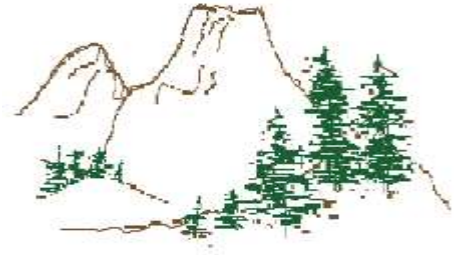


SARNEWS

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MAY 2019

TUCSON, ARIZONA

VOL.44 No.5

SEARCH AND RESCUE COUNCIL

<http://www.sarci.org>

SARCI BOARD MEETINGS

by SARNews, [sarcinewsletter @ sarci.org](mailto:sarcinewsletter@sarci.org)

SARCI Board meetings are held at the SARA House at 19:30 (7:30 pm) on the third Wednesday of January, April, July, and October.

SABINO CANYON PARKING

The Overflow Parking Lot near the SARA House is now frequently open for public use. Expect two-way traffic, and pedestrians. PARKING ALONG THE ROAD IS NOT APPROPRIATE, DURING CALLS OR OTHERWISE. Park at the SARA House. If you cannot open the gate to the SARA House, or the gate into Sabino during calls, call a Records or Truck person for assistance.

SAR RADIO CHANNEL NAME CHANGE

by Andy Lamb, [Andy.Lamb @ sarci.org](mailto:Andy.Lamb@sarci.org)

The names of our SAR channels are changing to better reflect SAR usage around Arizona.

Frequency:	155.160 MHz	Tone:	127.3 Hz
Old Name:	MRA		
New Name:	STATE SAR	Suggested mnemonic for radio programming:	ST SAR
Frequency:	155.220 MHz	Tone:	110.9 Hz
Old Name:	RESCUE		
New Name:	PIMA SAR		

SARA MEDICAL TRAINING

by Josh Nelson, [josh.nelson @ sarci.org](mailto:josh.nelson@sarci.org)

Medical classes are available to members of all SARCI component groups. A listing of classes is included in the SARA section below.

NEOTOMA COMPOSITE SQUADRON, C.A.P.

by LtCol Robert McCord, [cap @ sarci.org](mailto:cap@sarci.org)

CAP SQUADRON CALENDAR

Sundays 15:30-18:00 **Golder Ranch Fire Station #380** 1175 W. Magee Road, Tucson, AZ 85704

The Civil Air Patrol's Neotoma Squadron actively participates in ongoing search and rescue missions and training exercises at the state, local and national levels. We welcome new members to join the more than 70 members of the nationally recognized emergency services Arizona Wing Ground Team.

Membership: Robert McCord, [cap @ sarci.org](mailto:cap@sarci.org)

Web site: <http://www.neotomasquadron.org>

PIMA CO. SEARCH & RECOVERY DIVERS

by John Longhofer, [divers @ sarci.org](mailto:divers@sarci.org)

DIVERS CALENDAR

<u>May 12</u>	<u>09:00 Sun</u>	Training Meeting	Ft. Lowell Pool
<u>June 9</u>	<u>09:00 Sun</u>	Training Meeting	Black Mountain Reservoir

In April, we ran two-person tethered line search patterns and refined our procedure for better deployment of divers.

Our May training, we will continue working with our two-person tethered line search patterns to allow all divers to run through patterns in the pool before moving to open water.

Our June training will be at Black Mountain Reservoir.

SOUTHERN AZ. MOUNTED SEARCH AND RESCUE

by Colleen Leon, colleen.leon@sarci.org

SAMSAR CALENDAR

May 21 18:00 Tue **Board and General Meeting** Forty Niner Country Club, 12000 E. Tanque Verde

For SAMSAR, rescues have been kinda quiet. Members of SAMSAR were able to assist in the multi-agency exercise in Madera Canyon. Amazing the planning and work involved. Gave us a whole new prospective and respect for those involved in the planning. And to think what we witnessed is done overnight in a matter of hours! Well done SARA for putting this together and thank you for the opportunity for assist and learn.

