



Supplementary Information

Oral presentation

Presentation from Durham Nuclear Awareness

In the Matter of

Ontario Power Generation Inc.

Application to renew the Power
Reactor Operating licence for the
Darlington Nuclear Generating Station

Commission Public Hearing
Part 2

November 2-5, 2015

Renseignements supplémentaires

Exposé oral

Présentation de Durham Nuclear Awareness

À l'égard de

Ontario Power Generation Inc.

Demande concernant le renouvellement
du permis d'exploitation pour la centrale
nucléaire de Darlington

Audience publique de la Commission
Partie 2

2-5 novembre 2015



DNA

Darlington Emergency

Preparedness Presentation

Intro to DNA presentation: Janet McNeill

Oraclepoll Research: Dr.Paul Seccaspina

Where are the gaps?: Barbara Pulst



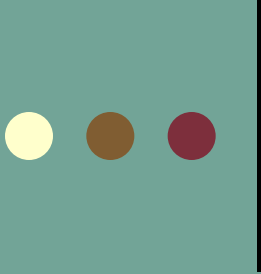
Darlington Emergency Preparedness Poll

by



oracle**poll**

R E S E A R C H

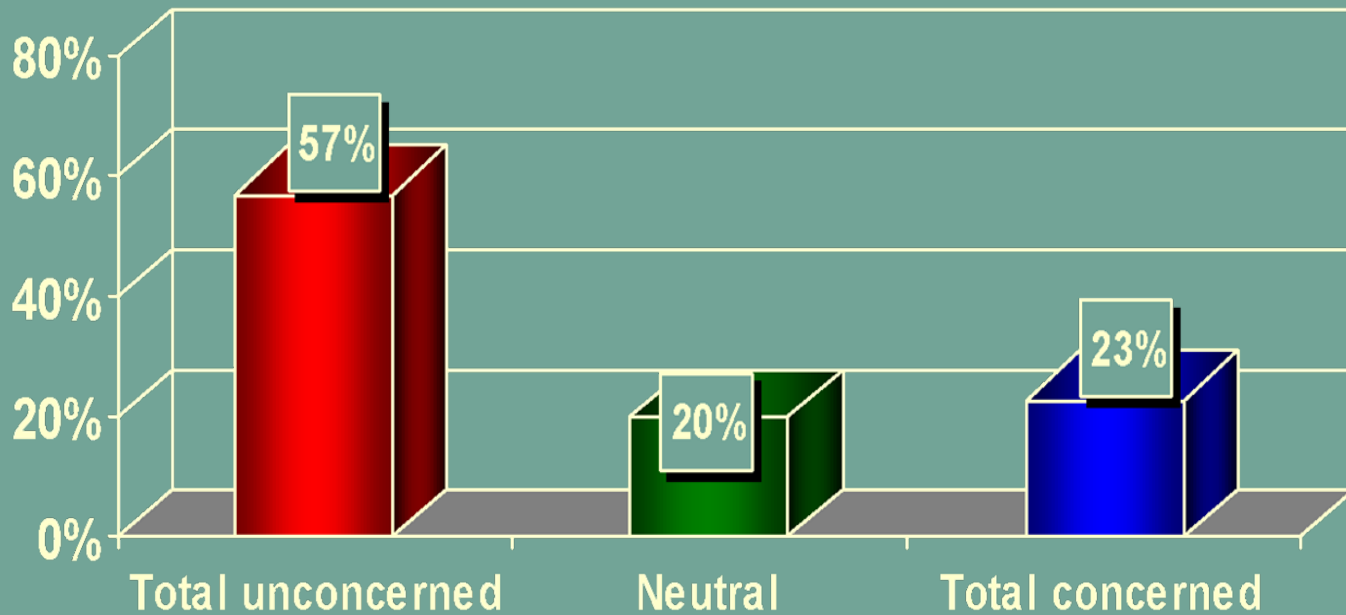


OVERVIEW

- Conducted N = 500 telephone interviews with individuals living within a 10km radius of the Darlington Generating Station.
- Poll conducted by person to person live operators between August 13th and August 21st 2015.
- The margin of error for this 500 person survey is +/- 4.4%, 19/20 times.
- In total 28% of the final sample (n=141) lived within a three kilometer radius of the Generating Station and 72% (n=359) outside of the three kilometer area up to 10 kilometers.

