EMRG

Emergency Measures Radio Group

and

Ottawa ARES

Two Names - One Group - One Purpose

General Meeting - Jan 31, 2004

AGENDA

- Introductions
- EMRG Update
- Exercise
- Emergency Response
- Group Exercise
- Community Repeaters
- Packet Radio

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Emergency planning starts with YOU!

Emergency Management exists at all levels of Government

- Facilitate problem solving and resource acquisition for emergency response
- Monitor, plann and prepare (resource contacts, emergency plans, exercises) in times of no emergencies

City of Ottawa **Emergency Measures Unit (EMU)**

- The City provides direct services, Fire, Police, EMS, Roads, Shelters, Water

Province **Emergency Management Ontario (EMO)**

- Provides Province wide co-ordination, funding and field specialists
- Minimal field resources (co-ordinators, not response workers)

Federal **Public Safety & Emergency Preparedness Canada (PSEPC)**

- Provides Canada wide & global co-ordination, funding, field specialists and the military
- Minimal field resources (co-ordinators, not response workers)

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Emergency Planning - More Than Response

Emergency planning identifies potential disasters that could happen in an area, then looks at;

- the probability that each specific type of disaster can happen
- options to reduce the likelihood of it happening
- options to reduce the impact if it happens,
- plans for how to respond if it does happen.

Example: Flooding may have a high probability in low lying areas.

- Higher dykes or overflow channels can reduce the likely hood of it happening
- Zoning plans that limit the type of use for low lying areas, such as for parks rather than homes can reduce the impact if it does happen
- Plans identify where people will be evacuated to, how they get there and ensure there will be enough space and supplies if it does happen

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The Role of EMRG In An Emergency

The role of EMRG in an emergency is to supply telecommunications support as part of the humanitarian effort in our communities, by providing radios & radio operators for organizations who;

- do not have a communications infrastructure (i.e. People Services, Red Cross, local citizen patrols)
- need a backup solution (i.e. Hospitals)
- need to to communicate with organizations who are on different communications systems (i.e. Red Cross, People Services, Salvation Army, Saint John Ambulance)

EMRG does not exist to back up the City's radio system used by Police, Fire and Paramedics. We will give everything we have, if needed, but the capacity required is beyond the limits of what Amateur radio can supply.

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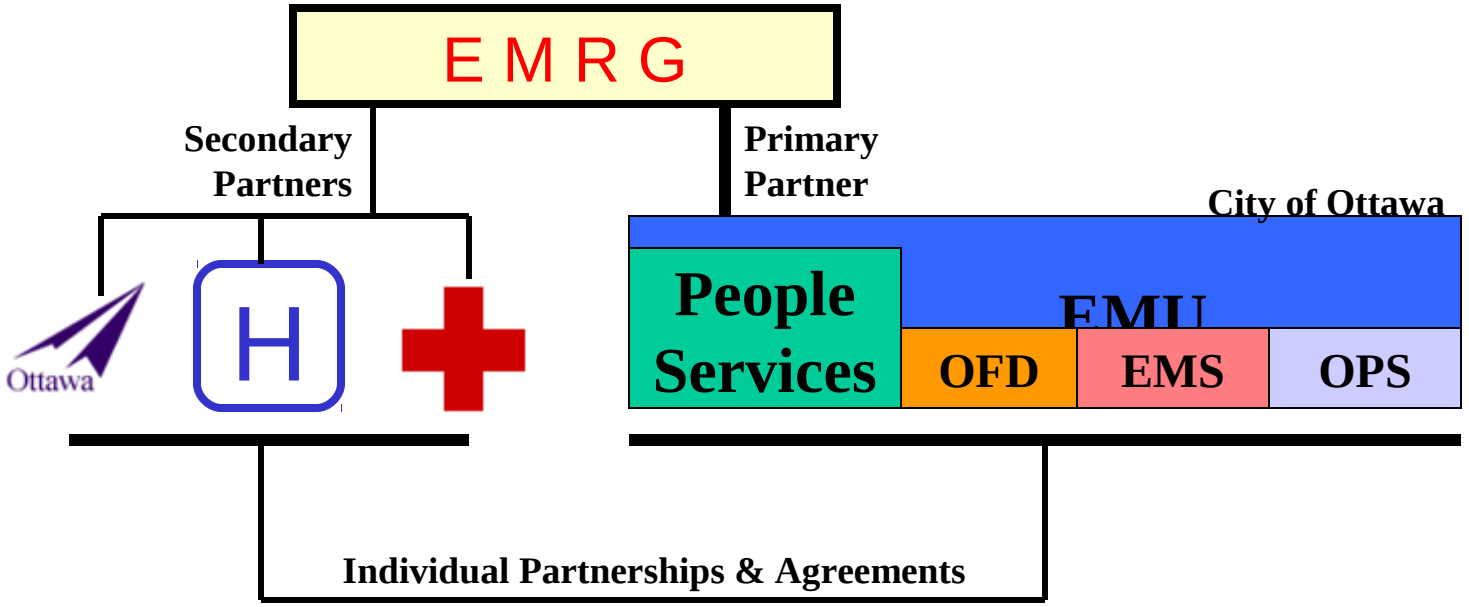
EMRG Partners

