Volume 41, Issue 9 September 2019



The LCARA Patch

10 METER ROUNDTABLE WEDNESDAY NIGHT @ 2030 HRS 28.450 MHz



LCARA TWO METER NET

THURSDAY EVENING @ 1900 HRS

LCARA WEBSITE

LCARA.ORG

The PATCH

Published by the Lake County Amateur Radio Association P.O. Box 868 Painesville, OH 44077-0868

The Patch Staff

Editor: Melody Leasko, KB8QIB

LCARA Officers

Ed Kopcak	KB8BKE	President
Larry Caskey	K8LPC	Vice-President
Rick White	W8QL	Secretary
Ed Kopcak	KB8BKE	Treasurer
Joe Koskovics	N8JKO	Director at Large



Standing Committees

ARES/Public Service Mike Goffos WB8ZGH Contest Reno Tonsi WT8C DX Jim Pyle AA8OY Field Day Chairperson Jim Pyle AA8OY Program Director Joe Koskovics N8JKO **Historical Society** Bob Mekinda K8QXO History Scott Farnham KO8O **Publicity** Vance Roth KA8YHZ Communications N8IJG, K8LPC & W9LAC Sunshine KB8ZZW Connie Tonsi Trustee, N8BC Bob Liddy K8BL Bill Wihebrink N8IJG

September's meeting is at the Lake County Historical Society

415 Riverside Drive Painesville Township, Ohio 44077 http://lakehistorycenter.org/

Meeting @ 7:30 pm September 4th

Table of Contents

Minutes from August 7 th 2019 Meeting	3
August Attendance	4
Sunshine Report	4
From the President, Ed KB8BKE	5
BACKSCATTER	6
Backscatter cont'd.	7
DX Alert, September 2019	8
OHDEN Has Some Changes To Tell You About	9
VE Testing in Lake County	10
Breakfast Date for September 2019	11
LCARA Board Meeting	11
For Sale or Swap	12
Events Contact Info.	13
LCARA Net Information	13
Lake County ARES Net	13
Lake County Two Meter Net	13
Ten Meter Roundtable	13
Ohio Emergency Preparedness Nets, Columbus EOC	14
Ohio Digital Emergency Net	14
The Amateurs Code	14
LCARA 2019 Future Events	15
WWV is Celebrating 100 years	16
I CARA CALENDAR OF EVENTS	17

Minutes from August 7th 2019 Meeting

Board Members Present:

- KB8BKE Ed President
- W8QL Rick Secretary
- K8LPC Larry Vice President

Meeting Minutes:

- Ed KB8BKE opened the regular club meeting at 7:30 PM with the pledge of Allegiance and a round of introductions. There were 26 members present. (Secretary note: Only 20 people signed in. A head count will now be made at each meeting to make an accurate account of those attending. Please sign in.)
- There was no presentation this evening.
- There was no correspondence.
- The treasury was noted to be in good shape.
- Ed KB8BKE noted we had a new member Shiloh Linden
- Jim AA8OY gave the DX report noting many new great DX expedition opportunities.
- Jim AA8OY then gave an update on this past June Field Day's statistics. Considering conditions we did just under last year's mark. The non-operating "extras" pulled us up.
- Mike WB8ZGH noted public service information about some future public service events. September will bring Ohio State Parks on the Air. This will be the weekend after Labor Day, September 7-8, 2019. October 6, 2019 will bring the Lake Health Marathon. It was also noted that the National Parks will celebrate their 103rd anniversary We will plan on operating from the Garfield House on August 25, 2019.
- Ed KB8BKE noted that the LCHS will have its Clambake on September 29, 2019. Times for serving will be from 1:00 to 3:00 PM.
- Bill N8IJG noted that all repeaters are up and running.
- An announcement was made on a very nice award that Larry K8LPC received from the 20 meter single sideband net. It was the "Garlock" Award for outstanding service. Congratulations to Larry.
- Dick W8GQO brought pictures of the 2019 Field Day event. They will be available for viewing at the rear of the meeting room.
- Evan W8LSQ discussed a direct lightning strike to his antenna. Lots of damage to the Ham Radio gear and the house wiring.
- Ed KB8BKE asked if all had a good time at the picnic and if there were any comments on changes/improvements for next year. All commented that it was good. One comment was to look into Sunday for next year.
- Ron KC8BTN noted that the Ohio QSO Party would be running on 8/24/19 from noon until midnight.
- The 50/50 raffle was held with 3 extra hats as raffled items.
- A motion was made to adjourn and was unanimously accepted by all.

