

Reston Century Bike Ride 2018 - *Final* Operational Plan

Mission: Provide continuous radio communications for the Reston Bicycle Club on Sunday, August 27, 2017.

Reference: Maps and Cue Sheets Published by Reston Bike Club are attached following the text of this document. For sign up, sign up review or modification see web site at [SignUpGenius](#) web site.

Hours of operations:

Net Control: 06:00 to 18:00 (or until event officially over)

Rest stops:

[Reston Town Center](#): 06:00 to 17:00

[Ashburn \(mile 10 and 93\)](#): 07:00 to 16:30

[Leesburg \(mile ??\)](#): 07:30 to 12:30

[Purcellville \(mile 48\)](#): 08:30 to 14:00

[Lovettsville \(mile 63\)](#): 08:30 to 14:30

[Old Mill \(mile 80\)](#): 09:00 to 15:30

NOTE: There will be a bike mechanic/shop at each rest stop.

NOTE: See information in the following pages for the address and other details of each rest station.

Roles and Definitions:

Before we get too into the weeds let's talk about the various roles we'll conduct during the event.

- **Rest stop** - In this role you will set up, operate and break down the communication at one of the rest stops. This is a key role since all of the riders will pass through one of these stops and could need help or want to pass some information to the event staff. This can be a very busy role at times. For example, the Reston is the busiest at the beginning and the end. But you'll get the "whole picture" of the race as it starts and finishes and you'll hear everything in between. This stop is also open early (6am) and won't close until around 5-6pm. At Reston you may be asked to pass information to event staff during the ride.
- **SAG (Support) vehicle** - Jump in with both feet!! Use your vehicle, radio and APRS to assist in this ride critical role. It's essentially the primary need from the bike club. That is to pick up people who need help along the route. Everything we do will be to help the rider that can't make it for whatever reason. It is worth noting here that your actual out of pocket expenses related to this event will be provided for.

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- **NCS** - The “command center”. This is where all the telephone calls from riders, local and state police, event staff and others will reach out to us to let us know they need help, inform us of safety issues or otherwise run the event. You won’t physically interact much with people but you’ll touch everyone.
- **OTHER** - There are many other things you could do for the event. Photography is need. Someone who can tell a good story with pictures, blog posts, Instagram updates, etc.

Procedures:

NOTE: THIS IS A RAIN OR SHINE EVENT. THERE IS A 100% CHANCE THAT THE EVENT WILL TAKE PLACE AND 50% CHANCE OF RAIN WITH WIDELY SCATTERED THUNDER SHOWERS. THE NCS WILL RUN 100% OF THE TIME ON ALL BANDS IN ANY WEATHER INCLUDING A THUNDERSTORM.

Communications will take place on a directed voice net. All communication will be on the primary frequency unless directed by net control to secondary frequencies for the handling of traffic. The net control will be located at the home of John Westerman (W5ODJ). Net control will use the call sign of K4LRG. The NCS will be addressed at “NET”.

The Net **primary frequency** will be **simplex 147.480 MHz, no PL tone**.

The net **secondary frequency** will be N4FSC Repeater - 145.31 MHz (PL 77). The repeater coverage will be validated in the coming weeks. If it is determined that the repeater can not cover the route we will move to simplex as primary and repeater as secondary.

A **cross band repeater** in **Reston** provided by Rick Miller (N1RM) will utilize 445.925 MHz using sub-audible tone of 100 Hz for the uplink in Reston to the simplex 147.480 net frequency. The sub-audible tone is used to reduce interference that is experienced in the Reston Town Center.

Tertiary Frequency - The WA4TXE/R Repeater in Leesburg, VA which operates on 146.700 MHz with negative 600 kHz offset and with NO PL tone. Thanks to Dave for the use of his repeater for this event should that be necessary.

In the case that all of these methods do not work NCS will use a list of cell phone numbers to garner support.

Utilization of the APRS system will provide SAG vehicle location information primarily at the net control station but may also provide mapping visibility at the rest stops. The APRS systems will use 144.390 MHz for its operations. There is a digital APRS repeater and iGATE (Internet Gateway) permanently set up at the QTH of W5ODJ which will cover most of the route. If any of the SAG volunteers

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would like to use APRS.fi on their mobile phones I am happy to help show you how to set up and use this tool to augment the location information on the maps.

Contacting Net Control via the Public Phone Network:

The primary phone number for the event to get to net control via the public telephone network is: (540) 882-4887.

This phone number will go into a software defined PBX and the caller will be given an announcement and put in to a queue for call handling. Calls are handled first come first served basis, without priority.

There will be multiple phones with multiple line instances at net control. There will be no limit to the number of inbound calls we can field at one time. However, there will only be 2-3 control operators active at any given time. It is possible to assist in NCS duties with your own phone at your QTH. If you have an interest in doing this let me know and I'll do my best to make it happen for you.

This phone number has been printed on all the wrist bands and documentation given to each rider participant. This number was active and last tested as of August 14, 2017;

Use this number if all your other communications to net control have failed.