EMRG partners with several organizations, BUT the City of Ottawa, Emergency Measures Unit is the primary partner. In the event that there are insufficient EMRG resources, EMU will assign priorities for EMRG.



Ottawa Is Now One City With One Emergency Radio Group!

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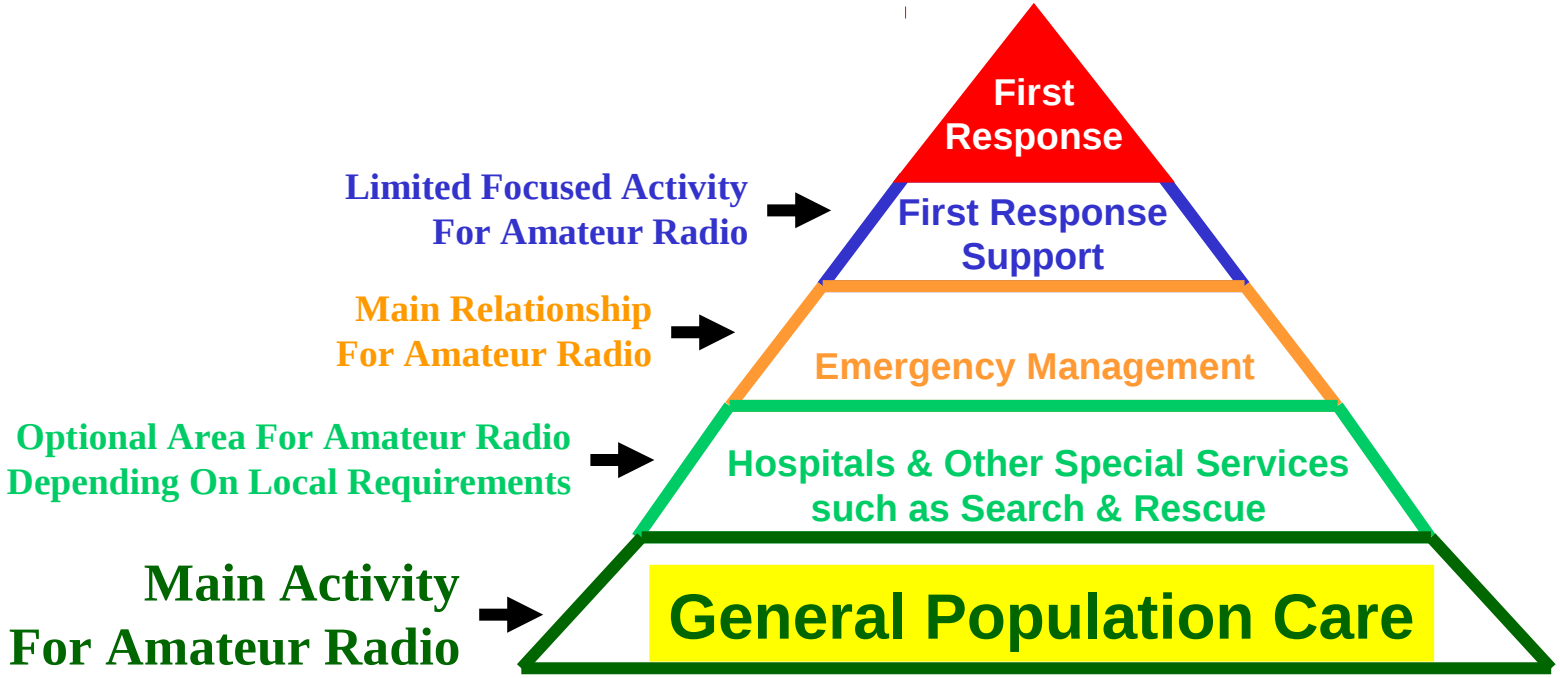
EMRG In The City Wide Picture

