM6LZG, Activities Director

Something to Think about When You Transmit

All of us like to use our repeaters and most of the time it is easy to do so. But there are times when we forget that there are policies and rules that we should follow. Whether we are just out to talk to someone or we are involved in an exercise we should always use our call signs. Under normal usage you might say "AD6OI this is AI6WE" and when you finish your conversation you should sign off with your call sign ie AI6WE. During an exercise or other special event where tactical call signs are in effect one should begin by calling " Irvine Races this is Mission Viejo Races" or " Net control this is station one" and when finishing the conversation you sign off with "AI6WE" you can add "station one" if you wish. Whereas the FCC does not require you to identify at the beginning of a conversation, Soara policy says that you should when using our repeaters.

Another forgotten part of our amateur radio spectrum are all the non-repeater frequencies, sometimes called by the name "simplex", these frequencies are very useful for point to point conversations and come in handy when we do special events like the Laguna Hills Half-Marathon where we only use the repeaters when necessary. If you need to find a simplex frequency to use please look up TASMA.org on the web and you will find available spectrum for your use.

For those who use **Yaesu** radios here is a hint: There is a place on your radio that activates the **Wires** function and when you do it transmits an annoying beep that confuses the SOARA repeater controllers. To turn it off on a Yaesu FT-60, for example, you must key down on the "0" button to deactivate it.

Thanks, Heiko, AD6OI, Director of communications



Membership Report

It's time to pay your annual SOARA dues. Since Oct 1st (due date) and the time of this writing, 69 members have already paid. Thank you!

We now have 232 active members. I suggest all members attend and participate in as many events as possible to gain maximum benefit from your membership. Have fun participating in the nets, SOARA Saturdays, meetings, emergency preparedness and more.

73, Ed, WA6ED

Membership Director

membership@soara.org

(Continued from page 1) - *Firestorm—From the President*

wide coverage. Several cities have gone to cell system driven “walkie talkies” to communicate with their public works, building departments, and other important city services.

Many of us, as hams are also beginning to embrace networked digital communications as well. Be it D-Star, DMR, Meshnet, and the like, all these systems, because of the relative short range of the equipment, and digital modes, rely on area infrastructure such as landline telephone links, internet cables, or multiple sites to achieve any range over a few miles. While all these new technologies are certainly fascinating and fun to learn and implement, given today's state of the art, and the lack of available funds to build long range systems with multiple redundancies, and catastrophe proofing, these modes are less than reliable in major emergencies such as the firestorms, or major earthquakes.



The point of all this is, that in spite of all the technology available, given the current state of technology, the most reliable, and therefore, the most useful emergency communications continues to be stand alone, point to point, radio systems. The Sacramento Bee, and the Mendocino County Sheriff have both acknowledged that the only reliable communications to and from many fire areas, and with the area hospitals is ham radio. Also, I expect and hope that a majority of the 250+ people that remain unaccounted for, are safe somewhere out of the fire areas, but aren't able to communicate their survival back to the area friends, family, and authorities, because of the broken communications infrastructure. We as hams, need to maintain and hone our abilities to communicate via infrastructure free methods. Learn more about emergency power, makeshift antennas. Upgrade so that we are able to use HF long range equipment and frequencies etc. We can help, even from home, if we receive out of area health and welfare traffic from evacuees via HF, and then communicate the names and addresses of those reporting their safety to the local authorities who will eventually be able to forward the information into the fire areas.

So to recap, as the ARRL motto says, “When all else fails, amateur radio gets through.” Practice your skills, look to see how you could make your station more portable, educate yourself on the best emergency procedures through the ARRL / FEMA emergency communications classes, join a local emcomm group, and get involved. These events are unlikely to be the last serious catastrophes to strike our state. You could very well make a difference!

73, Ray, AE6H, SOARA President



Ham radio operators are saving Puerto Rico one transmission at a time

<http://www.cnn.com/2017/09/27/us/puerto-rico-maria-ham-radio-operators-trnd/index.html>

The phone call from the Red Cross came in late Friday night, just as the full scale of Hurricane Maria's calamity began taking shape. "We need 50 of your best radio operators to go down to Puerto Rico."

