

# THE Maple Leaf LA Feuille d'érable

July 2015, Volume 18, Number 7

Keeping the Defence Team informed

Français au verso

## Training under the Sun

Page 6 and centre

**LEADERSHIP SPOTLIGHT: MARLANT**  
**PAGE 3**

---

**THE INNOVATORS:**  
**SAPPHIRE SATELLITE**  
**PAGE 8**

---

**VETERANS HIRING ACT**  
**PAGE 10**







# NEW LOOK FOR THE DEFENCE TEAM

Whether through words or imagery, identifiers help shape our perception of an organization and what it has to offer.

## Official Launch

One critical component of a strong identifier is a clear visual identity. On May 29, the new Defence Team branding was officially launched, reinforcing Defence as a unified team consisting of military and civilian partners working together to achieve one vision, one mission, one team, with one look to tie it all together.

The Defence Team will see the colour of the bilingual Defence Corporate branding in such things as PowerPoint presentations, web identifiers, social media and podium signs in the coming months.

## Adopting New Colours

There are several L1 organizations who have adapted the new visual identity such as ADM(Infrastructure and Environment), ADM(Information Management), Vice Chief of the Defence Staff, ADM(Science & Technology), but the support of all L1 organizations is important to the implementation of the program.

L1 groups who have already adopted the new colours have been able to work with the templates and adjust them to be able to keep their own individual identity.

Graphic identifiers, colours, fonts, and images all make up an organization's visual identity, available to personnel across the country to use. The objective is to provide the Defence Team with the information necessary in a cohesive and consistent visual identity across all internal and external communications tools.

## Toolkit Link

This new corporate branding is part of the move towards a cost-effective visual identity across the government, as we use this common design look and feel with templates and toolkits to help make DND/CAF more identifiable.

A user-friendly toolkit encompassing various L1 templates will be housed at: [dt.mil.ca](http://dt.mil.ca). This site will also include access to the ASSYST marketing request form for further graphic assistance or guidance, including all policies, best practices and templates to use. Procedures for publishing, access to external suppliers, sample statement of work will be accessible on this site. ♦



## PUBLIC SERVICE APP CHALLENGE

The first ever, government-wide, Public Service App Challenge is being launched!

This exciting initiative is an opportunity for you to showcase your creativity, your expertise and your dedication to modernizing service delivery to better serve Canadians. You are invited to come up with ideas for a mobile app that will help improve policy, program or service delivery across Canada. It can be an idea that serves our mandate here at National Defence or that of another federal entity.

Of course, you can also participate in the challenge by simply commenting or voting on the app ideas that others have submitted. The DM Committee on Policy Innovation and the PCO Central Innovation Hub are also looking for public servants who are coders or app developers, graphic designers, subject-matter experts and more to participate on the app development teams.

The closing date to submit your ideas is July 24. After that, the top ideas will be selected for prototyping, development, and testing. Winners will be announced in the fall, with final deployment in winter 2015/16.

Everything you need to know in order to participate is on the PS App Challenge page on GCconnex: [gcconnex.gc.ca/groups/profile/12266349/the-public-service-app-challenge](http://gcconnex.gc.ca/groups/profile/12266349/the-public-service-app-challenge). Be sure to follow #PSAppChallenge on twitter as well!



## NO AUGUST ISSUE

*The Maple Leaf* will not be published in August, but will return in September. Visit [dt-ed.mil.ca](http://dt-ed.mil.ca) for updates.

Have a safe and happy summer!

## CHANGES TO MAPLE LEAF DISTRIBUTION

*The Maple Leaf* will no longer be distributed to those outside of the Department of National Defence (DND) and the Canadian Armed Forces (CAF). Readers impacted by these changes may subscribe to the external stakeholder e-newsletter, Defence Connexion to continue to stay current with Defence news and issues. Defence Connexion features many of the stories found in *The Maple Leaf*.

Subscribing to Defence Connexion is free and easy! Visit [www.forces.gc.ca](http://www.forces.gc.ca) and scroll down to the bottom of the screen and click the *Defence Connexion* button in the "Featured" area. Click "subscribe" and fill in your information.

*The Maple Leaf*  
ADM(PA)/DGPASP  
101 Colonel By Drive  
Ottawa ON K1A 0K2

Fax: 819-997-0793  
E-mail: [InternalCommunicationsInternes@ADM\(PA\)@Ottawa-Hull](mailto:InternalCommunicationsInternes@ADM(PA)@Ottawa-Hull)  
[internal\\_communications\\_internes@forces.gc.ca](mailto:internal_communications_internes@forces.gc.ca)  
Web site: [www.forces.gc.ca](http://www.forces.gc.ca)  
Translation: Translation Bureau, PWGSC

Submissions from all members of the CAF and civilian employees of DND are welcome; submission guidelines can be found on the Defence Team intranet. Articles may be reproduced, in whole or in part, on condition that appropriate credit is given to *The Maple Leaf* and, where applicable, to the writer and/or photographer.

*The Maple Leaf* is the monthly national publication of the Department of National Defence and the Canadian Armed Forces, and is published under the authority of the Assistant Deputy Minister (Public Affairs).

ISSN 1480-4336 • NDID/IDDN A-JS-000-003/JP-001

### COVER:

Lt(N) Wen Nie, a CAF doctor, travels into the community to treat locals who physically cannot travel to treatment facilities in Ulaanbaatar, Mongolia on June 22, as a part of Ex KHAAN QUEST, an international joint training exercise series.

Photo: Cpl Andrew Wesley





# MARLANT:

## Building the picture of Canada's seaways

**W**e recently sat down with Rear-Admiral John F. Newton, Commander Maritime Forces Atlantic and Joint Task Force Atlantic, when he shared some insight into some recent challenges, successes, and passions.

**Q: Why do you consider the building domain awareness for MARLANT to be so important?**

**A:** Well, I think my biggest challenge and our biggest focus in the Royal Canadian Navy and with the Royal Canadian Air Force and the Canadian Coast Guard and a few other partners like Transport Canada and Border Security Agency, Department of Fisheries and Oceans and even CSIS and the RCMP, is to build a picture of what's going on in Canada's three oceans.

And we're really good at building that picture and that understanding of what people do and what the cargos are doing and what the ships and their brokers are doing in the seaways that come to Canada and travel past Canada.

We're really good at understanding in two big oceans what's going on, and we're just developing that broader capability in the Arctic. We are increasing our domain awareness in the north at the same time we are always building on what we do in the Atlantic and the Pacific.

The sea lanes of approach to Canada are not just in the Atlantic and the Pacific, they reach all the way around the world and what our ships are doing in East Africa and Operation ARTEMIS, what they're doing in the Baltic or in the Mediterranean, what they do off Libya, it does eventually relate to the sea lanes right here at home. Those waterways reach right here and we see that with immigration cases, illegal refugees in the Pacific and in the Atlantic and in the Caribbean, the same drug routes that bring drugs into North America can be used to smuggle people, arms and money. All which destabilize the countries of the Americas and certainly contribute to organized crime and international criminal activities in Canada.