EMRG officially reports to the Emergency Measures Unit. But in an emergency, most EMRG activity will be co-ordinated directly with People Services.



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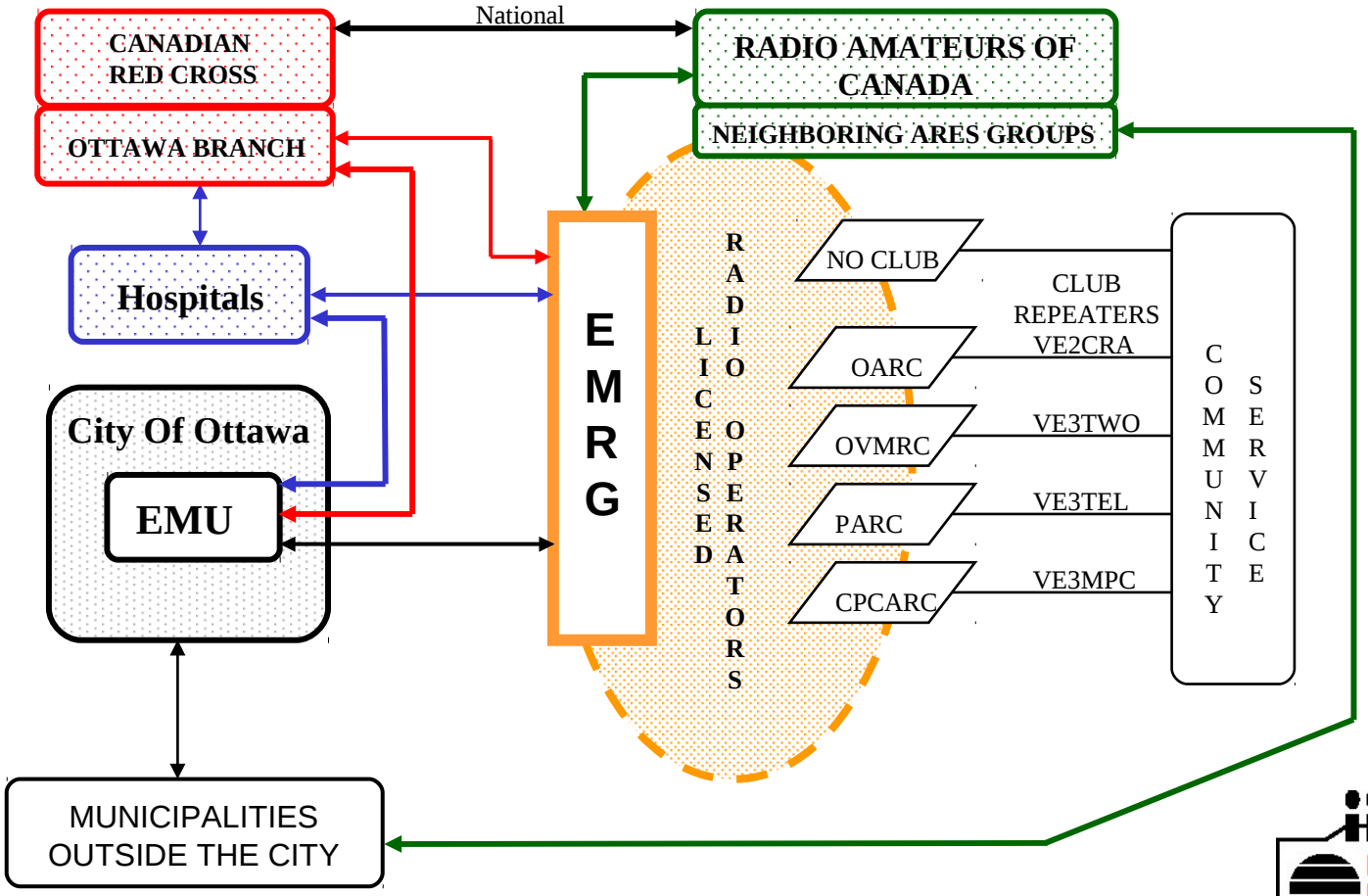
EMRG In The Amateur Community