In the days after the worst storm in three generations hit the American island -- and for many more to come -- public electrical, land-line and cellular communication systems showed few signs of life. And radio networks used routinely by police officers, power company workers and other first responder still were down. Yet, a key mode of communication -- one not reliant on infrastructure vulnerable to strong winds and flooding -- still crackled: the "ham" radio... More at link above.

In Devastated Dominica, 'Hams' Become Vital Communications Link

When Hurricane Maria smashed into the tiny island of Dominica in the Eastern Caribbean..., phone service went down, virtually cutting off the island. But within hours, amateur radio operators got on the air and have been providing a vital link to the outside world ever since.

<http://www.npr.org/sections/thetwo-way/2017/09/21/552649149/in-devastated-dominica-hams-become-vital-communications-link>



ARRL Expresses Gratitude for Outpouring of Ham Aid Donations

ARRL is thanking the Amateur Radio community for its generosity in support of the [ARRL Ham Aid Fund](#), which is making it possible to provide relief and recovery communications in Puerto Rico. Overall, there have been more than 600 donations to the Ham Aid program in response to a call from ARRL President Rick Roderick, K5UR, and nearly \$125,000 has come in from clubs and individuals. Several Amateur Radio retailers and manufacturers also have stepped up to donate needed equipment. Roderick said he was amazed at the overwhelming response, including those who answered his call to join the "Force of 50" now deployed in Puerto Rico.

"The Amateur Radio community really came together in providing donations of equipment, funding, and personnel in response to the great need in Puerto Rico," Roderick said. "The scale of these efforts and the response is making history. This has got to be one of Amateur Radio's greatest moments. Our sincere thanks go to all involved."

More info here: <http://www.arrl.org/news/arrl-expresses-gratitude-for-outpouring-of-ham-aid-donations>





76% of Cell Sites Still Down in Puerto Rico

<http://www.tvtechnology.com/news/0002/major-puerto-rico-tv-stations-still-off-the-air/282043>

The impact of Hurricane Maria still affects the entire island of Puerto Rico, including its television stations. According to the FCC's Disaster Information Reporting System report from Oct. 12, WIPR in San Juan, Puerto Rico and WIPM in Mayaguez are still off the air...

There has been some improvement in the number of cell sites that continue to be out of service, though the number is still high. In Puerto Rico, 76.1 percent of cell sites are [still] reported down, though that is down from the 88.8 percent of cell sites listed in the Oct. 1 report. The U.S. Virgin Islands still have 55.4 percent of its cell site out of service, down from 68.9 percent...

SOARA Saturday October Report

This is an informal, easy to walk around, ask questions, and see things work event. Or, break out into your own discussion. So, attend, ask questions, have fun, share your experiences, and knowledge. SOARA will provide [coffee and donuts](#). Time 9am to noon. Contact: Ed Barnes, WA6ED@soara.org

I was unable to attend the last DSTAR SOARA Saturday. Verbal SOARA Saturday reports were very positive and Brian went into good detail Thank you Brian! I sure wish I could have been there.

Future, SOARA Saturdays:

Oct 21, Murray Center, Disaster Preparedness EXPO. We will not be providing coffee and donuts at this event. Food should be available if it's similar to past Expos. I will have a membership table. SOARA table volunteers are welcome. Please email me at wa6ed@soara.org.

Nov 25, Murray Center, RTL-SDR and SDRPlay software defined radio (SDR) workshop, on Raspberry Pi3 and or PC laptop.

Ideas for 2018 SOARA Saturdays:

- Thunt practice, build Thunt tape measure yagi antenna kit, kit building, how to solder, hf setup & operation, ht programming Gordo 100 on Chirp & RT Systems, antenna analyzers, multimeter 101, antenna analyzer 101, grounding, building a cubic quad antenna, oscilloscope 101, battery box, radio go box, Bitx40 kit, ham shield, or how to properly eat a donut without getting your HT sticky.
 - I need feedback, suggestions welcome! I will outline a 2018 schedule next month. Maybe another yagi tape measure thunt antenna and offset attenuator build for January? I could order parts and put some kits together. You will need to pre-order so I don't have extra parts or waste.
- I still have a few HF dummy load kits with instructions. Let me know if you want one.