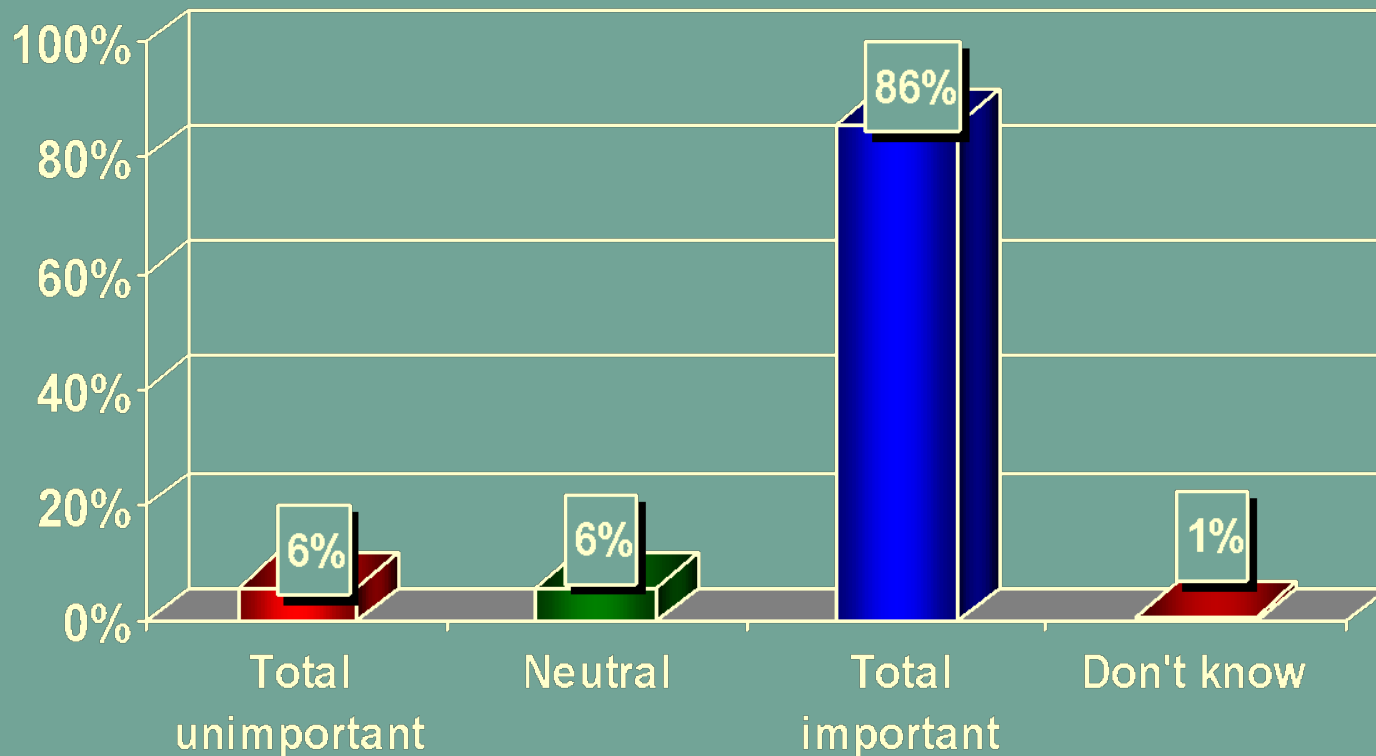
LEVEL OF CONCERN

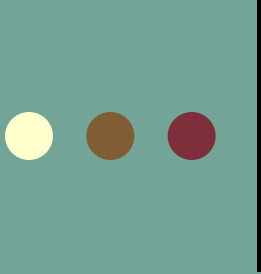
“How concerned are you about a possible accident at the Darlington Nuclear Generating Station?”



EMERGENCY PLANS

“How important is it to have detailed nuclear emergency plans in place to protect Durham residents from a Fukushima scale accident at the Darlington nuclear station? Please use a scale from one (not at all important) to five (very important).”