NOTE:

IN AN EMERGENCY WHERE SOMEONE IS CRITICALLY INJURED OR THEIR LIFE OR THE LIFE OF OTHERS IS THREATENED PLEASE CALL 911 FIRST THEN CONVEY THIS INFORMATION TO NET CONTROL. IF SOMEONE CALLS NET CONTROL WITH A LIFE THREATENING EMERGENCY 911 WILL BE CALLED IMMEDIATELY AND WE WILL COORDINATE EMERGENCY SERVICE THE BEST WE CAN FROM NET CONTROL TO THE SCENE IN QUESTION.

Also note that particularly for locations on the higher elevations along the northern century route, 911 calls may get routed by the cell network to Frederick County instead of Loudoun County if you are on a Frederick cell tower which has happened in previous years. The suggestion in the event of making a 911 call, verify you are connected to Loudoun 911 or request transfer to Loudoun 911. This will expedite getting help to you.

ALL OPERATORS:

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Be sure that you can be self sufficient for food and water. I hope that you will be able to receive water at the rest stops and snacks but it is better to be prepared to take care of your needs independently. SAG riders especially need to take food and water with them. SAG riders will be able to take care of rest stop needs when they arrive back at the rest stop after covering their route.

Things to consider that you may want to have on-site at your rest stop:

- ★ Assume it will be raining all day!
- ★ Temporary tent (“soccer mom” type temporary push up) - borrow if you do not own
- ★ Pop-up or folding table to operate from
- ★ Electrical tape
- ★ Duct tape
- ★ 3 pound sledge hammer
- ★ Warning flagging for guys
- ★ Rope
- ★ Tarp for sunshade
- ★ Misc tools
- ★ Hammer and nails
- ★ Step ladder
- ★ Chairs to sit upon
- ★ Cushion
- ★ Food and drink
- ★ Notebook for logging
- ★ Printed “Operations Plan”
- ★ Printed route maps

Things to consider for your radio and radio support equipment:

- ★ Good antenna
- ★ Plenty of coax
- ★ Some type of mast with mounting tripod to get antenna off the ground
- ★ Guy ring, guys, and stakes
- ★ Concrete block and rope
- ★ Battery
- ★ Generator
- ★ Laptop
- ★ Internet Access if you can

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Schedule:

Site installations at rest stops should start with 30 minutes earlier than the times given above. When you arrive at your station and are getting set up give network control a call to let them know you are there. Station captains will decide on exact time for setting up their stations at the rest stops which could be earlier than the times given here. Riders will be leaving the town center at 6:30 am. Between 06:00 and 07:00 we will be testing with the various stations providing signal reports and other information. Full net operations will commence at 06:30 in support of the ride. All stations should note during the test period what stations they can receive and provide a report to net control when asked.

APRS Operations

If you do not have APRS gear please give us a heads-up so we can locate/allocate equipment for you. If you are a SAG driver/rider we are expecting that you have a full VHF/UHF setup with APRS available to you. APRS gives us the situational awareness that will keep the OTA radio chatter to a minimum.

APRS Identifier for SAG: For each SAG driver APRS please encode the APRS identifier using this methodology: APRSID will be RBCSAG-x, where x is your unique number.

APRS Identifier for BIKE: For each BIKE driver APRS please encode the APRS identifier using this methodology: APRSID will be RBCBIK-x, where x is your unique number.

NOTE: For FCC compliance please put your call sign in the information part of each APRS packet. Please program your call sign into the message portion of the packet. This is an FCC requirement. All NCS needs to know is the call sign of the APRS device to track it in the system. If your call sign will be non-standard, please let NCS know your call sign prior to the day of the event so we can get them in the system(s).

Follow along: Go to <https://k4lrg.org/aprs.html> for a current map of the event as seen from APRS.

SAG RIDERS/DRIVERS

See specific information below on when/where/how to meet your driver if you are not using your own vehicle. I highly recommend that you use the information in the spreadsheet to call your partner rider by phone prior to the event and organize a pick-up spot most convenient to each of you.

NOTE to SAG participants: Mechanic skills are not needed to support the SAG effort. Most times, the rider can fix his/her issue, with a little help

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from us. Some basic tools would be nice to carry, (allen wrenches, various screwdrivers, small wrenches ,etc). If these don't work, then we pick up the biker and take them to the next rest stop. There is a bike mechanic at each rest stop that can fix the bike, allowing rider to continue. Being a mechanic is not a requirement for LARG people.

Other considerations:

You may want to coordinate in advance with your SAG driver to get permission/ access for their vehicle for:

1. leg room to park your radio(s),
2. temporary magnet mount antenna(s) on roof, and
3. 12VDC power (lighter socket, for example). If no power is available (often their socket is already full!), plan on bringing your own
4. 3-way lighter socket adaptor (for more holes to poke!), or
5. a modest 12VDC battery, in a nice & safe protective box.

SAG participants and associated RBC Member assignments are as follows.

NOTE: The lists below will be filled out during the last days of the week prior to the event. Until then the definitive list of participants without detailed contact information will be [SignUpGenius](#). Please go there for more details until this information is made available.

For contact information for all SAG drivers that we will be using for this event please see the RBC contact document. Print this information and have it handy with this plan so we can reach the SAG drivers by phone as necessary.