EMRG is the interface between Amateur Radio & Emergency Agencies in Ottawa. Neighbouring Municipalities can request assistance directly through the City of Ottawa EMU, or through their local ARES group.



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Communications Requirements

Each EMRG partner has slightly different requirements, but the critical common component is the ability to provide communications across the City of Ottawa.

City of Ottawa

- Provide communications across Ottawa
- Provide communications with neighbouring municipalities

Red Cross

- Provide communications across Ottawa
- Provide communications with neighbouring municipalities
- Provide communications across the Province

Hospitals

- Provide communications between the hospitals in Ottawa, the EOC and EMS dispatch
- Provide communications with neighbouring hospitals in Eastern Ontario and Quebec

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Getting Messages Through

The best method available should be used to send a message. This could be the telephone, fax, email, cell phone, Amateur Radio or a runner.

The "Best Method" offers clarity, reliability, accuracy and speed

Messages should be sent to the nearest location that can provide a better method of communications.

If phone service is out in the Eastern half of the City and a message is destined for Toronto, the best method for sending this message is to use FM voice or packet to get the message to a location in the West end of Ottawa and from there, phone or fax the message to Toronto

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Challenges

There are two main challenges to providing communications across the City of Ottawa

Sealed Buildings - Concrete, Glass & Steel Boxes

- Radio communications is often difficult from inside with hand held radios or cell phones (especially from the centre of the building)
- There are few entrances (difficult to step outside to use the radio) and no way to run cables outside to an antenna.
- Hospitals are most challenging due to limits on radio power inside the building, access controls due to SARS.

Distance & Terrain

- Communities which are below or behind a major hill, making communications within the area and from the area back to the core of the City difficult.
- West Carleton is an extreme example, with Fitzroy Harbour, Constance Bay and Carp all on different sides of hills, plus significant distance back to central Ottawa.

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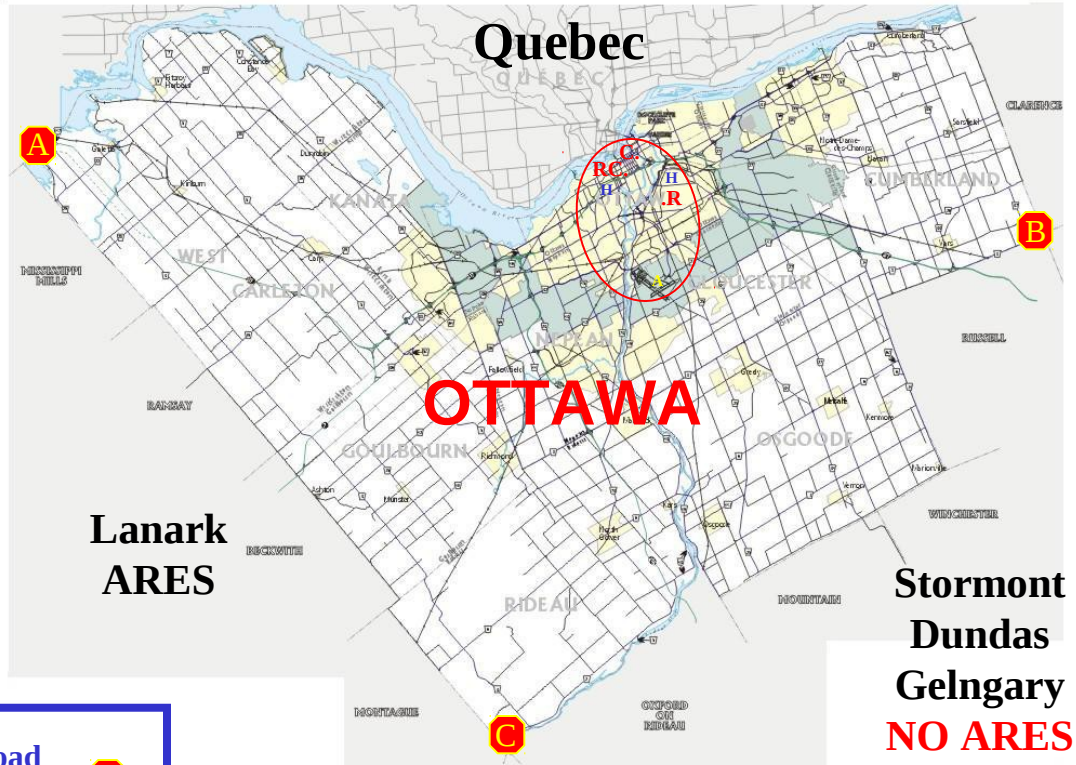
Ottawa is a large City!