73, Ed, WA6ED

South OC Disaster Preparedness Expo

The 10th Annual South County Disaster Preparedness Expo held in conjunction with the City of Mission Viejo's 29th Annual Walk Against Drugs. The event is scheduled on Saturday October 21st, from 9am to 12pm at the Village Green at the Norman Murray Community and Senior Center.

The focus of the Expo is to allow the public to see and learn about the first response resources available in Orange County that will play a major role in our preparedness, response and recovery. Past average attendance has ranged from 4,000 to 5,000, so don't miss the opportunity to get your agency's message of preparedness out to the public.





Greenbury Point

My business partner Tony took a walking tour of Greenbury Point, the site of the Navy's 200-acre antenna farm, which over the years has been whittled down to just 3 towers now. Attached is a photo [see below] he took of one of them and below is some info and a great link to the history page of the NSS (call sign for Navy Shore Station). Click the web link below (yellow highlight) and don't miss the video at the bottom of that web page...very informative with lots of interesting insight.

<http://j-hawkins.com/nss.shtml>

Enjoy! Lambert, KK6WOW

Naval Radio Transmitter Facility Annapolis Naval Station, North Severn, Annapolis MD Greenbury Point is managed as a conservation area and is used for light midshipmen tactical training. The Radio Transmitter Facility at Greenbury Point was ordered to close, per BRAC '91. The the 231 acres of land and existing facilities, except the towers, at Greenbury Point conservation area at North Severn (formerly the Naval Radio Transmitting Facility (NRTF)) has been transferred to the US Naval Academy in September 1994. The undeveloped areas are being managed as wildlife habitat; therefore, human access is limited. Residents of Greenbury Point housing have free access to their homes and surrounding area except the East and West Roads and undeveloped areas.



During the Cold War, Greenbury Point was a key communications center for the Navy's submarine fleet. The antennas transmitted Very Low Frequency signals capable of penetrating the ocean, allowing communications with submerged submarines. By the early 1990s, with advances in satellite communications, the antennas became obsolete. Greenbury Point was the site of the original settlement in the area, now mostly submerged by the Severn River. It was called Providence and was established by Puritans seeking religious freedom in 1649.

The property -- called "Hammond's Inheritance" -- was purchased by the Navy on August 21, 1909 for use as a dairy farm. From 1911 to 1917, part of this site was also used for the first Naval Air Station. In August 1911 a handful of Naval officers received orders to report for duty at the Engineering Experiment Station at the Naval Academy "... in connection with the test of gasoline motors and other experimental work in the development of aviation, including instruction at the aviation school." The site of the aviation camp at the Academy was Greenbury Point. The Greenbury Point station has not come in for its fair measure of recognition in the history of Naval Aviation. It was a very small affair, and it shared its location with the Academy as its host. Nonetheless, its establishment was a landmark event, It was the Navy's first air station and it was at Greenbury Point that the Navy began to conduct its first formal aviation training program. Pensacola, known as "The Cradle of Naval Aviation," succeeded the "naval air encampment" at Greenbury Point as the training site for naval aviators in 1914.

The Navy first built the four of the most northern radio towers on Greenbury Point in 1918 to communicate with US forces fighting in World War I. The transmitter, with call letters NSS, went on the air on 06 August 1918. The Annapolis transmitters operated in conjunction with a large antenna receiver facility at Cheltenham, MD. Two additional southerly towers were erected at Annapolis in 1922. In August 1938, the erection of three "Eifel Towers" (1G7, 1H7 and 1T9) was completed. In 1941, Building #60 was completed, a 50 kW L.F. transmitter were installed and high frequency operations established. The station was used for all communications with the Atlantic Fleet during World War II.

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(Continued from page 6) - *Greenbury Point*

Extensive modification and improvement of the VLF antenna system was begun in 1969. The old 600-foot radio towers on Greenbury Point were demolished to make way for a new communications link with vessels of the Atlantic fleet. A new 1200-foot guyed center tower was erected and surrounded with nine 600-foot towers (three of which were identical to those erected in 1917). The modified "Goliath" antenna consisted of the 1200-foot tower and the "top hat" assembly supported by the 600-foot towers, covering about 200 acres. To power the new VLF antenna a 1000 kilowatt AN/FRT-87 transmitter was installed in the original transmitter building.