We are also looking forward to helping with PSAR, assisting in community awareness on how to stay safe while hiking in the Tucson canyons and trails.

The new ERM app is AMAZING! Thanks to Brooke and Sean Fawcett for all their time and hard work putting it together!

Members Kathryn Wade, Jerry Simmons, Lori Poppino, Kendra Burdon and Colleen Leon gave a presentation to Boy Scouts in Sahuarita. Trusty steeds Joe and Pony were rock solid, and the young men and their families enjoyed the presentations and might have even learned a little!

Board meetings at 6:00pm and General meeting at 7:00pm in the Rincon Grill at the Forty Niner Country Club.

Stay safe out there!

See ya on the trail!!

Membership: <http://www.SAMSARaz.org> for any and all information for membership.

SOUTHWEST RESCUE DOGS, INC.

by Karen Paquette, karen.paquette@sarci.org

SRDI CALENDAR

May 01 18:00 Wed **Monthly Meetings** SARA House, 5990 N Sabino Canyon Rd
May 3-5 Fri-Sun **Arizona SAR Conference** Heber, AZ

With great sadness, SRDI grieves the loss of K9 Peeps, and our deepest condolences are given to her handler, Kari DiStasio. SRDI is grateful for the many years of service provided by Peeps / Kari.

The following article shares some very interesting information on how dogs use their noses:

Ever noticed those slits at the sides of a dog's nose? Why do dogs have them? Once again, nature proves her elegance in the design of our dogs. When we humans inhale and exhale, air comes in the same way it goes out. Any smells that come in through our mouths are forced out as we exhale, if we exhale out our mouths.

When a dog exhales through his nose, however, the exhaled air is released through those slits and off to the side so that nice, smelly air going into the dog's nostrils doesn't get diluted with the outgoing air. Put another way, the slits allow the dog to avoid smelling what he just exhaled.

The slits help the dog hold scent particles in the nostrils even as exhaled air passing out the slits creates a swirling air turbulence allowing interesting odors to be inhaled directly into the center of each nostril. Since dogs breathe faster when trying to sniff a certain smell, they widen their nostrils to pull in more air which makes it possible for a dog searching for smells to have a steady stream of air coming in for up to 40 seconds, maybe even longer.

The slits also allow dogs to wiggle each nostril independently which gives them the ability to know which nostril a smell entered. This is how a dog can pinpoint where a smell is coming from, and why a dog searching for smells on the ground will weave back and forth as he follows a trail.

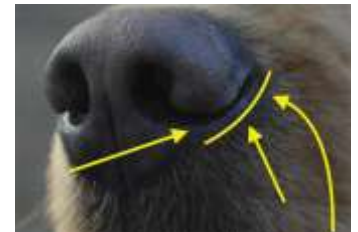
We all know the superb smelling abilities of dogs, but let's use an analogy between scent and sight to really put it into perspective: If our eyes were our nose, what we as humans can see at a third of a mile, our dog can see more than 3,000 miles away and still see as well.

Just wow.

SARCI members are invited to join us for training at any time. If you are interested in attending one of our trainings, please email us at K9@sarci2.org, or Karen.Paquette@sarci.org, or call Karen Paquette (275-2074). SRDI's monthly meeting is the first Wednesday of each month at the SARA House.

UPCOMING EVENTS

FIRS Workshop	June 2019	Colorado
LTD	June 2019	California
DStaal Detection Network	Sept 2019	Colorado
NAPWDA (?)	October 2019	Tucson, AZ



SARA CALENDAR

May 03 19:30 Fri
May 3-5 Fri-Sun
May 11 TBA Sat
May 16 19:00 Thu

SARA General Meeting
Arizona SAR Conference
Training: Summer Skills
SARA BoD Meeting

SARA House, 5990 N Sabino Canyon Rd
Heber, AZ
TBA
SARA House, 5990 N Sabino Canyon Rd

2019 SARA BOARD OF DIRECTORS

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Scott Clemans, Vice President
Joe Barr, Secretary
Michael Cardella, Treasurer
Jason Aubrey, Facilities
Chris Yamanaka, Operations
Granny Grant, Training
Kit Henker, Medical
Nic Jones, Member Services

by SARA BoD, [sarabod @ sarci.org](mailto:sarabod@sarci.org)