Renfrew ARES



Prescott & Russell ARES

Lanark ARES

Stormont Dundas Gelngary
NO ARES

Leeds Grenville ARES

A ← 110 km by road / 85 km by air → B

City Hall ← 50 km by air → A
City Hall ← 35 km by air → B
City Hall ← 50 km by air → C

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First 24 Hours Is Critical

Amateur radio can make its greatest impact in the first 24 to 48 hours of a disaster while information is being gathered, decisions are being made and normal communications systems are damaged or inoperable.

Planning and Practice help ensure that

Amateur radio can be activated and

deployed as quickly as possible

Within 24 to 48 hours of a disaster, commercial backup systems will be deployed to replace or increase existing communications capabilities, relieving some of the communications pressures.

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How Many Amateurs Is Enough?

What To Do If There Aren't Enough?

Quality Vs. Quantity?

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How Many Amateurs Are Required?

The exact number of amateurs available and required in an emergency cannot be predicted or planned. Amateurs are volunteers and family comes first!

Effective communications requires a lot of people!
With **2** amateurs per location and **3** shifts of **9** hours per day, each location will require **6** amateurs per day

Simple Evacuation:

EOC + Red Cross + NCS + 2 shelters = **30** amateurs per day

Hospital Back Up:

- EOC + Montfort + CHEO + General + Civic + Heart Institute + EMS Dispatch + QCH = **48** amateurs per day

The 9 hour shift includes 8 hours on duty plus 30 minutes before the shift to get briefed plus 30 minutes after the shift to complete any paperwork.

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Managing Resource Expectations

Amateurs feel a duty to provide emergency communications

There is a misbelief that all amateurs share a sense of duty or responsibility to provide communications for community events or in an emergency. The reality is that only a subset of amateur radio that feels this sense of duty!

There are Hundreds of Amateurs in Ottawa to help

"Ottawa has 2000 amateurs" (Recent SUN newspaper article)

- That is really 2000 call signs, which reduces to around 1400 amateurs once club and duplicate callsigns are removed
- In Ottawa there are less than 200 amateurs who do all the community service and emergency service work.

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The Untrained Volunteer

Amateurs have always said, that in an emergency there will be plenty of Amateur volunteers. They will come out of the woodwork to help when they are really needed!

<u>How To Use Untrained Amateur Radio Volunteers</u>

- Don’t know where to go
- Don’t know who is in charge
- Can’t be placed in secure sites
- Skills, equipment and attitude are unknown

Some jurisdictions now say “Send Them Home”!

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EMRG Response Plan

The EMRG plan for managing resources in an emergency, is to ensure there is a skilled core group, who can organize, manage and partner with Amateurs who come to help in an emergency!

Do we have enough people for a core group?

Are there more Amateurs in Ottawa who would like to participate in EMRG if they knew more?

How do we find interested amateurs, inform them and get them involved?

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Group Exercise

Based on what we discussed today and what you know from experience, as a group, find at least 1 answer for each of the following questions

- **Why do YOU participate in EMRG?**
- **Why do more Amateurs NOT participate in EMRG?**
- **What does EMRG do best?**
- **What does EMRG do worst?**
- **What are you willing to do to make EMRG better?**

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Community Repeaters

Designed to provide portable and mobile coverage in the local area, to support activities such as Shelters and Citizen Patrols

Located on antennas which were formerly Ottawa Fire Dept radio sites.