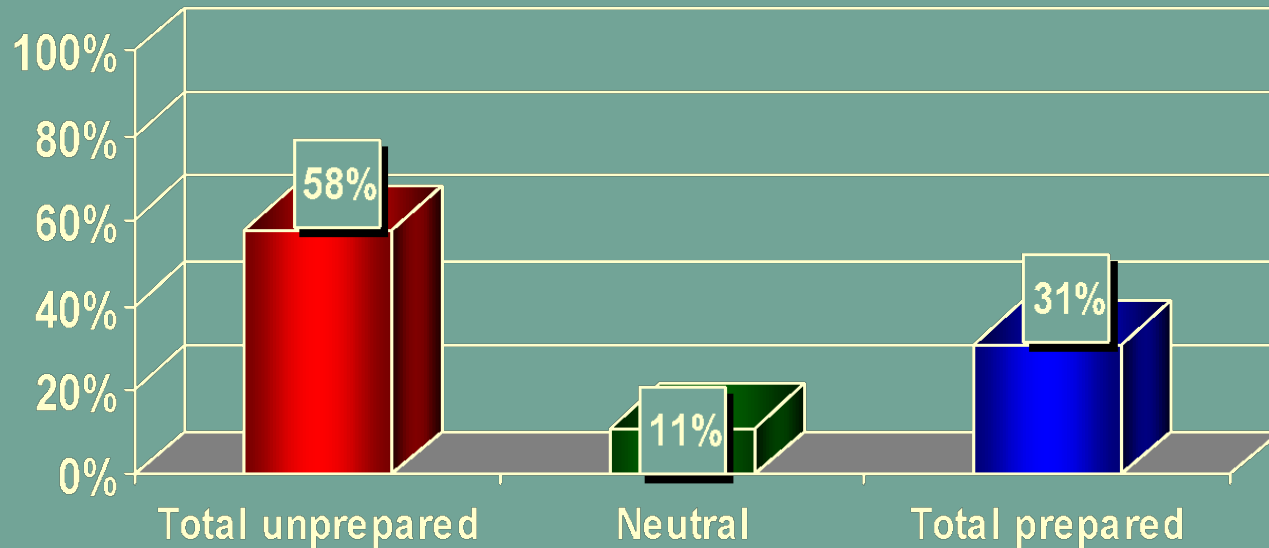


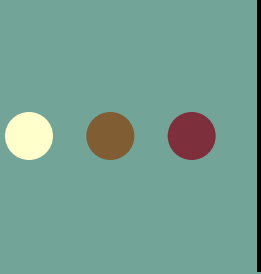
AWARENESS EMERGENCY PLANS

- **Highest level** of awareness related to the need to listen to accurate media sources (**54%**), followed by when to use KI potassium pills (**54%**).
- Awareness was **lowest** and unawareness highest for self decontamination (**71%**) and the location of monitoring stations (**72%**).
- Lack of awareness was also **high** as it related to the location of the emergency shelters (**63%**), of emergency plans in place for children, seniors and others (**59%**) and the location of public reception centres (**61%**).
- Lack of awareness of evacuation plans: **56%**, evacuation routes: **51%** and remaining in place: **52%**.
- **Split opinion** on the issue of the meaning of emergency sirens **49% aware** and **43% unaware**.

PREPAREDNESS FOR AN ACCIDENT

“Overall how would you rate your level of readiness or preparedness for a possible accident at the Generating Station?”

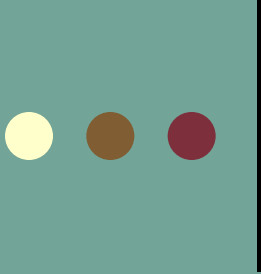




PREFERRED SOURCES FOR INFORMATION

***“What is your preferred source to get information
in the event of a nuclear accident?”***

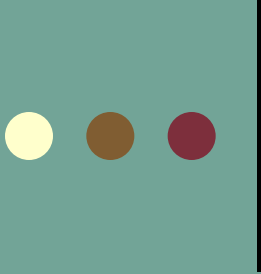
Radio	25%
TV	21%
Website / Internet	19%
Police	11%
Don't know	6%
Social Media	6%
Media (not specified)	5%
Email	4%
Door to door	2%
A phone call	1%
From the Station	<1%



ENGAGING THE COMMUNITY

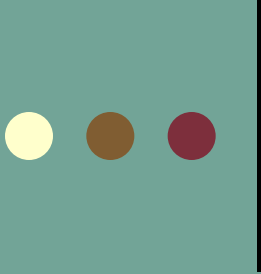
“In your opinion, what would be the most effective way to engage residents and the community to advise them about emergency planning, including evacuations and routes to follow?”