**Q: How important are relationships with emergency partners?**

**A:** One of the hats I wear is the Halifax Search and Rescue Region Commander. I don't command forces per se, but I command a region of search and rescue in Canada and in the international search and rescue scheme. Our area is a big one. It borders the United States in the Boston search and rescue region and then reaches, halfway up Baffin Island, well into the Arctic. And then it goes all the way across the Atlantic to the Mid-Atlantic Ridge and bumps into the Azores zone, and the British zone and the Danish zones.

SAR is huge. It involves things in space, and it involves knowing what's going on the ocean surface

and in the air with partners like NORAD. It's happening every day, 24/7. It has a watch floor in this building with Coast Guard and Air Force and Navy operators working side-by-side. It has permanently stationed assets at sea. And there's a case every hour, a case every day and unfortunately just today (June 17) as we're doing this interview, three men have died in Newfoundland, and we're just coming out of a case having recovered a third body. And

*"I think you have to spend a lot of time encouraging people to participate in the dialogue and solution space, so that they can see the global change we're going through."*

death is, unfortunately, one of the realities of working in the Maritime domain. It is just so dangerous.

The fishing industry is incredibly dangerous. And you can go from a Maritime disaster like a ship sinking or an oil rig catching on fire, from the search and rescue, really quickly into consequence management. Big oil spills, like the deep water horizon event in the Caribbean, you go from search and rescue to federal and international level consequence management in a heartbeat. And that's why here in this headquarters, you'll see search and rescue linked to the marine security operation centre, linked to the regional joint operation centre. They're all co-located and they all work together. So, while today we've just finished a big search and rescue in Newfoundland that had a very unfortunate outcome, so many others come to a positive outcome. But it's a sad reality of the Maritime.

**Q: Can you speak to your long standing passion for the North?**

**A:** The North is very much in my brain on a daily basis. I think we all live with passions, whether it's a sport or a hobby. My hobby for a long time, linking my personal life to my professional life, has been the Arctic. And going to the North, formerly as a geologist and then as a young maritime surface officer in the Navy, I got to lead science expeditions to test global positioning systems.

But the interest really stems back to an event my father created for me. He sent me to the North twice as a young boy; a 14-year-old and then a 16-year-old kid. He sent me on Navy ships in the days when we sent young kids like cadets aboard ships, and so he sent me to the high North

to the Franklin Graves at Beechey Island, to Dundas Harbour, an abandoned RCMP station, to the small communities of Pond Inlet, and Resolute, and Iqaluit and other places.

And so I think if anybody who gets the chance to see Northern Labrador, or see the Arctic, or see Northern Canada gets a bit of a bug in their brain that there is a great beauty to our country beyond the highways of the south. There's lots to be done up there. There's social and sustainable development.

My interest now is mirroring our Defence and security activities with actually a greater social and sustainable development piece, and I think our new ships will bring us full circle into that bigger game. So, I can marry my personal passion with my career and the Navy allows me to do that. And there are great partners in government, with equally motivated people under some private sector interests that share this desire to build Canada's North into a fully functioning piece of the greater Canada.

**Q: Can you speak a little bit about your participation in the search for HMS *Erebus* and the partnerships that were involved with that?**

**A:** *Erebus* for us today is a bit of a metaphor. It allows us to tell the story of the Royal Canadian Navy in the Arctic, which goes back to the Korean War, the post Korean War era, our Navy has been routinely going to the Arctic. We used to have a beautiful ship called Her Majesty's Canadian Ship *Labrador*. It was an icebreaker and year-after-year after-year, we had big voyages into the North ...but most recently we've been going with small ships and doing patrol work and hydrography and small tasks.

So, being invited to participate in the search for the *Erebus* gave us a whole new level of involvement. Bringing modern technology, autonomous underwater vehicles, some of our operational planning capabilities, our ships, our divers into the Arctic and it gave us a national profile to tell the story of the Navy in the Arctic. And then to tell an even bigger story of why the Navy is building a new patrol ship called the Harry DeWolf class, which will deliver right here in Halifax in 2018. And the whole idea of being involved in the *Erebus* and the *Terror* search is to prepare the Navy for a bigger future in the North and to increase our personnel competencies. So when those ships deliver, our Navy has a personnel base ready, willing,

proud and known by the country and our international partners as being a naval force in the Arctic. That's the whole idea of the Navy's investment in the *Erebus* search.

**Q: How do you institute a sense of ownership in those that work under your command?**

**A:** Well for one thing, in the Navy I think we're all about pushing responsibility, authority downward into increasingly more junior ranks. It takes a lot of communication to instill ownership in your people. I think you have to spend a lot of time encouraging people to participate in the dialogue and solution space, so that they can see the global change we're going through, the departmental or Canadian level of change that the institution is going through.

But, young people have to be invited into the process of leadership. There's a lot of reward and activity that has to be undertaken too. You have to value peoples' contributions and show it. I think our forces are known for sort of having an autocratic authoritarian pure middle style of leadership and I think we're at the place in our society development where that autocracy can melt away a bit.

I was talking today that I think we should really get into first names on our name tags because I'm always asking, what's your name? And what I'm trying to do, and everybody else

seems to be doing, is to actually treat people more as the individual they really are than a peg in a board. And I think that will go a long way to sharing this greater sense of ownership. It matches more of the point we're at in our society where young people want to be involved. Where young people question and interrogate why they're doing things. And there's a greater willingness by us leaders to allow that more fulsome discussion to occur.

This is part of the cultural change I think we can undertake as we look at some of the destructive behaviours that afflict society or we talk about big subjects like sexual misconduct. There's real respect to be gained with our people by engaging them, talking to them, helping them understand why. I believe what makes us a very powerful military that makes up for our smallness and the numbers, the size of our capabilities, the number of people invested in it, is that this idea of 'mission command' that General (Ret) Hillier (former CDS) talked about and commanders intent; our people really do know what's going on, and understand it so when there's a lack of order or there's a fog of battle or confusion, they will do the right thing. They'll do what's best for their unit, their service, their country.

To view the video portion of the interview, visit the Defence Team site at [dt-ed.mil.ca](http://dt-ed.mil.ca). ♦



**RAAdm John F. Newton, Commander Maritime Forces Atlantic and Joint Task Force Atlantic.**



# FUELLING THE FIGHT:

RCAF Polaris delivers 10 million pounds of fuel to anti-ISIS coalition

PHOTO: Op IMPACT



The CC-150 Polaris refueller returns after successfully completing its 100th refuelling mission over Iraq during Op IMPACT on March 11.

The 21 members of Air Task Force-Iraq's air-to-air refuelling detachment have reached a major operational milestone in their contribution to the Middle East Stabilization Force's (MESF) efforts against the Islamic State. Recently, while flying their 168th mission on the CC-150T Polaris since the beginning of Operation IMPACT, in late October 2014, the refuelling crew surpassed 10 million pounds of fuel transferred to Canadian CF-188s and other coalition strike aircraft.