Meeting adjourned 8:00 PM Rick – W8OL



August Attendance

Ed, KB8BKE; Larry K8LPC; Bill, N8IJG; Peter, W1BKZ; Sally, N1BCF; Melody, KB8QIB; Larry, WB8PHI; Cal, W8BZP; Dale, KG6WGO; Mike, WB8ZGH; Ron, KC8BTN; Rick, W8QL; Bob, W2THU; Tom, N8UAZ; Jeff, KC8LAR; Andy; Don, WA8TWM; Vance, KA8YHZ; Neal, NF1X; Jim, AA8OY; Reno, WT8C; Connie, KB8ZZW



Sunshine Report By Connie, KB8ZZW

A sympathy card was sent to Jim McAdams, KF8VX for the death of his mother.

From the President, Ed KB8BKE

Greetings fellow travelers,

I hope you are all enjoying the final days of summer. This has been a busy year so far for our club and there is more to come.

This past weekend we helped with Painesville Township's Family Fun Day held at LCHS. According to the township's administrator, there were a record number of attendees and the assistance we provided with parking some 350+ cars was greatly appreciated. Sunday we set up at the James A Garfield home to help celebrate the National Parks Service 103rd anniversary. While the band conditions were not great, we did manage over 150 contacts thanks to our operator's valiant efforts. Thanks to K8BL, WT8C, AA8OY, WA8TWM, WB8PHI, KB8QIB, WB8ZGH, and K8LPC.

For Our September meeting, we will have Jeff Kopcak who is the technical co-coordinator for the ARRL Ohio Section. He will be talking about his team of specialists and their function as a resource for and in providing assistance to clubs and hams with issues and or questions relating to our hobby.

The Ohio State Parks on the Air contest is on September 7th, running from 14:00 UTC thru 22:00 UTC (10 am to 6 pm ET). We will be deploying our trailer, along with Mike Goffos's motor home, (including Fran's famous chili), at Mentor Headlands State Park in the vicinity of lots 3 and 4. There is plenty of room for additional stations. Operators and visitors are welcome and encouraged.

The following Saturday, 9/14, we will be at the Willoughby Hills Municipal Complex with our trailer as part of the city's "Touch-a-Truck" day. This kid's themed family event will feature a landing by a Life Flight helicopter, along with many public service and safety vehicles. Also that day we have been asked to have a representative in our radio room at LCHS for "Constitution Day". If anyone is interested in being the face of Amateur Radio and LCARA, let me know. Your help would be appreciated.

But wait there is more...we will again be operating at Garfield's home on 9/28.

I can appreciate that we all have a life and ham radio is after all a hobby, but as an organization, we are asked with providing public service and promoting awareness of our ability and usefulness. We help ourselves and the hobby in general, when we participate.

Thank	الدييون	for vour	continuing	cunnart
IIIalik V	vou aii	ıdı vdui	CONTINUINE	SUDDUIL.

	ᄂ	۱.	_
-	r١	ĸ	$\boldsymbol{\omega}$

BACKSCATTER

88 Years Ago: The first 33 rpm long-playing records were demonstrated at the Savoy Plaza Hotel in New York by the Radio Corporation of America (RCA). Unfortunately, players were so expensive the product flopped. The first plastic LP records as we know them, did not come out until 1948, when RCA rival, Columbia, began mass production of the LP.

61 Years Ago: Jack Kilby demonstrated a miniaturized electronic circuit to his supervisor at Texas Instruments, now recognized as the first integrated circuit. Nearly six years later, a patent was issued in June of 1964.

40 Years Ago: New newsletter editor, Mike, WD8IVL, reminds everyone "this is y-o-u-r newsletter, and if there is something you would like to contribute, feel free to do so." He also announces a contest to name the newsletter. Suggestions, anyone?

LCARA operates a message handling booth at the Lake County Fair, however major RFI with both an organ in an adjoining booth and the Fair's PA system limit operating time.

35 Years Ago: Cal, W8BZP and Norm, W8FPX, offer a morse code program for Commodore 64 and Vic 20 computers. Speed and spacing are adjustable.