Information in the mail	22%
Public meetings	21%
Media (not specified)	12%
Social media	10%
Television	10%
Newspaper	8%
Websites	5%
School/ workplace visits	4%
Tours of the Station / open houses	4%
Don't know	4%



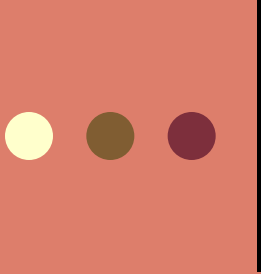
FAMILY EMERGENCY PLANNING

- A very high per centage (**80%**) of residents do not have an emergency plan in place in the event of a nuclear emergency.
- **Only 29%** were aware of EP for children, seniors or others at public institutions in the community.
- **Only 17%** of residents who will be separated from family or those close to them during an emergency have a plan in place to reunite with them.
- **92%** have a vehicle at their residence.



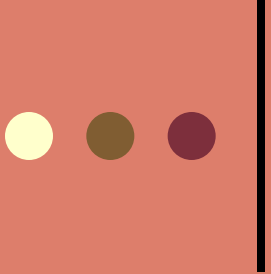
INTEREST IN INFORMATION

- **93%** request info on emergency reception centres
- **88%** request contact information of sources
- **88%** request info about sheltering-in-place
- **85%** request info about public alerting systems
- **83%** request maps with evacuation routes and info about KI pills



Report on CNSC & OPG CMD's

- Prevention: Safety Analysis
- Mitigation: Defense in Depth, Fukushima Action Items, SAMG
- Preparedness: KI pre-distribution, Public Education & EP Plans
- Response: Exercise Unified Response, Drills, Alerting Systems, Monitoring
- Recovery



Compliance?

Are EP plans being carried out?

- DNERP: Appendix G # 7

*Ensure all schools in the PZ provide **parents** and students, on an **annual** basis, with information concerning*