This landmark number reflects the operational importance of Canada's air-to-air refuelling capability in the fight against ISIS, enabling a wide variety of coalition fighter aircraft to reach areas of operations and stay overhead for longer periods of time in order to provide Iraqi Security Forces with effective air support.

"The air-to-air refuelling detachment is a major asset for the MESF," said Brigadier-General Lise Bourgon, Joint Task Force-Iraq commander. "The Polaris ensures fighter aircraft, despite their heavy ordnance loads, have the range needed to conduct airstrikes on ISIS throughout our operational areas."

## Polaris crews make name for themselves

While the Polaris is not the only MESF air-to-air refuelling aircraft supporting fighter operations, the RCAF crews that fly the large aircraft have made a name for themselves for their flexibility and willingness to stay in the air as long as possible to ensure aircraft striking ISIS are fuelled on the way to a mission and are able to make it back to base at the end of the day.

With a refuelling hose and drogue deployed from under each wing, the Polaris can transfer more than 80,000 pounds of fuel to receiving aircraft during a single flight.

The 10 million pounds of fuel transferred is a success achieved thanks to the hard work and dedication of a unique partnership between RCAF aircrew from 437 Transport Squadron, Trenton and civilian technicians with L-3 MAS who work tirelessly to keep the modified Airbus A310 ready for the next mission. Given the high operational tempo, this regular maintenance is essential.

While sometimes overlooked, the contribution of this air-to-air refuelling capability is essential to keeping the pressure on ISIS. As the air-to-air refuelling crews note, they "fuel the fight".

PHOTO: Combat Camera



A CC-150 Polaris Airbus refuels a Royal British Air Force Tornado GR4 during Op IMPACT on February 2.

## Air Task Force-Iraq surpasses 1,000th SORTIE OF OP IMPACT

Trailing a characteristic blue flame, a CF-18 took to the sky in the early morning of June 4 on its way to operations over Iraq to mark the 1,000th sortie of Operation IMPACT.

While this sortie, which resulted in a strike against an ISIS fighting position, reflects an important milestone in Canada's contributions to counter terrorism in Iraq and Syria, it also represents the success of the Canadian Armed Forces' (CAF) expeditionary capability. Indeed, it reflects the mission-focus of CAF personnel deployed to Kuwait as part of Joint Task Force-Iraq.

"Our members have achieved much since late October 2014, when the Royal Canadian Air Force's first transports touched down in Kuwait carrying initial set-up supplies for the Joint and Air Task Forces," noted Brigadier-General Lise Bourgon, Joint Task Force-Iraq commander. "Camp Patrice Vincent, for example, was a sandy lot when our members arrived. Today it is the hub of Air Task Force-Iraq and supports Canadian air operations throughout Iraq and Syria."



PHOTO: DND

An RCAF CF-18 pilot conducts a post-flight inspection of his aircraft at Camp Patrice Vincent, Kuwait on June 5, following the 1,000th sortie of Op IMPACT.

## Dedicated air crews and support staff

While the 1,000th sortie was a strike mission flown by a CF-188, the total includes flights made by the dedicated crews of the CP-140M Aurora Intelligence, Surveillance and Reconnaissance (ISR) aircraft and CC-150T Polaris air-to-air refueller. Each sortie represents a single flight by an aircraft, but there is a larger story behind each of these flights; a comprehensive team is needed on the ground to send an aircraft into the air and meet it when it returns. Teamwork is essential to maintain a high operational tempo as summer months heat up, while keeping the pressure on ISIS.

"From maintainers who work in the hot Kuwaiti desert to ensure aircraft are serviceable for the next mission, to the armourers who load ordnance on CF-188s, to the intelligence and operations personnel who help plan and assess missions; there is a lot at stake," said BGen Bourgon. "Our enablers like engineers, logistics, medical, and security personnel are also essential to ensuring our operations are sustained, despite being far from home and in difficult desert conditions."

The kinetic effects of the precision guided munitions delivered by CF-188s, the air-to-air refuelling capabilities of the CC-150T Polaris and intelligence gathering by Canada's modernized CP-140M Aurora continue to restrict ISIS's movements. Indeed, it was only a year prior that ISIS was enjoying freedom of movement through much of Iraq and Syria. However, thanks in part to Canada's efforts and co-operation with other coalition nations, ISIS can no longer operate as they used to.

"The 1,000th sortie of Op IMPACT is a story of dedication," said BGen Bourgon. "There is still a lot of work to do on the mission, but this number tells a great story of commitment shown by CAF members at Camp Canada and Camp Patrice Vincent." ♦



## FACE OF OPERATIONS



# EYES IN THE SKY, EYES ON THE GROUND:

## Canada's Directorate of Arms Control Verification

As Canada continues its assistance to the Ukraine as of Operation REASSURANCE, it's worth noting that the Strategic Joint Staff Arms Control Verification (SJS ACV) Directorate has been part of international efforts since Russian aggression began more than a year ago.

Two members from the SJS ACV Directorate in Ottawa were part of the first group of international observers tasked to look into unusual military activities along the borders of Ukraine in March 2014. At the time, Ukraine requested participating States from the Organization for Security and Cooperation in Europe (OSCE), of which Canada is a member, to conduct Vienna Document 2011 (VD11) missions within Ukraine in order to increase transparency concerning military activities in Ukraine.

"Our VD11 mission in Ukraine is a concrete demonstration of Canada's commitment to the security, sovereignty, and territorial integrity of Ukraine," said Colonel Peter Williams, ACV's director.

The VD11 is a politically-binding agreement amongst participating States of the OSCE, and is one of the arms control mechanisms that has been used so far in Ukraine. Under VD11, participating States can conduct inspections and observation visits in order to increase openness and transparency concerning military activities.

### Canadian Contribution

Canada regularly participates in OSCE inspection and observation missions in Eastern Europe. In this regard, SJS ACV works in concert with other stakeholders within the DND and the government, as well as overseas partners, to ensure Canada continues to play a key role in responding to the crisis in Ukraine. Since March 2014, Canada has led four arms control verification visits to Ukraine. As part of an ongoing series of inspections led by OSCE member States, Canada led a VD11 Regional Measures mission in Ukraine in April/May and October 2014, and more recently in February and April of this year.

These Canadian-led teams included Ukrainian officers, and inspectors from the United States, Moldova, Denmark, Poland, and France.

"During the conduct of these missions, many Ukrainians expressed their gratitude to Canada and the other nations represented on the team for this demonstration of support," said Lieutenant-Colonel Gary Hardwick, who heads 2 Section, the team that conducts inspections on the ground based on the requirements outlined in VD11 as well as the Conventional Armed Forces in Europe (CFE) Treaty. "The overall message that was repeatedly communicated to the team was that the majority of Ukrainians support the territorial integrity of Ukraine and want Ukraine to remain unified."

Likewise, SJS ACV's 4 Section, headed by LCol Steeve Veillette, is responsible for observation flights conducted under the auspices of the *Treaty on Open Skies*. Signatory Nations (which include Russia, Ukraine, the US among others) are permitted to overfly, unarmed, any other signatory nation and capture imagery. Designed to enhance mutual understanding and confidence, it provides all participants with the opportunity and means of gathering information about military forces and activities of concern. Coordinated by SJS ACV's 4 Section, Canada regularly conducts such flights over Russia, Ukraine and Georgia.