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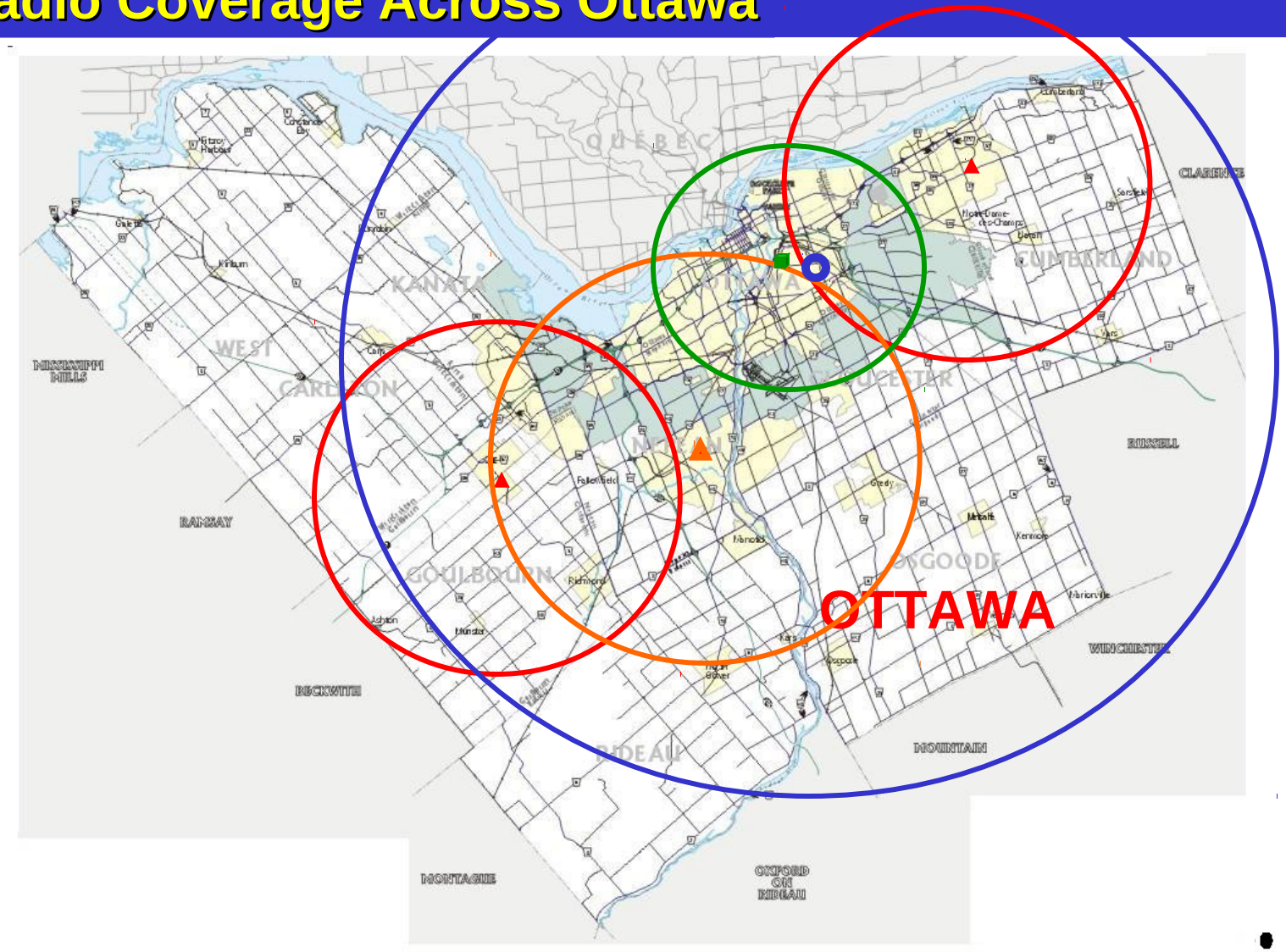
Radio Coverage Across Ottawa