✓ KI pill

☐ Evacuation

☐ THC locations

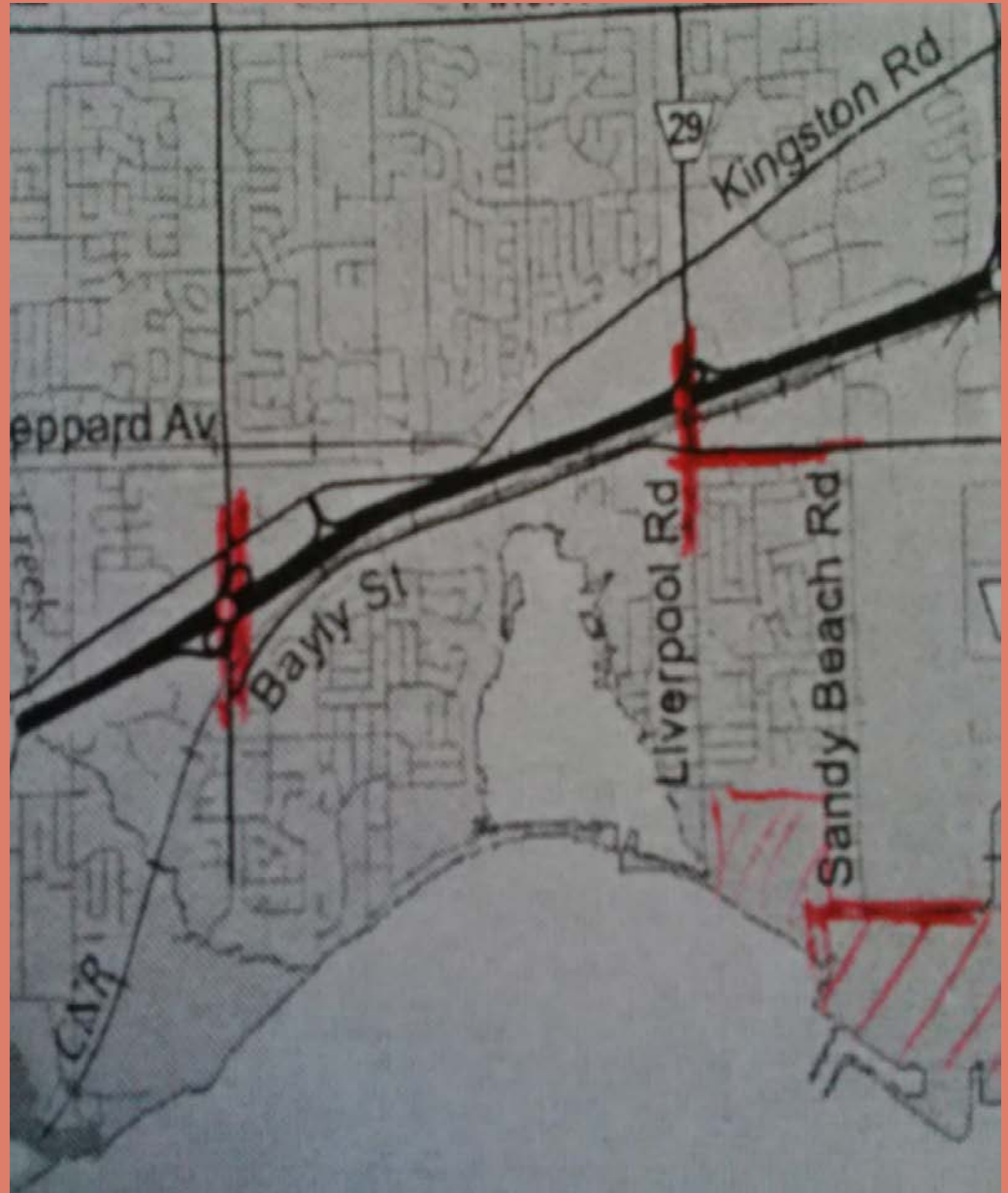
☐ Sheltering

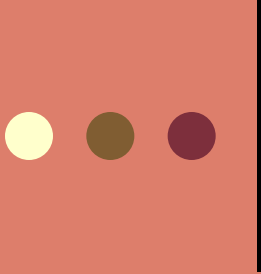
EDR routes are not designed for nuclear evacuations. They may in fact bring people closer to the nuclear plants.



Traffic

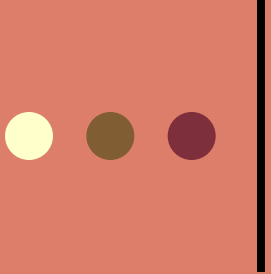
- May 12, 2015:
Three Durham
Regional Roads
had
simultaneous
construction -
with traffic down
to one lane
- 'Entry control'





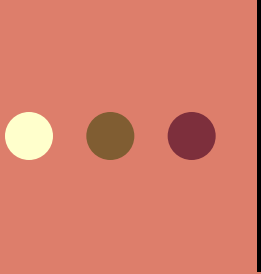
BFS Study on Emergency Management Germany in Case of Nuclear Power Plant Accidents Similar to Fukushima, 2011-2012

- Catastrophic Accident - effects of INES 7 event
- Long lasting large radioactive release of up to 30 days
- Findings:
 1. 'Sheltering', 'evacuation' and 'ki pills' were needed over a much larger area than originally planned for.
 2. 'Sheltering' increased risk of late evacuation with increased nuclide concentrations in the atmosphere.
 3. The # of planning zones needing to implement *Protective Measures* can increase rapidly.
 4. A one time ingestion of KI is not sufficient.



Totally Important

- 86% of people polled in the Primary Zone feel it is important to have a detailed plan in place to protect residents in the event of a Fukushima-scale accident.
- The Emergency Management and Civil Protection Act states: *(4) The Lieutenant Governor in Council may designate a municipality to address a specific type of emergency in its emergency plan and, if so required, the municipality shall include the type of emergency specified in its emergency plan. 2002,c.14,s.5 (2)*



“Personal Preparedness is up to you.”