### Op REASSURANCE

Op REASSURANCE is the military activities undertaken by CAF to support NATO assurance measures through the provision of military capabilities for training, exercises, demonstrations and assigned NATO tasks. In coordination with its NATO partners, Canada is continually looking for opportunities to contribute to peace and stability in Central and Eastern Europe and planning is ongoing for future activities related to Op REASSURANCE.

More information about the role and work of the Strategic Joint Staff Arms Control Verification Directorate is available at: [strategic.mil.ca/sites/intranet-eng.aspx?page=3213](http://strategic.mil.ca/sites/intranet-eng.aspx?page=3213). ♣



MCpl Merrell loads film into the imaging pod installed on a RCAF CC-130J Hercules.



Monitoring the impact site.

## Expedited Smart Bomb Flight Testing SUPPORT TO OP IMPACT

Critical data required for fleet-release of a new weapon capability took place recently to aid in Canada's commitment to Operation IMPACT. Certification flight testing of the Bomb Rack Unit 55 (BRU-55) and Enhanced Paveway II (EP2) weapon system for the CF-188 Hornet was completed at the Aerospace Engineering Test Establishment (AETE) in 4 Wing Cold Lake, Alberta.

### New Smart Weapons

EP2 is a new GPS and laser guided smart bomb, which can be used for both pre-planned and dynamic targeting scenarios in all weather conditions. Once deployed, the combination of BRU-55 with the Joint Direct Attack Munition (JDAM) weapon and EP2 delivers the ability to make real-time decisions regarding targets of opportunity with double the number of smart weapons available for use on the CF-188.

At the same time, testing was also being conducted to expand the capabilities of the already-fielded JDAM weapon. The BRU-55 allows the CF-188 to double its carriage of advanced precision-guided air-to-ground weapons.

Projects were put on hold and personnel worked seven days a week to complete all testing. Testing was conducted by an integrated test team comprising of AETE specialists in maintenance, armament, airborne data systems, image data systems, flight test instrumentation, and flight test evaluation, as well as personnel from the Fighter Operational Test and Evaluation Flight. Also essential to the testing effort was the technical support provided by engineering and project management agencies from across the RCAF, including the Directorate of Technical Airworthiness and Engineering Support and the CF-188 Weapon System Manager (WSM), including the WSM Detachment in Mirabel, Que.

### Weapon Integration

The integration of BRU-55 with the smart weapons and the CF-188 aircraft itself required significant testing from AETE's broad range of facilities, capabilities and expertise to ensure the weapons could be employed safely and effectively.

"The challenges to integrating these systems with the Hornet were not trivial. Significant problems were encountered, requiring continuous troubleshooting, retesting and, in one case, recoding of aircraft computer software," said Captain Martin Dionne, flight test engineer and test director.

### Testing Focus

The primary focus of the testing included fit and compatibility, captive carriage, safe separation verification and end-to-end employment. Fit and compatibility testing required thorough ground functional checks and detailed evaluations to ensure both physical and functional compatibility of the weapon package with the aircraft and all of its systems. Captive carriage testing subjected the weapons and BRU-55 to the extremes of flight in order to prove structural security and functionality.

AETE-designed and manufactured wingtip camera pods were used to confirm that the weapons separated from the aircraft in a predictable and stable manner. Finally, end-to-end operational testing included validating everything from the newly developed installation procedures right through to the accuracy of the weapons against actual targets.

"The BRU-55, and particularly the EP2, represents a big step forward for RCAF fighter force capability. The highly specialized and synergistic efforts of the integrated test team came together at all levels of the organization to make that happen," said Major Joshua Kutryk, test pilot.

Once certified, this weapon system will significantly increase the RCAF's capability for kinetic strike.







## TRAINING TO DEFEND

# CANADIAN RANGERS TRAIN TO SAVE POTENTIAL DROWNING VICTIMS

Canadian Rangers from four Cree communities on the Ontario side of James Bay have completed a military training exercise designed to provide them with the skills to save lives in potential drowning situations.

"Rangers on the James Bay coast live on the water, they work on the water, and much of their recreation is on the water," said Captain Mark Rittwage, officer commanding Canadian Rangers. "And every year there are a number of deaths there and in other parts of northern Ontario related to boating. But the Rangers and others living in the North are generally not prepared to respond to drowning situations effectively."

"The training they got on this exercise will help them to do that, and they can pass on what they learned to other Rangers, to their families, and to others in their communities. Will it help to save lives? I am sure it will," said Capt Rittwage.

Northern Ontario has had the highest number of Aboriginal deaths by drowning in Canada for several years. The training the Rangers received has taught them several techniques, both with and without equipment, for rescuing a person who has fallen into the water from a boat and how to help a victim recover from hypothermia.

A surprise night exercise sent the Rangers looking for two men who were supposedly overdue from a fishing trip. The victims were two soldiers who lay in the cold waters of the Albany River for more than 10 minutes before they were found. When the Rangers found the soldiers they were wet, shivering, and extremely cold from the 4°C water temperatures.

"We wanted to make it as real as possible," said Warrant Officer Carl Wolfe, Canadian Army instructor. "So when we conduct training like this we actually put the victim in the water. They really are cold and wet by the time they are found and it really does matter to get them warmed up as quickly as possible. It makes for realistic training and it's very effective."

The training included how to respond to a multi-casualties incident in which there are more than emergency responders and victims have to be prioritized depending on their injuries and conditions. ★



Canadian Rangers practice rescue techniques on the Albany River.



Rangers conduct a "man overboard" recovery as part of their water rescue training.

PHOTOS: Sgt Peter Moon

## NEW CBRN DECONTAMINATION SYSTEM



CAF personnel undergo personal decontamination during a training exercise at CFB Borden.

One of the pillars of chemical, biological, radiological and nuclear (CBRN) defence is the decontamination of both people and equipment. One of the key principals of operations that concern a CBRN threat is to limit the risk to personnel in an asymmetrical battlespace. That's why the CAF CBRN Decontamination System (Decon System) is so vital for operational integrity.

The Directorate of CBRN Defence and Operational Support recently unveiled the new rapid delivery system (RDS) prototype in Ottawa.

"I am very proud to be part of a project like this that will be of benefit throughout the whole Canadian Armed Forces," said Captain Christian Doucet, project director. "You see the future before you."

### Training the Units

The prototype has been labelled by the design team as the 90 per cent solution. Although delivery of the first Decon System isn't anticipated until January 2016, the RDS prototype will help train the units who will be using this new capability, expediting the kit's availability by almost one year.

In addition to supporting military operations, the RDS will allow the CAF

to optimize the final design of the Decon System, obtain valuable user feedback, and develop and validate training materials. In the coming months, the RDS will be fielded to the CF Fire and CBRN Academy (CFFCA) in Borden, from May-August and 5 Service Battalion in Valcartier, Que. from August to March 2016.