The FCC expands SSB at the expense of CW. 80, 15 and 10 meter phone are expanded into frequencies previously allocated to CW. In related action, the IARU announces sub-bands within the 18 and 24 MHz bands. No word is given as to when the FCC will release these bands for US amateur use.

The Land Mobile Communications Council indicates that 220-225MHz spectrum is small, and could be better used to satisfy the requirements of future Land Mobile users. The FCC responds since no-code is dead, their intended use of 220 as a no-code ham band is no longer valid.

30 Years Ago: The latest proposal for a no-code license by the ARRL is to give the new "Communicator License" all privileges above 220 MHz. Earlier proposals gave no-coders everything above 50 MHz, other than 2 meters.

Solar flux levels have been bouncing between 175 and 250 recently, with the cycle's peak expected in December. It is likely to be the most active solar maximum in 50 years.

Backscatter cont'd.

25 Years Ago: Jim, KF8VX gives his recipe for Field Day Beans:

1 large can pork and beans, 1 can kidney beans, 1 can green beans, 1 can chili beans in gravy, 1 can wax beans, 1 can lima beans, and 1# pork sausage. For the sauce, 1 large can tomato paste, 1 can tomato soup, ½ cup barbecue sauce, 1 cup brown sugar, and bacon strips. Drain kidney and lima beans, cook the sausage, mix, and bake 1 hour at 350 degrees. Triple for Field Day, while using a cement mixer for blending purposes.

Ted, N8XCF reports on operation of the K8RDN Special Events station from the Clothing Optional Midwest Gathering at Turtle Lake Resort in southern Michigan. All Q's were made running barefoot.

20 Years Ago: Our new Amateur Traffic Vests have arrived, and Mike, WB8ZGH says they were a big plus in identifying the Hams as having official status at the recent Little Mountain Folk Festival and Johnnycake Jog & Walk.

15 Years Ago: Hurricane Charley batters west central Florida, causing two dozen deaths, nearly 4000 injuries, with as many as 10,000 homes badly damaged. Hams rise to the occasion, with ARES operators assisting FEMA and working with the Red Cross and Salvation Army.

10 Years Ago: The October LCARA program speaker will be Jeff Covelli, WA8SAJ on "Radios of the Past.

Pres Bill, N8IJG reports the repeater move from Lake East Hospital to TriPoint is "ongoing (with) some issues with the type, size and style of the antenna.

LCARA Historian
Scott, KO8O



DX Alert, September 2019

JD1/M - Minami Torishima - JD1BNA (ex JK1FXI), Kazu, is planning to be active as JD1BNA/JD1 from Marcus Island, aka Minami Torishima from September 25-30. He will be running a KW into a Hex on 80 and 40 meters and a dipole on 160 meters. He will be mostly on CW with some SSB and FT8. Listen for him on 1.8 through 18 MHz.

E5/N - North Cook Islands - E51WL, Warwick on Penrhyn, says he will start operating on the lower bands at night starting in September.

E5/S - South Cook Islands - E51SFS will be holiday style from two different islands in September. Operator DH5FS, Fred, says he use CW and FT8 with a multiband groundplane from "The Wireman," 100 watts, 40-10 meters. He is going to two different IOTAs within the South Cooks, Rarotonga, OC-013, September 8-16 and Aitutaki, OC-083, September 20-25.

EX - Kyrgyzstan - SP9FIH, Janusz, updates us on the upcoming EX6QP DXpedition to the south shore of Issyk-Kul Lake. Joining him will be SP6CIK, SP6OJK, SP9FOW, SP9TCE and SP9HVW for the September 2-15 operation. They will have Icom's and Elecraft rigs with up to 500 watts from amplifiers. For antennas they will use an Inverted L, phased verticals and Spiderbeams for use on 1.8 through 28 MHz on CW, SSB, RTTY and FT8.

FR - Reunion Island - The 2019 IEEE RADIO (Radio and Antenna Days of the Indian Ocean) event will take place between September 23 and 26. YT7MPB plans to be there and operating with special event stations TO019IEEE and TO0MPB.

HB0 – Liechtenstein - DJ2AX, DL4APJ and DL5ARG will be there September 12-18, holiday style" on 80-10 CW, SSB and digital modes, operating as HB0/home calls.

KHO – Saipan - WHORU is the callsign for JG7PSJ, Harry, when he is there operating September 15-22. He will be on 40-10 CW, SSB and RTTY.