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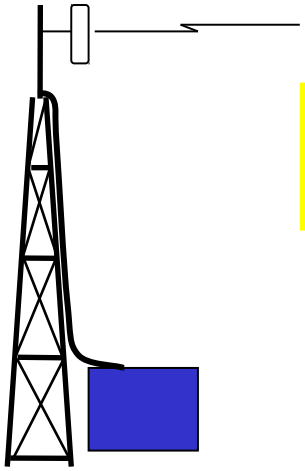
East & West Repeaters



Community Repeaters

Designed to provide portable and mobile coverage in the local area

- Same frequency across the City
- CTCSS Tone on Input & Output
- Use different CTCSS at each site

Cumberland (Eastern Community Repeater)

Band	VHF	Tone (Hz)
TX Frequency (MHz)	146.9850	77.0
RX Frequency (MHz)	146.3850	77.0

Stittsville (Western Community Repeater)

Band	VHF	Tone (Hz)
TX Frequency (MHz)	146.9850	146.2
RX Frequency (MHz)	146.3850	146.2

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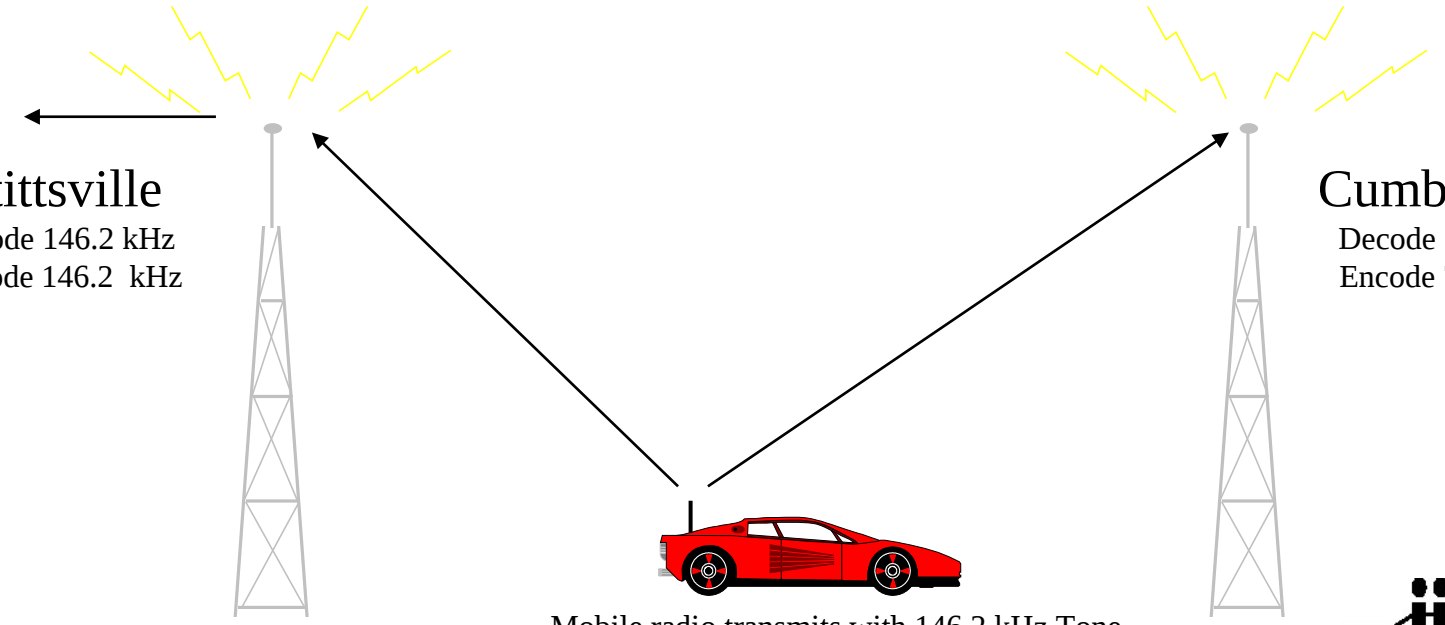
CTCSS Tones Required

CTCSS Input & Ouput tones are required to ensure that a user, within range of both repeaters, only activates the repeater they want.

If the Cumberland repeater was being used locally, they may experience interference, if the signal from the mobile, is as strong as the signal from the local users.



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