### The RDS features:

- A crane and sprayers with enough decontaminant for 12 armoured vehicles;
- Three decontamination lines, including one for casualties;
- An environmental protection system that collects all wastes from vehicles and personnel;
- DF-200 HF Decontaminant that is applicable to chemical, biological and radiological threats; and
- Contracted in-service support.

### Modernizing Decontamination

The CAF is modernizing their decontamination capability through the acquisition of this efficient, user-friendly system capable of decontaminating vehicles, ship and aircraft exteriors, personnel and their non-sensitive personal equipment. It's a total systems approach to providing a CAF-wide decontamination capability.

Canada's participation in international alliances requires the CAF to operate in areas of the world where the potential use of CBRN weapons or materials is an important consideration. Regional conflicts, where the threat of the use of CBRN weapons (either classic warfare agents or toxic industrial materials) exists demand that the CAF be prepared to operate in a contaminated environment. The CAF may also be called upon to participate in a domestic situation where a CBRN incident has occurred. To maintain operational effectiveness in such environments, the CAF requires a full-range of CBRN defence capabilities, including the ability to decontaminate personnel and equipment.

# CAF healthcare members BATTLED EBOLA VIRUS IN SIERRA LEONE



As a health services led mission, the Canadian Forces Health Services Group (CF H Svcs Gp) left a mark in the history books when they deployed in December 2014.

The members of the CF H Svcs Gp were filled with a great sense of pride after recently accomplishing their duty at the end of Operation SIRONA, the military component of the Canadian whole-of-government contribution to fighting the Ebola virus disease (EVD) in Sierra Leone.

"I am very proud of the members of the Canadian Forces Health Services Group who have

made such a significant contribution to the Government of Canada's efforts to combat the largest Ebola outbreak in history," said Brigadier-General H.C. MacKay, commander and Surgeon General of the CF H Svcs Gp. "This was an extremely dangerous humanitarian mission, and we are fortunate to be working so closely with our United Kingdom and Whole of Government partners."

### CAF healthcare contribution

Lieutenant-Colonel Colleen Forestier, commander of the third rotation of CAF personnel in Sierra Leone, remarked that "the CAF's contribution to the fight against Ebola has been an eye-opening experience, from the unique training and preparation required for the challenging healthcare environment, to the bonds forged with our UK colleagues and allies."

Seventy-nine Canadian personnel were deployed on this operation to augment the UK's efforts to combat the spread of the EVD at their Kerry Town Treatment Unit (KTTU). Only three people did not wear a medical cap badge. Over the course of their deployment in Sierra Leone, the CAF physicians, nurses and medics saw the importance of their contribution as the number of EVD cases decreased.

"From December 2014 to April 2015, the number of EVD cases in Sierra Leone dropped from over 500 per week to under 30 per week. This speaks to the incredible work that was being done by numerous government agencies, non-government agencies, and most importantly front-line healthcare workers, during that time," said LCol Forestier. "The effect could not have been achieved without everyone's contribution."



# CIGARETTE-CAUSED FIRES:

## Predictable and Preventable

Fires caused by careless disposal of smoking material continues to be a leading cause of fires, both inside and outside of the home. The Canadian Forces Fire Marshal (CFFM) has seen an important increase into fires that can be attributed to improper and careless disposal of cigarettes outside of the home. These fires range from small flower pot fires to major fires with injuries. Cigarettes disposed in planter boxes or in an improper receptacle can smolder and spread to your home and neighbor's.

Over the past 10 years, the CAF fire departments have responded to nearly 300 structure fires that were determined to be cigarette-caused. These fires represent more than \$3.4 million in fire loss. A study conducted by the CFFM office indicates that 14.5 per cent of fires and more than \$1 million in public money loss, are now related to improper disposal of smoking material, more commonly cigarettes and smoking related material.

Additional data from the CFFM office shows that 72 per cent of cigarette fires at residential properties originate outside and nearly one in four of these become structure fires, extending to the inside of homes. Many times these fires start outside the home on a patio, balcony, or exterior wall and can be traced back to improper disposal of cigarettes.

### Safety and Prevention Tips:

- Smoke in areas away from things that burn, such as, potted plants, combustible vegetation and planters.
- Safely dispose of cigarette butts in a non-combustible container filled with water or sand.
- Never empty smoking material directly into a trash can.
- Place ashtrays or metal cans away from anything that can burn.
- Develop guidelines for smoking on your property and enforce them.
- Provide designated smoking areas and suitable disposal containers.
- Consider no-smoking policies.
- Be alert and investigate unusual smoke smells.
- Take an active role in ensuring smoking safety, whether you smoke or not.
- Keep matches and lighters away from children.
- Remind those who use home oxygen not to smoke.
- Test your smoke alarms monthly.
- Develop and practice a plan to escape your home.

## June ANNOUNCEMENTS

*Recent announcements heated up the Defence Team this summer.*

### June 1

#### Canada Launches Third-Party Oversight of Defence Procurement

Canadian Defence procurement will be subject to the rigour of a new independent, third-party challenge function as the first Independent Review Panel for Defence Acquisition was announced. The establishment of this panel is an important initiative to help National Defence achieve greater clarity and certainty in the initial stages of the procurement process

### June 2

#### New Commander for Canadian Joint Operations Command

Lieutenant-General Stephen Bowes officially assumed command of Canadian Joint Operations Command (CJOC) from LGen Jonathan Vance.

#### Former CAF Surgeon General elected to NATO position

Brigadier-General Jean-Robert Bernier has been unanimously elected as Chair of the Committee of the Chiefs of Military Medical Services in NATO (COMEDS). This appointment is to begin in November and is the first time any nation outside continental Europe chairs this committee.

### June 5

#### HMCS *Frederickton* participates in Ex BALTOPS 2015

HMCS *Frederickton* joined Ex BALTOPS 2015 in the Baltic Sea under Op REASSURANCE, Canada's response to the Putin regime's military aggression toward Ukraine and threatening posture in Eastern Europe.

The multinational maritime exercise, designed to enhance operational flexibility and interoperability as well as demonstrate the resolve of NATO and partner forces to defend the Baltic region, took place June 5-20.

### June 10

#### CAF gets new Surgeon General

Brigadier-General Hugh Colin MacKay assumed the duties of Surgeon General for the CAF from Major-General Jean-Robert Bernier at a change of command ceremony at CF Health Group Headquarters.

### June 15

#### RCN deployed to the St. Lawrence Seaway

HMCS *Goose Bay* departed Halifax, N.S., for a five-week deployment to the St. Lawrence Seaway. These operations will help maintain crew readiness and proficiency in a wide range of naval tasks, and provide a visible military presence in Canadian waters. During the deployment, the ship will also conduct port visits to Ville de Saguenay and Montréal, Quebec.

### June 17

#### Army participated in joint training exercise in Poland

More than 35 Canadian Army soldiers from 3 RCR trained from June 15-29 with members of the Polish Army on Ex LANCER STRIKE in Tomaszow Maz, Poland. The exercise is part of Op REASSURANCE, Canada's contribution to NATO's assurance measures which were established as a confidence-building response in the wake of the Putin regime's continued aggression toward Ukraine.