SV9 – Crete - PH2M, Frank, will do a holiday DXpedition as SV9/PH2M from September 20 to October 3.

T8 – Palau - JO3LVG, Miyo, is planning a "Short-DX Pedition" to Palau as T88MK from September 12-20. Activity will be on 160, 80, 40, 30, 20, 17, 15, 12, 10 and 6 meters on CW, SSB, JT65 / JT9, FT8 and FM.

CN - Morocco - Members of the Royal Amateur Radio Association of Morocco are QRV with special event call sign 5E6A until September 29 for their National Celebration.

Happy hunting!

Jim, AA8OY
Thanks to ARRL DX and Weekly DX



OHDEN Has Some Changes To Tell You About

(from Gary, NJ8BB & Eldon, W5UHQ)

Due to the continued long skip being experienced on 80 meters during the Ohio Digital Emergency Net (OHDEN) training sessions @2145 local time each Tuesday; OHDEN will temporarily go to **Sunday afternoons** at **3:00 - 4:00PM**.

Training will remain on the prime frequency of 3584.5KHz USB +1500 Hz.

Tests show that this time has much better propagation throughout the state and should allow the best propagation currently possible on 80 meter band. We are currently having to use a North Carolina station for NCS relays later in the evening.

Anything beyond local ground wave and this long skip point have not been reliable during this time of year, time of day, and sunspot cycle for the past three years.

At the same time, W5UHQ is going to start an experimental Olivia / FT8 net on 1805.000 USB +1500 Hz during the normal time slot of 21:45 – 22:45 on Tuesdays.

The objective of the 160 meter net will be to perform signal reports and check for traffic quality circuits on 160 meters from county to county and county to SEOC. Hopefully we can get more stations active on this frequency and as many county control stations as possible to try out their capability. Tests thus far have been great from border to border. I currently have six different stations that have checked into that test frequency. There will be no change to our standard mission call up frequencies at this time. Using alternate times and frequencies is already in our SOP. The Ohio Technical Specialist team will be available to assist ECs in putting up at least a compromise antenna for that band.

These changes be in effect from Jan 15 until March 12 (start of daylight savings time). These changes should allow all members interested in improving the 160 meter readiness of this critical statewide connection under all conditions of solar impacted propagation.

VE Testing in Lake County

Exams are held every other month.

The Lake County Amateur Radio Association will be holding its **2019** Amateur Radio license exams at **the Kirtland Library**, 9267 Chillicothe Road, on the following dates:



Saturday, February 2

Saturday, August 3

Saturday, April 6

Saturday, October 5

Saturday, June 1

Saturday, December 7



This bi-monthly schedule is the first Saturday of every even-numbered month (e.g., February being the second month, etc.), and will be held at the Kirtland Library, 1.7 miles south of I-90 on Route 306 (Chillicothe Rd). The library is on the left, just beyond the Marathon gas station. The tests will start at **12 noon.** Please arrive a few minutes earlier.

To register, you will need the NCVEC 605 Form, which will be available at the test. If you would like to complete one ahead of time, be sure it is the Sept 2017 version or later. You can find it by Googling "NCVEC quick-form 605" and clicking on the url for a pdf of the form.

Be sure to bring the <u>original</u> and a copy of both your license and any CSCEs you may have to the exam. The cost is \$15.00, and if you wish to pay by check, it should be made out to the ARRL/VEC. Identification with your picture is also necessary, such as a driver's license. If you have any questions, please contact Scott Farnham, KO8O, at (440)256-0320, or scottfarnham@roadrunner.com



Breakfast Date for September 2019



Mark your calendar the next meeting of the Tuesday Morning Breakfast Group is at the Painesville Perkins on **Tuesday, September 17**th at 8:00 a.m. Breakfast orders start being taken at 8:30 a.m. This group averages 15-20 people from all counties, and it provides a great opportunity to meet other Hams, sell and trade your spare equipment. This is not a club event. Please encourage any Hams or non-Hams to bring your significant other, or a friend, to breakfast. It is a fun gathering.

LCARA Board Meeting

The LCARA Board meeting will be at the Tri-Point facility on **September 11**th @ 7:00 p.m., in the Tri-Point Board room.

To find the Board room, simply continue waling past the regular meeting rooms down the hallway. The Board room is located on the left from the main elevators.

All members are invited.