2019 SARA DUES

by Michael Cardella, [michael.cardella @ sarci.org](mailto:michael.cardella@sarci.org)

It is that time of year again where we send out reminders regarding SARA dues payments. For 2019, there is a flat fee of \$20. **YOU WILL BE DROPPED BY THE JULY BOARD MEETING IF YOU HAVE NOT PAID YOUR DUES!** Below I have provided several different options on how you can make your payment:

- A) Cash or check paid at the SARA Store
- B) By check mailed to:
Southern Arizona Rescue Association
PO Box 12892
Tucson, AZ 85732-2892
- C) Using PayPal online via the SARA donations page
 - * <http://www.sarci.org/donations/>
 - * Please note your name and description of payment "2019 Dues" in the memo area
 - * Please include a \$0.75 convenience fee if paying via PayPal

If anyone has any questions, please do not hesitate to reach out.

SARA TRAINING

by Jen Dempsey, [jen.dempsey @ sarci.org](mailto:jen.dempsey@sarci.org)

The monthly Training for May will be summer skills. Due to the Arizona SAR conference it will be on May 11th. More details will follow, but if you are interested in helping to lead this training please contact Jen at jen.dempsey@sarci.org.

MRA SPRING CONFERENCE

by John Bechman, [john.bechman @ sarci.org](mailto:john.bechman@sarci.org)

I want to remind you all of the **MRA Spring Conference**. June 4th - 9th. Space for the conference is filling up. The discount early registration seats are going fast as are the pre-conference classes.

Of interest: Jason Bowman, one of our former SARA members, is teaching the Canyoneering Rescue Course (pre-conference). Knowing Jason, it will be an experience to remember.

I have reserved two condos at the Lodge at Government Camp which is 6 miles from the Lodge. They are advertised as sleeping 6 each but the beds yield 4 in one and 5 in the other. Anyone else would have to sleep on the couches or floor. You can go on line and see pictures.

The cost for the condos is \$2587.00 for Tuesday thru Sunday. I could most likely add an arrival for Monday. That would add an additional, \$200.00 per condo. This covers the early session and the conference. For a stay over on Sunday night would add \$300.00 per condo.

This cost averages to \$2785.00 / 9 = \$309.00 per person or \$62.80 per person per night which is much less than at the lodge. We have until 30 days prior to cancel. So, let me know if you want to do this. Let me know what your preferences are. I can do some juggling based on demand but the sooner the better and I want hard commits. First come, first served or bed selection.

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PINE PIG RESCUE

Bob Brantley In Arizona Call: **Dave Brown**
Phone: 520-762-0165

Phone: 703-758-6678 12353 Marionwood Court
Fax: 703-758-9208 Oak Hill, VA 20171-2133
Email: pine-pig-rescue@worldnet.att.net

OEC CORNER

by John Gorski, john.gorski@sarci.org

Work is in progress for our OEC Cycle "C" refresher for 2019. OEC Refresher dates for 2019 are currently scheduled for Saturday July 20th and Sunday August 18th. Look for the Ski Patrol Magazine, Summer Catalog, and the OEC Refresher Workbook starting the first week of May.

SARA MEDICAL TRAINING

by Josh Nelson, josh.nelson@sarci.org

Below are the medical trainings currently being offered by the SARA Medical Committee. These training are open to members of all SARCI component groups. Registration via Whoozin is required in advance for all classes to ensure sufficient instructors / materials. Class may be cancelled if minimum registrations are not received by one week prior. All training will be held at the SARA House.

CPR: AHA Basic Life Support for the Healthcare Professionals. A minimum of 4 participants is necessary to host the class. Participants are required to bring their own face masks / face shields. \$5 fee to cover AHA fees for issuing CPR card. Payable to the instructor via cash or check.

May 14, 2019 (18:30 - 21:00)

<https://whoozin.com/O74-WY7-GKYK/>

Blood Borne Pathogens (BBP): It is an AZ state requirement that all search and rescue volunteers take an OSHA approved BBP class once per year. There are no fees or required materials for this course. Minimum 4 students needed to host the class.