NET CONTROL

Net control will establish the net at 06:00 and will begin station check in and testing when they come online. All sites, SAG riders and stations should remain operational until told to secure by net control. It is estimated this time will be before 17:00. NCS will transfer to Reston Town Center towards the end of the event. The phones will be manned until 18:00.

Net control will be attended by:

POS 1: John Westerman, W5ODJ, (703) 431-9148

POS 2: Dave Putman, KE4S

POS 3: Daniel Vrolijk, W5DJV

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LOGS:

Each station leader indicated below will keep two logs; one for the operations and one for contacts of anyone interested in what we are doing and how we can reach out to them after the event. Please try to keep them electronically. Scribbling paper documents after the event is time consuming and generally doesn't happen.

LARG Member Participation

See information below for all of the details for participation in each station and each SAG.

Rest Stop Hours, Groups Served, and Addresses.

RBC primary contact to LARG: Ed DiMonda, (703) 850-0385

Reston Town Center

06:00 to 17:30;

All Groups – mile 0 and finish

FULL MECHANICAL FACILITY

GPS: 38.9586268,-77.3577234

APRS: rbc-rtc

Ashburn

Carolina Brothers BBQ

20702 Ashburn Road

Ashburn, Virginia 20147

07:00 to 16:30

All Groups – miles 10, 26, 55.7, 94

FULL MECHANICAL FACILITY

GPS: 39.0436138,-77.4874769

APRS: rbc-ash

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Leesburg

400 Madison Trade, Plaza SE
Leesburg, VA 20175
Rest stop is directly in front of Transition Triathlon.
07:30 - 12:30
FULL MECHANICAL FACILITY
GPS: 39.1095132,-77.5634707
APRS: rbc-lee

Purcellville

End of the W&OD Trail
Close to the [Velo Classique](#) bike shop and Magnolias restaurant.
08:30 to 14:00
Century only – mile 48.7
FULL MECHANICAL FACILITY
GPS: 39.1374699,-77.7160994
APRS: rbc-pur

Lovettsville

[Lovettsville Community Center](#)
57 E. Broad Way
Lovettsville, VA 20180
Ph: 540-822-5284
08:30 to 14:30
Century only – mile 62.4
FULL MECHANICAL FACILITY
GPS: 39.2698441,-77.6338377
APRS: rbc-lov

Old Mill (Hamilton Station Rd/Irene)

[Loudoun Mill](#)
39098 Irene Rd.
Hamilton, VA 20158
(540) 338-7161
09:00 to 15:30
Metric and Century groups – miles 42.1, 80.2
FULL MECHANICAL FACILITY
GPS: 39.1436829,-77.6525349
APRS: rbc-mil

NOTE: in the event of heavy or sustained rain, portions of the Old Mill site are prone to flooding. Site operators should select a location with that in mind or be prepared to relocate or operate from a vehicle.

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Bike Marshals:

Generally there are 1-3 licensed hams riding in the race to keep an eye on things from the ground. For details on who the bike marshals are please see the RBC documentation for contacts. Print this information and have it handy with this plan so we can reach the bike marshals by phone as necessary.

MAPPING

If you are interested in mapping the route there are two internet sites you can track our progress on the web:

1. <https://www.aprsdirect.com/>
2. <https://aprs.fi/>

I use these because there is no good stand-alone mapping software that I've found. The following search/filter string for the ride was roughly will get you the majority of the stations we will be using today:

**rbc-ncs,rbc-lov,rbc-rtc,rbc-ash,rbc-mil,rbc-pur,rbc-lee,rbc-sag-
*,rbc-bik-***

You can use this search string to start and then change as the ride continues. I will do my best to make the list as complete as I can before the race starts. You may have to augment your data with what you hear over the air or look at what's tracking in your area during the race.

There will be a web site published with all of this information pre-loaded into a map. Keep an eye out for the link. **Please also not that this function may not be working in 2018 due to a problem with Google and [APRS.fi](https://aprs.fi/).**

Feel free to make your own wild-card view list and use it on your own maps. You can choose what you want to view from there.

SIGNING UP

To be a part of the support team supporting the event please go to this URL, pick a slot you prefer and sign up for the time you have available:

<http://www.signupgenius.com/go/20f044daba92ca0ff2-reston>

If you have any questions or would prefer that I help you sign up for the even please let me know.

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EPILOGUE

One last request: Please take photographs of your station, SAG operation, NCS or anything else you may think might going well on the public web site. We will be putting together a section on the event which will be published to the public. Even if it's one photograph with a few words it will be very beneficial to put on the web.

This document is a work in progress and we put all the details together. Information comes at me daily and as a result these documents will change. Keep an eye out for the changes. New documents will be published with the date of the change so you can always tell if you have the latest document compared to what you have already received.

If you have any questions don't hesitate to contact me. E-mail is fine, but if you need a quick answer please call my phone number given here.

Above all, Have fun!

In memory Frank Gentges (K0BRA), Charlie Preston, (K4LJH), Norm Styer (AI2C) and Dale Harrison (K3CN). All were big supporters of this event and ham radio in general. They were our teachers, family and friends. They are missed.