For Sale or Swap

Equipment for Sale: by Bill, N8IJG (call 440.943.1703)

MFJ 8268 Digital SWR/Wattmeter/Freq Readout	\$140.00
Icom IC-756 Pro 3 Transceiver	\$1300.00
Icom IC-275H 2 meter All Mode Transceiver	\$600.00
Swan 350C w/117XC PS	\$300.00
Icom IC-275H 2 meter All Mode Transceiver	\$600.00
Swan 350C w/117XC PS	\$300.00

Equipment for Sale: by Evan Liechty, W8LSQ (ELIECHTY@windstream.net)

Icom 718, like new, original box, will demo	\$450.00
Kenwood TS950 SD 150 watts, internal power supply, dual receivers, auto antenna tuner, all of	\$475.00
the filters, like new condition, will demo	
Yaesu FT901 DE, 180 watts, comes with Turner desk mike with Heil HC 5 cartridge, like new, will	
demo	

Mike, KD8JDL is in the process of disposing of radio tubes from his father's store. If members could e-mail him with requests and he has the tube, there will be no charge.

Events Contact Info.

Event	Contact	Location	Date
ARES	WB8ZGH mgoffos@ymail.com	147.210 MHz	Mondays 1930
Two Meter Net	Bill N8IJG n8ijg@arrl.net	147.210 MHz	Thursdays 1900
Ten Meter Roundtable	WB8ZGH mgoffos@ymail.com	28.450 MHz	Wednesdays 2030
LCARA Board Meeting	Tri-Point Board Room	Tri-Point Medical	Wed. 9/11 1900
VE Testing	Scott, KO8O, at 440-256-0320	Kirtland Library	Sat. 10/5 12:00

LCARA Net Information

Lake County ARES Net

The **Net is Every Monday at 7:30 pm** on the 147.210 repeater. This net is open to all licensed operators; you do not need to be a member. This net is provided for operators to verify the proper operation of their equipment and verify their stations capabilities in the event of an emergency. Here is your perfect chance to be Net Control or Alternate Net Control. Step forward, no experience is necessary, everyone will help you.

Lake County Two Meter Net

The 2 Meter Net runs weekly. Come join your fellow hams on Thursday's at 7:00 pm on 147.210 MHz. this is an informal net where the group can discuss any subject for the good of the group, great time to ask those questions, especially from the new operators. List your items related to ham radio that you want to sell or swap and any sunshine announcements to pass on.

N8IJG brings us the ARRL News when available. Bill is always looking for Alternate Net Control Operators. Please check in.

Ten Meter Roundtable

The 10 meter Roundtable meets on Wednesday's at 8:30 pm on 28.450 MHz. This is an informal roundtable where the group can chat about anything that comes to mind and even correct some of the world's problems. You don't need to be a LCARA member, just have at least a Tech ticket and some 10 meter gear. The Roundtable is a good chance to meet old and maybe some new friends this is a "Round Table" anyone can start it off on 10 meters. Any Questions contact WB8ZGH.

Ohio Emergency Preparedness Nets, Columbus EOC

Ohio Emergency Preparedness Net, W8SGT, is on every Tuesday at 7:15 pm. Try 3.902 MHz, tune up and down the band and check in! Follow on Twitter (hashtag W8SGT) for frequency information on the 80 meter band.

Ohio Digital Emergency Net

Ohio Digital Emergency Net is held on Tuesdays at 8:00 pm (0100 UTC).

OHDEN meets on 3585 KHz +/- USB http://ohden.org/

This net is looking for all Ohio Counties to check-in. Learn as you go.

Modes: OLIVIA 8/500/PSK31 alternate, with MT63 1K for bulletins.

Frequency: 3585 KHz, 7072 KHz alternate.

MT63 2K on VHF/UHF with PSK as an alternate (Assigned locally)

The Amateurs Code

By Paul M. Segal, W9EEA (1928)

The Radio Amateur is:

CONSIDERATE..... never knowingly operating in such a way as to lessen the pleasure of others.

LOYAL..... offering loyalty, encouragement and support to other amateurs, local clubs and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

PROGRESSIVE..... with knowledge abreast of science, a well built and efficient station, and operation beyond reproach.

FRIENDLY..... with slow and patient operation when requested, friendly advice and counsel to the beginner, kindly assistance, co-operation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

BALANCED..... Radio is an ad vocation, never interfering with duties owed to family, job, school or community.