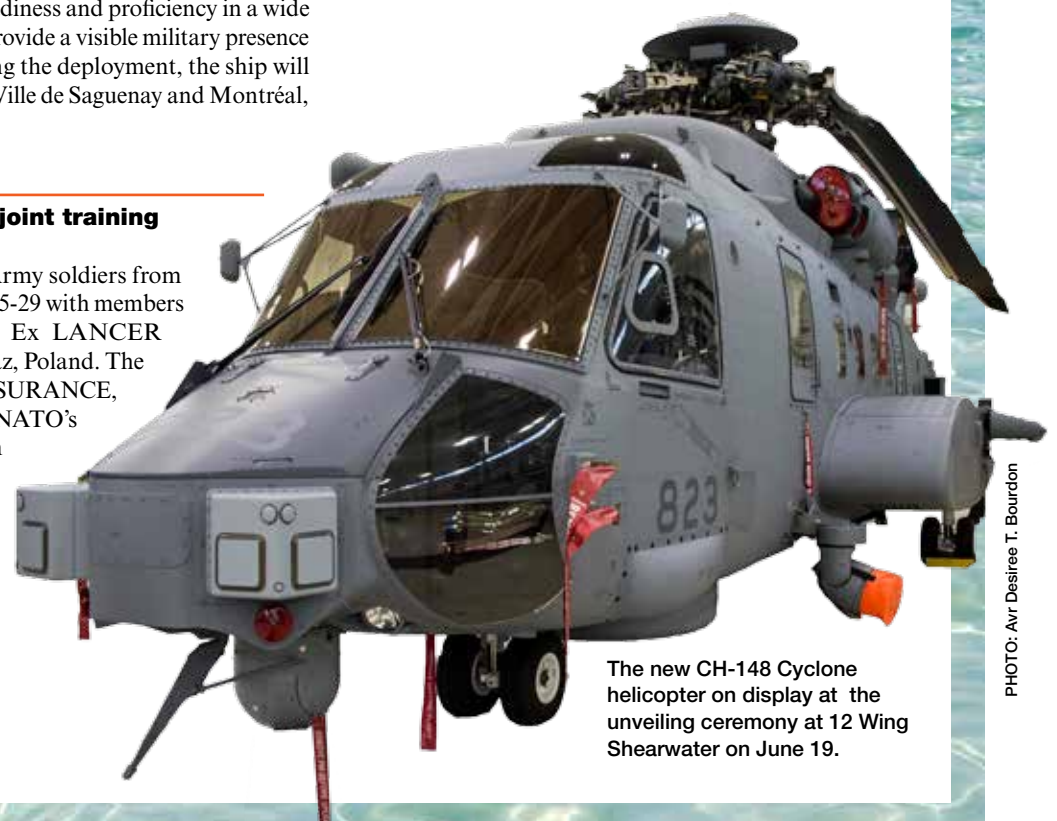
### June 19

#### Canada accepts six CH-148 Cyclone Helicopters

The CAF is a major step closer to operating a new world-class maritime helicopter fleet with the official acceptance of CH-148 Cyclones. The six helicopters were accepted at 12 Wing Shearwater, as per the schedule set out in January 2014, and have the operational capability to allow the Forces to begin retiring the Sea Kings.

#### New Commandant at RMC Saint-Jean

Colonel Simon Bernard took command of the Royal Military College Saint-Jean from Col Jennie Carignan during a ceremony presided over by Major-General Éric Tremblay, Commander of Military Personnel Generation.



The new CH-148 Cyclone helicopter on display at the unveiling ceremony at 12 Wing Shearwater on June 19.





**THE INNOVATORS** profiles members of the Defence Team who have demonstrated front-line innovation and ingenuity in their work. Real-life stories illustrate the innovative ideas these groups and individuals had, those which have been implemented and the potential impact proposed new ideas may have on the Defence Team.

# THE SAPPHIRE SATELLITE: Monitoring space objects

On February 25, 2013, a rocket carrying some very special Canadian cargo launched from a facility in Sriharikota, India, leaving only a plume of smoke in its wake. This awe-inspiring sight was a long-awaited milestone for the Surveillance of Space team, who accomplished something truly

remarkable that day: they had successfully launched Canada's first military satellite.

More than two years later, the Sapphire satellite is doing exactly what it was meant to do: monitoring the movements of resident space objects – including many pieces of 'space junk' – in deep space. These observations

feed into the US Space Surveillance Network (SSN), a large sensor network that tracks these objects, which in turn allows Canada to access the SSN's valuable information.

"Space is important because we have so many systems – whether it's communications systems or the GPS (global positioning system) – that we're using on a daily basis. All that information is up in space," said Valerie Seeto, the senior engineer, Remote Sensing and Satellites who joined the Surveillance of Space project under Assistant Deputy Minister (Information Management) in 2011. "There are so many areas where we now rely on satellite communications, and Sapphire is helping by identifying space objects, how they're moving, and what risks are associated with their movements," she said.

While space may seem infinite, nearly 60 years of space exploration and technology development have left an increasing number of satellites and debris orbiting the Earth. In fact, the SSN catalogues

and tracks more than 23,000 man-made objects in space, and as the number of objects increases, so does the risk of collisions. Sapphire records observations of resident space objects and sends the information back to analysts on the ground, protecting valuable space assets in the process.

"We tend to take a lot for granted. It's not until there's a collision and we lose something that we realize its value. Sapphire is helping avoid these types of situations."

## Observations from deep space – Over a million and counting

"Sapphire right now is providing observations on a daily basis – in the hundreds, actually," said Ms. Seeto. "And as of December 2014, Sapphire has provided more than 1 million observations, which is pretty exciting. And we're continuing to improve that."

While tracking the movements of space debris might seem like a far stretch from the Defence activities taking place here on Earth, Ms. Seeto is quick to point out how important the space domain is to the Canadian Armed Forces' mission.

"The Department of National Defence and the Canadian Armed Forces (CAF) rely on a lot of space assets to provide the information required for military operations. Whether it's search and rescue, maritime or Arctic surveillance, environmental sensing information – all of these play a role in carrying out the CAF's daily responsibilities."

Just how does Sapphire provide this information to the Department? The system relies on a series of actors that stretch from the US and across Canada, with the dedicated personnel of 22 Wing North Bay and the contracted personnel from Macdonald, Dettwiler and Associates (MDA) both playing an essential role. Other important players include dedicated team members within ADM(IM), ADM(Materiel),

Director General Space, and Defence Research and Development Canada, among many others.

"The way the Sapphire system works is this: the US Joint Space Operations Center (JSpOC) [link in English only] sends a request to 22 Wing with all the resident space objects

that they'd like to track during the next 24-hour period. 22 Wing Space Operations personnel then review and input the request into the Sapphire system, sending it to the Sensor Operations Facility (SOF) in Richmond, B.C. MDA then makes sure the request is transmitted to Sapphire when it passes over one of the ground stations, and then Sapphire starts to do its job," explained Ms. Seeto.