May 07, 2019 (18:30 - 20:30)

<https://whoozin.com/OX4-CTR-674J/>

July 09, 2019 (18:30 - 20:30)

<https://whoozin.com/O4G-YYT-YDUP-3HUC>

Wilderness First Aid (WFA): For those needing WFA, the following session is scheduled. There will likely be at least one more WFA session in December 2019 that has yet to be scheduled. Minimum 4 students needed to host the class. There are no fees or required materials for this course.

* Note the May and July WFAs may move due to instructor availability and scheduling conflicts.

May 25-26, 2019 (All day, 8:00 - 17:00)

* <https://whoozin.com/4FJ-9C4-DJ4E/>

July 16, 18, 20, 2019 (18:30 - 22:00 Tues/Thur, 08:00 - 17:00 Saturday) * <https://whoozin.com/9AT-TJX-FA6K-6O9O>

Wilderness Emergency Medical Responder (WEMR): Registration is now open for the Fall WEMR session. The course will run from Tue Sep 10, 2019 to Sat Nov 16, 2019. Classes will be on Tuesday / Thursday evenings from 18:30 - 22:00 every week with two all-day Saturday classes on October 5th and November 16th.

The cost of the class will be identical to the 2018 WEMR class at \$275 per person, with \$75 being returned to the student upon successfully passing the NREMT EMR exam. Registration fees includes the course book and course-specific materials.

This is the last WEMR session before the SARA transition from OEC to WEMR is complete. The next session will likely be in Fall 2020.

A minimum of 12 students is required in order to host this class. Please only register as "In" for this class if you are able to commit to all of the scheduled class dates. If you are interested but not able to fully commit at this time, please register as "Maybe". If you initially register then find you cannot attend the class, please update your Whoozin registration accordingly.

Sep 10 – Nov 16, 2019 (18:30 – 22:00) plus 2 Saturdays

<https://whoozin.com/NNP-DDA-4K6U-EFJP>



04/17



04/17

Date	Vol/Hrs/ Problem	Location	Resources
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Mission Hrs now show total portal-to-portal times (not Rdvs). Mission times now show Field IN/OUT times (not Rdvs).

- Thu Mar 28** 6/ 13/ **Five hikers exhausted** **Romero Canyon Trail, Catalinas** **GRFD**
No field times A group returning from Romero Pools became exhausted. They were met about 0.5 miles from the old trailhead by a Golder Ranch team.
- Sun Mar 31** 13/ 26/ **59yf hiker wrist injury** **Tanque Verde Canyon, Rincons**
 13:45 – 14:20 A hiker injured her wrist. The group assisted her to the SARA Trail, Rural Fire splinted her wrist, and all walked out.
- Mon Apr 01** 6/ 21/ **??yf hiker ankle injury** **Romero Canyon Trail, Catalinas** **GRFD**
 13:30 – 14:50 Assist Golder Ranch with evacuating a patient.
- Mon Apr 01** 9/ 58/ **??ym hiker disoriented** **Sabino Canyon, Catalinas**
 23:40 – 04:15 A group returning from Hutch's Pool were separated. One went up east fork then returned to other campers at Hutch's who transmitted a SOS by Spot. Companions had gone back in from a couple directions. All were rounded up and walked out.
- Fri Apr 19** 8/ 25/ **??ym hiker exhausted** **Finger Rock Canyon, Catalinas** **RMFD**
 14:10 – 15:50 Two hikers went to Kimball, then over to Finger Rock, then down the south gully where one became exhausted. Phoenix Ranger dropped a medic and three were short-hauled to the trailhead. The Hasty Team was getting close.
- Sat Apr 20** 7/ 11/ **42ym hiker exhausted** **Finger Rock Canyon, Catalinas**
No field times An exhausted hiker was assisted to the trailhead.
- Thu Apr 25** 7/ 25/ **??y? recovery** **Hoodo Vista, Catalinas** **MLFD**
 10:40 – 11:40 Recovery of a male near the pullout.
- Thu Apr 25** 12/ 33/ **??yf hiker exhausted** **Sabino Trail, Catalinas** **RMFD**
 15:10 – 16:00 An exhausted hiker was carried to the trailhead.
- Sun Apr 28** 12/ 27/ **73yf hiker ankle injury** **Phoneline Trail, Catalinas** **RMFD**
 14:50 – 15:50 A hiker injured her ankle and continued to walk with assistance from companions until stopping just before the top of the switchbacks. With fire and volunteer help, she continued to walk to the trailhead.