PATRIOTIC..... with station and skill always ready for service to country and community.

LCARA was organized for the purpose of furthering Amateur Radio by increasing the technical knowledge and operating proficiency of radio amateurs through continuing education, public service and acting as a vehicle of communication by, between and with the members of the association. LCARA is an incorporated association chartered under the laws of the State of Ohio and is an exempt organization under section 501 (C) (3) of the Internal Revenue Code. Contributions to LCARA are fully deductible from Federal Income Tax. Regular and Senior Dues are \$20.00 per year, Students \$10.00. Items may be reprinted by other non-profit publications without prior permission providing credit is given to the original source and The LCARA Patch. Articles from members are welcome.

Voice Repeaters N8BC

147.210 with a .600 MHz+ offset PL tone of 110.9 Hz. 224.500 with a 1.6MHz.-offset, PL tone of 141.3 Hz. 444.650 With a 5.0MHz. +offset, PL tone of 131.8 Hz. (Repeater & N8BC trustee, Bob Liddy, K8BL)



Web site: www.lcara.org

To receive the Patch via email in PDF format Send an e-mail to lcara patch-subscribe@yahoogroups.com

The Lake County Amateur RADIO ASSOCIATION

LCARA 2019 Future Events

LCARA 2019							
DATE	EVENT TIME TRA						
JUNE	JUNE						
9	Sunday-in-June Bike-Ride Burton	0530—1600	Υ				
16	Lake Health Hill – Yeah! Half Marathon	0700—1400	Υ				
21	Field Day Set-up	1400—1800	N				
22	Field Day	1400—0000	Y				
23	Field Day	0000—1500	Υ				
JULY							
3	Mardi-Gras Parade	1500—2100	?				
6	Civil War Era Music Garfield	0900—1600	Y				
28	LCARA Picnic Lakeview Shelter Perry	1000—1500					
AUGU	БТ						
25	National Park Service Anniversary Garfield	0900—1500	Υ				
SEPTE	MBER						
<mark>7</mark>	OSPOTA	<mark>0800—1500</mark>	Y				
<mark>14</mark>	Touch-a-Truck	<mark>0800—1500</mark>	Y				
<mark>28</mark>	National Public Lands Garfield	0900—1500	Y				
OCTOBER							
?	S.E.T. Exercise						
6	Lake Health Northern Ohio Marathon	0600—1600	Υ				
DECEMBER							
5	Home for the Holidays LCHS	0900—1600	N				
6	Home for the Holidays LCHS	0900—1600	N				
7	Home for the Holidays LCHS	0900—1600	N				
8	Home for the Holidays LCHS	0900—1600	N				

WWV is Celebrating 100 years

WWV is the world's oldest radio station. To celebrate the 100 years, starting September 28 through October 2 the Northern Colorado ARC and WWV ARC along with other operators are planning a 24-hour special event station WW0WWV on CB, SSB and digital modes. I have attached links for more information about the celebration and the history of WWV. This is a very interesting history of WWV, and I could not due justice in writing an article about WWV. Take time to read the article and history of WWV.

Thank you Bob K8BL for the information.

http://wwv100.com/

http://wwv100.com/index.php/history



shutterstock.com • 1324546832

Larry WB8PHI would like to thank everyone for the get-well card.

September 2019

LCARA CALENDAR OF EVENTS



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 Labor Day	3	LCARA Club Meeting 7:30	5 LCARA Meeting Net 7:00 (147.21)	6	7 OSPOTA 8:00 – 3:00
8	9 ARES NET 7:30 (147.21)	10	LCARA Board Meeting 7:00 (Tri-Point)	LCARA Meeting Net 7:00 (147.21)	13	Touch-a-Truck Constitution Day
15	16 ARES NET 7:30 (147.21)	Breakfast 8:00 (Perkins)	10 Meter Roundtable 8:30 (28.450)	19 LCARA Meeting Net 7:00 (147.21)	20	21
22	23 ARES NET 7:30 (147.21)	24	25 10 Meter Roundtable 8:30 (28.450)	LCARA Meeting Net 7:00 (147.21)	27	National Public Lands Garfield 9:00 – 3:00
Great Western Reserve Clambake 1 - 3	30 ARES NET 7:30 (147.21)					

Touch-a-Truck 8:00 – 3:00 Constitution Day @ LCHS 8:00 – 3:00