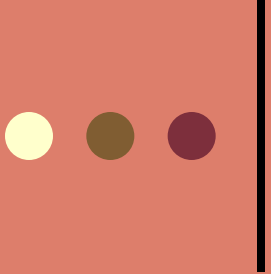
Warren Leonard, DEMO

People want to know where the Emergency Centres are that they would need to go to.

People want to know who the reliable sources are whom they can contact for up-to-date information.

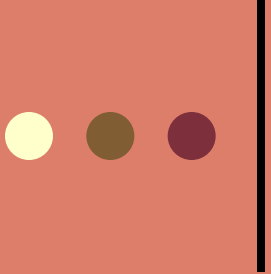
People expect the emergency plans to keep pace with current knowledge, which should be based on planning around a Fukushima-scale accident.

People are not making family plans - and Durham Region emergency preparedness public education materials evade nuclear-specific actions and/or recommendations.



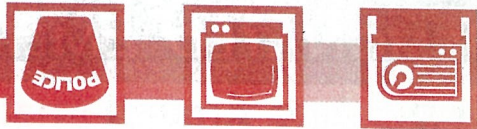
Conclusions

- No real change since 2012 hearing
- Still ignoring lessons from Fukushima
- Still no update in emergency planning
- JRP recommendations ignored
- Public not being protected
- Study of true impacts being hidden
- DNA and public are insisting on better emergency planning & protection: emergency measures for a Fukushima-scale accident



Recommendations

- Full endorsement of CELA's 16 recommendations
- OPG must come into compliance with REG.DOC.2.10.1
- Evidence-based decision-making with full public consultation re: planning basis for proper, robust emergency plans



DO NOT EVACUATE UNLESS YOU ARE INSTRUCTED TO DO SO.

CHRO Cable 6
TELEVISION:
CJMJ 100.3 (Magic 100) FM
CHVR 96.7 (Star) FM
CJRA 580 AM
RADIO:

Stay calm. Go indoors. Tune to one of the following local radio or television stations:

- by loud hailers on emergency vehicles, call, or
- when you receive an automated phone call, or

You will be notified about a nuclear emergency:

FINDING OUT ABOUT THE EMERGENCY

Take a moment now to review the map here.

The best response is a prepared response.

BE READY IN ADVANCE

DON'T WAIT FOR AN EMERGENCY —

YOU LIVE NEAR THE CHALK RIVER LABORATORIES...

If there is an emergency at Atomic Energy Canada Limited's Chalk River Laboratories, the information in this brochure will help you respond appropriately and protect your safety. Provincial emergency planners, your local municipalities and ABCL-Chalk River Laboratories have developed procedures to deal with a nuclear emergency. By reading this brochure, you will be informed about these procedures and be aware of what actions you may need to take.

1



IF YOU ARE INSTRUCTED TO EVACUATE THE AREA:

Listen to the designated radio and TV stations, from the Province. Instructions to evacuate will refer specifically to areas marked on the map in this brochure.

- Go into your home, place of business or other occupied building. Bring children and pets indoors immediately. If necessary, inform other people to take shelter. Give shelter to pedestrians.
- Prevent outside air from entering the building by closing all doors and windows, turning down furnaces, turning off air conditioners or any other air exchange mechanisms.
- If you are in a vehicle, close windows and vents and proceed home or to the nearest occupied building.
- Stay tuned to designated radio and television stations for further instructions.
- Stay inside until authorities say it is safe to go outside.
- If you are directed to do so, when coming in from outside, remove clothing and seal in a plastic bag. Shower and put on fresh clothing and shoes.

IF YOU ARE INSTRUCTED TO TAKE SHELTER:

Protective actions such as sheltering indoors and evacuation will help protect you. Taking Potassium Iodide (KI) tablets will protect you against radioactive iodine only.

WHEN YOU ARE INSTRUCTED TO TAKE ACTION

2

5

PEOPLE IN HOSPITALS OR NURSING HOMES

The area hospital and nursing homes have emergency plans and will remove patients to similar facilities in Pembroke. Contact the individual institution to check what these arrangements are as part of your family's emergency planning.