Once Sapphire has captured the images of the objects, the process is reversed, with the information transmitted through the ground station, SOF, sent back to 22 Wing for review, and finally to the JSpOC.

## Innovation and passion, from planning to in-service support

"While Sapphire itself was innovative, the in-service support was another innovative aspect of this project, which seems to be pretty unique," said Ms. Seeto.

From the outset, the project team took into account the maintenance support Sapphire would require after it launched to keep it functioning – known as the in-service support (ISS) phase. To do this, the lifecycle materiel manager was embedded in the project management team – a rare occurrence for a project of this magnitude.

"ISS wasn't an afterthought – it was something that we planned for, we prepared for, and the fact that we transitioned so smoothly to in-service support has been outstanding," she said.

With a nearly seamless transition to the ISS phase, the remaining Sapphire team can focus its energy – and any available funds – to making improvements to Sapphire that help the satellite perform more effectively, improving its contribution to the SSN.

The most important enhancement was improving the Sapphire system's software, which allows for quick and easy configuration changes such as Sapphire's observation range. While Sapphire originally detected objects within a range of 6,000 km to 40,000 km from Earth, it now can track objects within a range of 5,500 km to 55,000 km.

"We made the request to MDA one day, and the following day the changes to the software were made. Everything is now much more configurable and adaptable," explained Ms. Seeto.

Sapphire's continued success is drawing attention to the Defence Team's space expertise, as the team was recently honoured with the 2015 Alouette Award from the the Canadian Aeronautics and Space Institute, as well as an IM/IT Community Recognition Award for Excellence in Project Management and Deputy Minister Commendation in 2014.

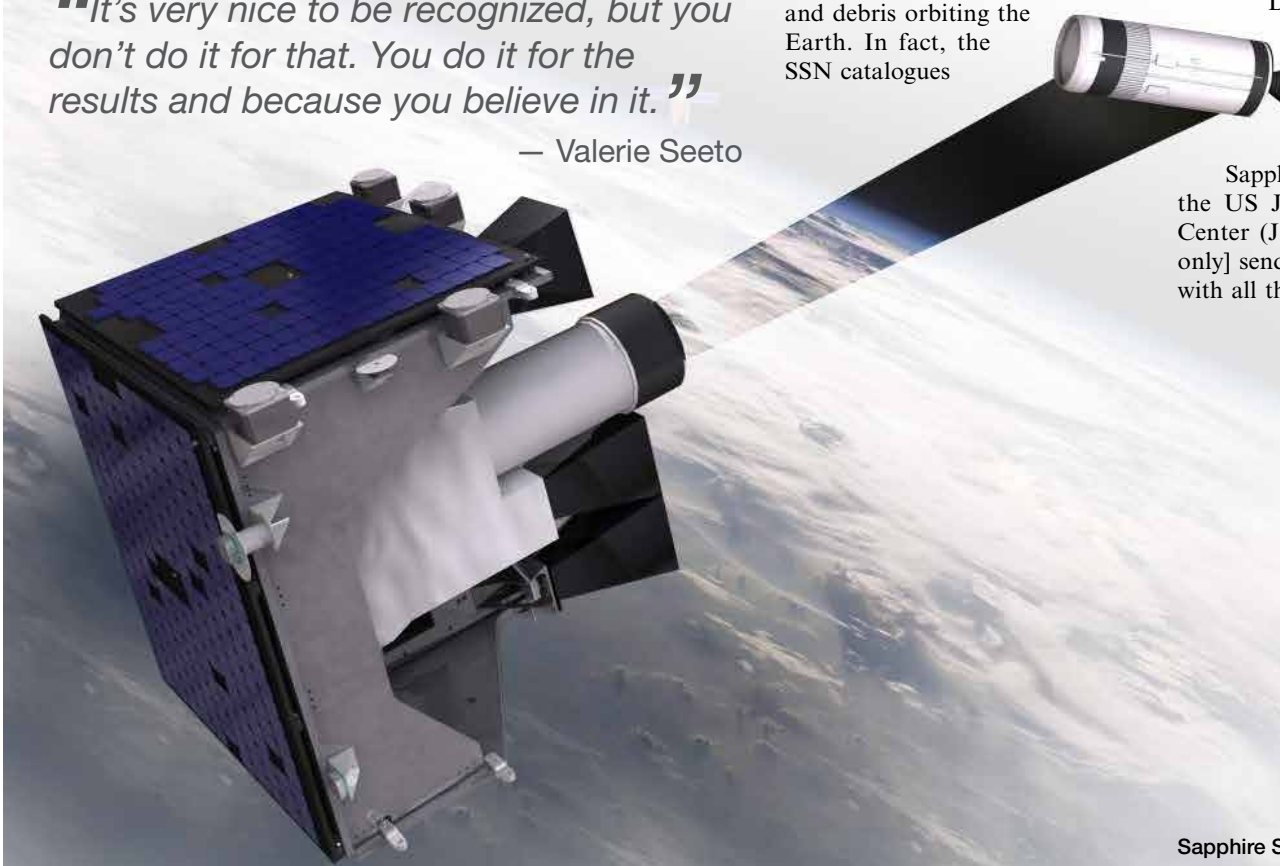
And while the awards accumulate, Ms. Seeto is quick to point out that she and her team members continue to be propelled forward by something bigger than official honours.

"It's very nice to be recognized, but you don't do it for that," she said. "You do it for the results and because you believe in it." ♦



*"It's very nice to be recognized, but you don't do it for that. You do it for the results and because you believe in it."*

— Valerie Seeto



Sapphire Satellite

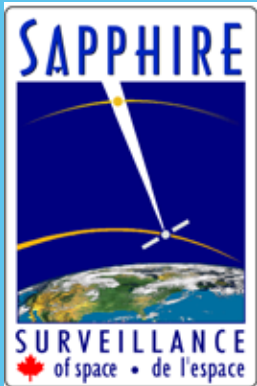


## DND TEAM RECEIVES PRESTIGIOUS SPACE AWARD

The Canadian Aeronautics and Space Institute (CASI) recently awarded their prestigious Alouette Award for 2015 to the Sapphire Project Team for their outstanding work on delivering DND's first dedicated operational satellite.

### The Alouette Award

The Alouette Award recognizes an outstanding contribution to advancement in Canadian space technology, application, science or engineering. It may be awarded to an individual, to a group, an organization, or group of organizations, as appropriate to the nature of the contribution. The award is presented annually for an outstanding achievement in the field of astronautics and the contribution on which the award is based must be recognized as a Canadian-led space endeavour or as a significant Canadian contribution to an international program.



### Sapphire Project Team

In 2013, the Sapphire Project Team, comprised collectively of the DND Surveillance of Space Project Team and the MacDonald, Dettwiler and Associates Ltd. Sapphire Project Team, successfully delivered the Sapphire satellite system to the CAF and coordinated Sapphire's formal certification and

incorporation into the US Space Surveillance Network (SSN). This critical new Space Situational Awareness system has allowed Canada to re-establish the capability to directly monitor the heavily congested Earth-orbit environment after a hiatus of more than 20 years.