Since the radio towers had no operational requirement and the Naval Academy has no mission requirement for the towers, the disposal action for the antenna towers was the responsibility of the Naval Computer and Telecommunications Command (NCTC) under MILCON project P-501.

The demolition of the towers had political implications. A Senate appropriation staffer attempted to allocate funding to this project; however, he also tried to place language in the appropriations bill that would limit the use of the property to only conservation and any changes require Congressional approval. The staffer was informed that this is not acceptable to the Naval Academy.

The demolition of the naval radio transmitting facility (NRTF) towers at Naval Station, Annapolis was initially projected to include demolition and removal of 19 antenna towers, antenna arrays and guys, the excavation and removal of a causeway in the Chesapeake Bay, and incidental related work. The towers to be demolished include: Six 600 foot towers supported by 2 levels of 3 guys, Three 600 foot freestanding Eiffel-style towers, One 1200 foot tower supported by 4 levels of 3 guys, Four 300 foot freestanding towers, One 800 foot tower supported by 1 level of 8 guys, Three 80 foot triangular towers with rigid conical antenna frame supported by rope guys, and One 66 foot freestanding download terminal tower. Six tower guy anchors located in the Bay were removed; and all other tower foundation/anchors and the radial grounding systems remained in place. The base insulator for Tower No. 10 was salvaged and turned over to the Government. The work also included removal of 4 HF curtain array antennas and supports. These include a total of approximately 20 wood pole supports, 55 guy cables, 250 foot (plus or minus) length of 2 foot wide wood access piers, and 60 (plus or minus) wood dolphin poles. The naval station, primary school and golf course remained in operation during the entire demolition period.

The final demolition of 16 of the 19 former Navy radio towers on Greenbury Point took place on 09 December 1999. Three towers remained standing and were turned over to Maryland or Anne Arundel County for telecommunications or training purposes.

The undeveloped area of Greenbury Point is being managed as a environmentally sensitive conservation area and is the surface danger zone for the Naval Station rifle ranges. In the developed area, the facilities are occupied by Construction Battalion Unit 403, a Bachelor Enlisted Quarters, Married Enlisted Quarters (being used as swing space during NavSta BEQ Renovation), and a soon to be renovated Environmental Nature Center.

There are no planned changes to the facilities or land usage at Greenbury Point. An updated Integrated Natural Resources Plan and a Facilities Master Plan are being developed to manage this area. Greenbury Point has a variety of other habitats including wooded coves, shallow wetland ponds, forests and scrub/shrub areas. Many interesting wildlife make this area their home. For example, Greenbury Point supports the only bobwhite quail population in Anne Arundel County, Maryland.

US Fish and Wildlife Service staff developed a Natural Resources Management Plan for the Annapolis Area Complex of the Navy, which includes the Naval Academy, the North Severn Complex of the golf course and Greenbury Point and the Naval Dairy Farm in Gambrills, Maryland. The Service's restoration and environmental education experts assisted the Navy's natural resources manager by evaluating Navy lands and writing a plan for the future of conservation areas and natural habitats under Navy management.

Greenbury Point, a 231 acre peninsula at the mouth of the Severn River, provides numerous opportunities to integrate wildlife habitat and education with the training mission of the Naval Academy. Outdoor education planners from the Service's Blackwater National Wildlife Refuge are lending their expertise to help shape the Visitor's Center Environmental Education facility the Navy is currently building on Greenbury Point. Nineteen osprey pairs that nested on Greenbury Point's radio towers were provided new platforms before the towers were demolished.