For additional information on emergency preparedness, contact either:

Emergency Measures Ontario
25 Grosvenor Street, 19th floor
Toronto, Ontario M7A 1Y6
(416) 314-3723

or your local municipal offices as follows:
Town of Deep River
P.O. Box 400, Deep River, Ontario
(613) 584-2000

Municipal Office of the Townships of Rolph, Buchanan, Wylie & McKay
RR #1 Deep River, Ontario
(613) 584-3114

Village of Chalk River
P.O. Box 59, Chalk River, Ontario
(613) 589-2985

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Printed on Recycled Paper



- To avoid overloading telephone circuits, do not phone 911 unless it is another type of an emergency. Minimize telephone use.
- Quickly pack items needed for several days, including:
 - extra clothes, pillows, blankets and sleeping bags
 - important medicine, baby supplies
 - cash and credit cards.
- Secure the building as if you were going away for several days. Turn down furnace/turn off air conditioning and other air intake mechanisms. Lock doors and windows.
- It is recommended that you leave pets inside your home with enough food and water for several days.
- Please be aware that pets are not allowed inside Reception or Evacuee Centres.
- Evacuate your sector exactly as instructed. Please share extra space in your vehicle with someone who needs a ride. If you do not have a ride, ask a neighbour or call your municipal office.
- For your safety, close the windows and shut off all ventilation in your vehicle, and listen to the radio for further instructions.
- Signs and police will direct all Traffic along Highway #17 East to the Reception Centre at Canadian Forces Base Petawawa.
- At the Reception Centre, you and your vehicle will be monitored for radioactive contamination. You will be registered with the Red Cross so friends and family will be able to find you. You may stay with friends or family outside the evacuated area, or if you do not have a place to stay you will be directed to an Evacuee Centre in Pembroke.
- Return home only when you have been advised it is safe to do so. Stay tuned to designated radio and TV stations (listed in Section 1) for further instructions.

3

4

IF YOU ARE INSTRUCTED TO TAKE A KI TABLET:

During a nuclear emergency, Potassium Iodide (KI) tablets can be used to minimize the absorption of radioactive iodine by the thyroid gland. However, other protective actions such as sheltering indoors or evacuating will help protect you from most radioactive materials, as well as radioactive iodine.

Provincial officials will authorize the taking of KI tablets, but only if necessary; DO NOT take them **unless instructed**. Do not take more than one tablet. KI tablets will be available for the public at the Reception Centre during an evacuation. The Chalk River Laboratories have stockpiles of KI tablets.

CHILDREN AT SCHOOL

Please do not attempt to pick up children directly from school. For more information, contact your child's school as part of your family's emergency planning. Each school has a plan for sheltering and evacuating students. If your child is at school when an evacuation occurs, you will be reunited at the assigned Evacuee Centre:

Evacuated School	School's Assigned Evacuee Centre
• Morison & Keys Public Schools (Deep River)	• Champlain Discovery Public School (Pembroke)
• St. Mary's (Deep River) & St. Anthony's (Chalk River) Separate Schools	• Bishop Smith/Jeanne Lajoie Separate Schools (Pembroke)
• Mackenzie High School (Deep River)	• Fellowes High School (Pembroke)

••My child will be evacuated to



NUCLEAR EMERGENCY INFORMATION

What You Need To Know: How To Respond to An Emergency at the Chalk River Laboratories

Please read and keep this Spring, 1999 brochure in the front of your phone book for future reference.

It will be replaced by a new brochure in the year 2000.