2019 Totals	Activities	People	Hours	Hrs/Per	Last 12 Mos
Missions	38	404	2328	5.8	110
Trainings	89	906	4251	4.7	191
Meetings	23	205	588	2.9	81
Public Relations	4	10	44	4.4	22
Special Events	4	48	592	12.3	10
Activities	48	209	985	4.7	124
TOTALS	206	1782	8788	4.9	538

20190428

COORDINATES – Let’s reduce the number of digits

by Andy Lamb, [andy.lamb @ sarci.org](mailto:andy.lamb@sarci.org)

When I hear coordinates over the radio, I (and Mykle) wonder why so many digits are given?

Many times, the coordinates must be repeated. To promote efficient communications, we propose **when giving coordinates over the radio use only 8 digits**, for example “19.11, 49.30” for the SARA House (32° 19.108’, -110° 49.300’). This set of numbers will give the location within 60 ft (19 m). We would know it is the SARA House. We don’t need to know which room. If we can give a helicopter coordinates with an accuracy of 60 feet, the helicopter will be able to locate the scene or a team.

If you have been given coordinates in decimal degrees, four digits after the decimal will put you within 36 ft (11 m). So, we still only need 8 digits. A major source of error in our operations is communicating coordinates by voice, whether face-to-face or by radio. Using 8 digits will minimize these errors.

Continue reading if you want to know the reason why 8 digits will locate you within 60 ft (19 m).

What distance does a minute of latitude and a minute of longitude represent?

The radius of Earth at the equator is 3,963 miles (6,378 km). The Earth’s polar radius is 3,950 miles (6,356 km). The earth is not a perfect sphere, but it is a flattened (oblate) sphere. Using these radii, the Earth’s equatorial circumference is 24,901 miles (40,075 km). The Earth’s polar circumference: 24,860 miles (40,008 km).

There are 360 degrees in a circle, thus;

A degree of latitude everywhere is 60 nm (nautical mile) or 69.1 mi (statute mile)

A degree of longitude at the equator is 60 nm (nautical mile) or 69.2 mi (statute mile)

As you move away from the equator the latitude lines get closer together which results in the distance a degree of longitude represents gets smaller. The change is proportional to the cosine of the latitude. In our operational area a degree of longitude is 50.9 nm or 58.6 mi (cosine of 32 degrees equals 0.8480).

Since Operations knows where you are, +/- 30 miles, **there is no need to give the whole number of degrees.**

There are 60 minutes in a degree, therefore in our operational area:

A minute of latitude is 1 nm (nautical mile) (approximately)

A minute of longitude is 1 mi (statute mile) (approximately)

GPS Coordinate Accuracy vs Precision

Accuracy is how close a measurement is to a standard or true value. Precision is how close two measurements are to each other. With GPS, accuracy is how close a given coordinate is to the true position, and precision is related to the number of digits. Just because a cell phone gives coordinates out to the 6th decimal place doesn’t make the coordinate any more accurate.

How accurate is your GPS? Garmin claim their handheld GPS units have an accuracy of <10 meters 95% of time. A cellphone in airplane mode has a similar accuracy.

Below are tables of precision for decimal minute and decimal degree coordinate formats.