-Tony Tarsia

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
General Meeting 7:00 PM	23	27	20	17	15	19	17	21	18	16	20	-
Program	SOTA	DXp 3Y0Z 2018	EQ Tom Broz	You and SOARA	Spring Auction	Field Day Prep	Digital Radio	SOARA Fair	Eclipse 2017	DX Eng.	Fall Auction	-
VE Testing	23	27	20	17	15	At Field Day 24	17	21	18	16	20	--
Educational Classes	21	25	18	15	13	17	15	19	16 (Tech)	14 (Extra)	-	-
SOARA Saturdays (9am)	28	Mar 4	25	22	20 Murray	24 Gilleran	22 Gilleran	26 Gilleran	23 Gilleran	21 Murray	25 Murray	-
SOARA T-Hunt	8	5	5	2	7	4	2	13	3	1	5	3
Board Meeting	30	Mar 6	27	24	22	26	24	28	25	23	27	-
Special Events	Quartzfest 22-28	Yuma Hamfest 17-18	Palm Springs Hamfest Feb 4	Visalia Intl DX 21-23	Ohio Hamven- tion 19-21	ARRL Field Day 23-25	HRO Ham Jam 8	SOARA Picnic 6		JOTA 20-22		SOARA Holiday Party 3
Ham-Related Swap Meets	TRW 28 C.A.R.S. 21	25 18	25 18	29 15	27 20	24 17	29 15	26 19	30 16	21 28	25 18	30 16
Major HF Contests		ARRL DX-CW 18-19 CQWPX RTTY 11-12	ARRL DX-SSB 4-5 CQWPX SSB 25-26		CQWPX CW 27-28	ARRL Field Day 24-25			CQWW RTTY 23-24	CQWW SSB 28-29	CQWW CW 25-26	
Volunteer Events	OC Chili Run 21	Paws Fur Pink 26 OC Chili Run 25	OC Chili Run 25 Baker to Vegas 25-26	Desert Storm Rally 7-8	HD Trails 6 OC Mara- thon 7 Memorial Day 1/2 Marathon 29	ARRL Field Day/ Setup/ Ops/ Clean 23-25	4th of July Fire -works 4			OC Cycle for Life 7 OC Prep Expo 21		Run for a Claus 2

*Dates subject to change.

Check the [SOARA website](#) to verify locations and times.

SOARA meets at the [Norman P. Murray Center](#), 24932 Veterans Way, Mission Viejo, CA on the third Monday of every month at 7:00 PM. For the months of January and February the third Monday is a holiday and the meeting is held on the fourth Monday.



License Exams: Amateur License Exams are given prior to SOARA meetings, except June. **Exams are at 6pm.** Prior registration is not required and walk-in applicants are welcome. For June, exams are held at Field Day. For further information, email Sean Reigle, AJ6B, at aj6b@soara.org.

SOARA Library: SOARA has many amateur radio related books such as hand books, books about electrical theory, etc. available to lend out to club members. Contact Heiko Peschel ad6oi@soara.org for more info.

Web Site: SOARA maintains a web site with current club information. The URL is: <http://www.soara.org/>

Repeaters: The Laguna Beach, San Clemente, and Trabuco repeaters are open. The Santiago Peak repeaters are closed. For details or questions on the repeaters contact the repeater director, or repeater@soara.org.

	2m — 147.645 — (110.9)	Laguna Beach
	2m — 146.025 + (110.9)	San Clemente
	2m — 145.240 — (110.9)	Trabuco
D-STAR	2m — 146.115 + (K6SOA C)	Laguna Beach
	220 — 224.100 — (110.9)	Laguna Beach
	220 — 224.640 — (pvt)	Santiago Peak. (C)
	440 — 445.660 — (110.9)	Laguna Beach
D-STAR	440 — 445.705 — (K6SOA B)	Laguna Beach
	440 — 447.180 — (pvt)	Santiago Peak. (C)
D-STAR	1.2G 1282.600 — (K6SOA A)	Laguna Beach

Nets:

UHF/VHF (447.180, 147.645 & 224.640): Tuesdays @ 8:00PM

D-STAR (146.115 C module):
Wednesdays @ 7:30PM

40 meter HF (7.200 MHz +/- for QRM), Sundays @ 8:00AM

10 meter HF (28.410 +/-)
Sundays after the 40m net.

Gordo HF (7.250 MHz +/- for QRM), Weekdays @ 8:30AM



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