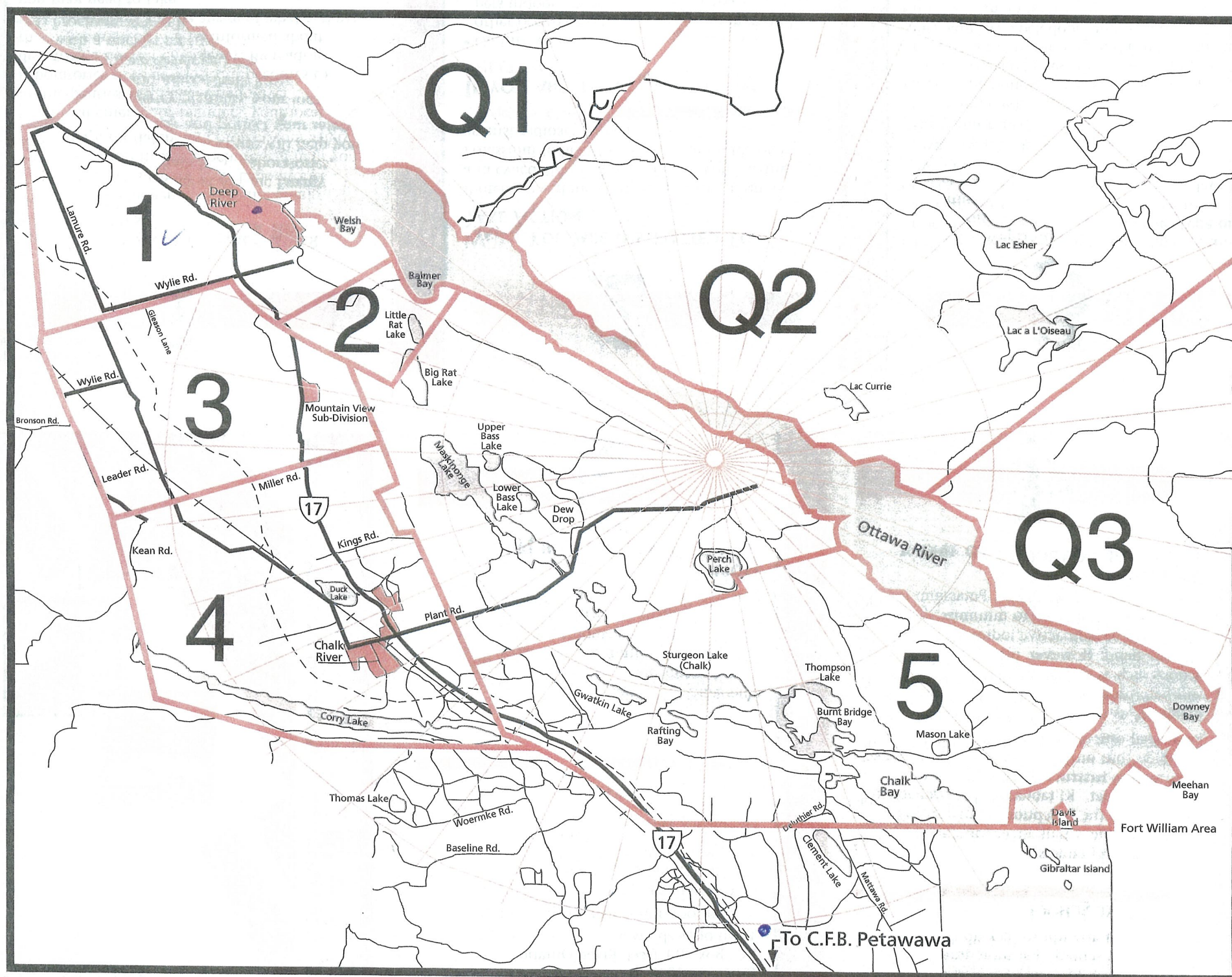


DESIGNATED EMERGENCY EVACUATION ROUTES

For the Area Around **Chalk River Laboratories**

1. Locate where you live or work on the map and note your sector number (1 to 5).
2. Each school has a plan for an orderly and time-efficient school evacuation. If your child was in school when the evacuation occurred, you will be reunited at the School's assigned Evacuee Centre.
3. Follow the signed evacuation route on Highway #17 East to the Reception Centre located at CFB Petawawa.
4. At the Reception Centre, you will be:
 - monitored for radiation contamination.
 - registered so that you can be contacted by relatives and friends and by authorities managing the emergency.
 - directed to an Evacuee Centre, if you need accommodation.
5. After leaving the Reception Centre, proceed from CFB Petawawa to Pembroke. Signs will direct you to your assigned Evacuee Centre.
6. At the Evacuee Centre, you will be provided with:
 - shelter
 - food
 - access to telephones
 - emergency information
 - medical assistance.

In an emergency, phone lines will be established by municipal authorities. Evacuees will be able to call out or request information from the Public Inquiry desk, at the Joint Information Centre, by phoning 613-735-6222.



ALL SECTORS

1, 2, 3, 4 and 5

RECEPTION CENTRE

CFB Petawawa Building Y101

MAP