32N 110W

Format	Latitude		Longitude	
	Precision (ft)	Precision (m)	Precision (ft)	Precision (m)
ddd	364,567 (60 nm)	111,120 (60 nm)	309,274 (50.9 nm)	94,267 (50.9 nm)
ddd mm	6076 (1 nm)	1852	5154 (~1 mi)	1571
ddd mm.m	608	185	515	157
ddd mm.mm	61	19	52	16
ddd mm.mmm	6	2	5	2

Format	Latitude		Longitude	
	Precision (ft)	Precision (m)	Precision (ft)	Precision (m)
ddd	364,567 (60 nm)	111,120 (60 nm)	309,274 (50.9 nm)	94,267 (50.9 nm)
ddd.d	36,457	11,112	30,927	9,427
ddd.dd	3,646	1,111	3,093	943
ddd.ddd	365	111	309	94
ddd.dddd	36	11	31	9
ddd.ddddd	4	1	3	1

In our SAR work there are few times an accuracy of better than 60 ft is needed. The tables above show that only 8 digits need to be given which will locate you within 60 ft. If using decimal minutes, you would give “19.11, 49.30” for the SARA House (32° 19.108’, -110° 49.300’). If using decimal degrees, you would give “.3185, .8217” for the SARA House (32.3185°, -110.8217°). Using more digits goes beyond the accuracy of your GPS unit.

To reduce confusion of the short comings of lat/lon, many Land SAR units use UTM or USNG where measurements in both east-west and north-south directions use meters. Life would be so much simpler if we adopted one of those two formats. The reason we don’t, is the 911 system dispatch gives coordinates in the decimal degree format (ddd.dddd) and the helicopters (aviation) use the decimal minute format (ddd mm.mm).

SARCI Calendar–2019

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Apr 29	Apr 30	May 01 SRDI Meetings (18:00)	May 02	May 03 SARA Meeting (19:30) AZ SAR CON	May 04 AZ SAR CON	May 05 AZ SAR CON
May 06	May 07 <i>SARA BBP CLASS</i>	May 08	May 09 <i>MEDICAL CME</i>	May 10	May 11 <i>SARA Training Summer Skills</i>	May 12 Mother's Day <i>Divers Training Ft.Lowell Pool</i>
May 13	May 14 <i>SARA CPR CLASS</i>	May 15	May 16 SARA Board (19:00)	May 17	May 18	May 19
May 20	May 21 SAMSAR Meetings (18:00)	May 22	May 23	May 24	May 25 <i>SARA WFA CLASS</i>	May 26 <i>SARA WFA CLASS</i>
May 27 MEMORIAL DAY	May 28	May 29	May 30	May 31	June 01	June 02
June 03 MRA Conference	June 04 MRA Conference	June 05 SRDI Meetings (18:00) MRA Conference	June 06 MRA Conference	June 07 SARA Meeting (19:30) MRA Conference	June 08 <i>SARA Training TBA MRA Conference</i>	June 09 <i>Divers Training Black Mountain Reservoir MRA Conference</i>
June 10	June 11	June 12	June 13	June 14	June 15	June 16
June 17	June 18 SAMSAR Meetings (18:00)	June 19	June 20 SARA Board (19:00)	June 21	June 22	June 23
June 24	June 25	June 26	June 27	June 28	June 29	June 30
July 01	July 02	July 03 SRDI Meetings (18:00)	July 04 INDEPENDENCE DAY	July 05 SARA Meeting (19:30)	July 06 <i>SARA Training TBA</i>	July 07

SEARCH AND RESCUE COUNCIL, INC.

P.O.Box 44231, Tucson AZ 85733
Meet 3rd Wed 19:30 (Jan, Apr, Jul, Oct), details inside.

NEOTOMA COMPOSITE SQUADRON, C.A.P.

8540 N. Wanda Road, Tucson AZ 85704
Meet each Sunday 15:30-18:00, details inside

PIMA COUNTY SEARCH AND RECOVERY DIVERS

P.O.Box 13961, Tucson AZ 85732-3961
Meet 2nd Sun 09:00, details inside.

SOUTHERN ARIZONA MOUNTED SEARCH AND RESCUE

Details inside.

SOUTHERN ARIZONA RESCUE ASSOCIATION

P.O.Box 12892, Tucson AZ 85732-2892
Meet 1st Fri 19:30, SARA House, 5990 N Sabino Canyon Rd.

SOUTHWEST RESCUE DOGS

P.O.Box 64120, Tucson AZ 85728-4120
Meet 2nd Wed 19:00, SARA House, 5990 N Sabino Canyon Rd.

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