The DND Sapphire Project Team was led, during Project Definition and Implementation, by ADM(IM)/DGIMPD/DPDCS and included critical team member support from CFD/DG Space, ADM(Mat)/DES Proc, ADM(IM)/DGIMO/D Strat CS, and 21 (AC&W) Squadron personnel from 22 Wing North Bay.

### Sapphire origins

Sapphire, launched February 25, 2013, is a \$65 million satellite that contributes to – and benefits from – the data produced by a \$25 billion global network of ground-based and space-based sensors that help protect the active satellites in Earth orbit, which have a combined total value in excess of \$1 trillion. Many of these satellites are critical to Canadian domestic and international interests in the fields of communications, environment, transportation, navigation, defence, and public safety. This new space-based capability comes at a time when space assets are becoming increasingly critical to successful military, commercial, and civilian operations.

Sapphire has proven to be an extremely valuable addition to the array of Space Situational Awareness sensors, as it monitors space debris and active satellites in the critical deep space regime. Sapphire is a key niche contributor to the Space Surveillance Network and has received much attention and accolades from both the Canadian and US operational communities. This success would not have been possible without the well-coordinated efforts of the collective Sapphire Project Team, who have delivered an outstanding contribution to the advancement of Canadian space applications. Sapphire is a system of which the entire country should be proud.

# RESERVISTS HONOUR THEIR EMPLOYERS AND EDUCATORS



PHOTO: Cpl Michael J. MacIsaac

Col Alexander MacDonald, CFLC Atlantic Regional Liaison Officer (left), Kevin Camus, owner of KJC Home Renovations, John Young, CFLC Provincial Chair N.S., and award nominator, Cpl Aurel Aucoin, a reservist with 36 Service Battalion and a KJC employee. KJC Home Renovations received the Most Supportive Employer in Nova Scotia.

Business, government, and academic institutions from across Canada were recently recognized for their outstanding support to Canadian Armed Forces Reserve Force members at the Canadian Forces Liaison Council (CFLC) 11th Biennial National Employer Support Awards in Ottawa.

"We are immensely thankful for the tremendous support of the employers and educators of reservists who were honoured this evening," said Lieutenant-General Guy Thibault, Vice Chief of the Defence Staff. "As a result of their efforts, the efforts of the Canadian Forces Liaison Council and the support of advocates across the country, the importance of reserve service to Canada's defence and security is widely understood and well-recognized."

The varying background and skills of reservists in the civilian workplace was highlighted by the wide variety of organizations present at the event.

### Employer support

Gowlings, one of Canada's largest law firms with over 700 professionals in offices across the country and in Moscow, London and Beijing, received a Special Award for Support to the Reserve Force. As a partner in their Toronto office, Major Frank Lamie is a business lawyer who practices corporate and commercial law, advising a wide-range of clients.

As a reservist in the CAF, Maj Lamie is also an infantry officer responsible for leading a company of soldiers from The Queen's Own Rifles of Canada, an Army Reserve regiment based in downtown Toronto and Scarborough. He decided to nominate his employer for a CFLC award based on their unwavering support to his Reserve activities.

Maj Lamie usually manages to keep his Reserve commitments such as field exercises or training courses – separate from his work at Gowlings. But when the offer of an operational tour to Afghanistan arose in 2011, he realized he would be asking for a lengthy leave of absence from his firm.

"When I told Gowlings that I sought their blessing to deploy to Afghanistan, their response was immediately supportive," said Maj Lamie. "The first question they asked was, 'how can we help your wife and family when you're away?'"

Gowlings' support to the military extends beyond its generosity toward Maj Lamie. Gowlings organizes internal fundraising campaigns in support of wounded warriors and the families of those who have made the ultimate sacrifice. A list of lawyers from the firm and its predecessors who have served in uniform is displayed in the lobby of the Toronto office.

Also attending the ceremony was Corporal Aurel Aucoin, a labourer with KJC Home Renovations and a reservist with 36 Service Battalion in Sydney, N.S. The Chéticamp commercial construction and renovation company received the award for Most Supportive employer in Nova Scotia.

"My employer has given me a lot of time off to go to weekend training, sometimes time off for full-week training as well," said Cpl Aucoin, who joined the Reserves in 2008. Throughout his military career, he has completed several training courses, including travelling to the US for military exercises.

Kevin Camus, owner of KJC Home Renovations Ltd., accepted the awards on behalf of the company.

"If I was working for anybody else, I wouldn't be able to do all this," said Cpl Aucoin. "This is why I nominated Kevin [Kevin Camus, owner of KJC Home Renovations Ltd] for this award – he deserves it."

The CFLC is made up of business leaders and educators from across Canada who volunteer their time to enhance the availability of reservists for military duty by promoting Canada's Reserve Force. The Council actively engages employers and educators of reservists, highlighting the benefits of military service and experience to the civilian workplace and encouraging them to actively support their reservist-employees. ♦

## THE 11TH BIENNIAL NATIONAL EMPLOYER SUPPORT AWARD WINNERS

### National Award Winners

- Scotiabank - Most Supportive Employer in Canada
- CUETS Financial - Support to Canadian Armed Forces Operations International
- Saskatoon Police Service - Support to Canadian Armed Forces Operations Domestic
- College of the North Atlantic - Special Award for Support to Student reservists

### Provincial Award Winners

- B.C. Hydro - Most Supportive Employer, British Columbia
- Environment and Sustainable Resource Development, Government of Alberta - Most Supportive Employer Alberta
- Agrium, Inc. - Most Supportive Employer Saskatchewan
- Ronin Safety and Rescue, Inc. - Most Supportive Employer Manitoba
- Scotiabank - Most Supportive Employer Ontario
- Service de police de la ville de Montréal - Most Supportive Employer Québec
- The Anglican Parish of the Nerepis and St. John - Most Supportive Employer New Brunswick
- KJC Home Renovations, Ltd. - Most Supportive Employer Nova Scotia
- Trinity/Clifton United Church - Most Supportive Employer Prince Edward Island
- Royal Newfoundland Constabulary - Most Supportive Employer Newfoundland and Labrador
- Department of Justice, Government of Nunavut - Most Supportive Employer North

### Most Supportive to reservists serving in the Cadet Organizations Administration and Training Service

- Staples Canada
- Thales Canada, Inc.
- West End Electronics

### Special Award for Support to the Reserve Force

- Safety Association of Saskatchewan Manufacturers
- Contracting Procurement and Supply Management, Alberta Health Services
- Ikahuk Co-operative Limited
- DMT Development Systems Group Inc
- Gowing Lafleur Henderson LLP
- Corporation du Fort St-Jean





# VETERANS HIRING ACT

## Increases Access to Federal Public Service Employment

### The Veterans Hiring Act aims to achieve the following:

- Grant the top level of priority entitlement (this is called statutory priority entitlement) for up to five years to all CAF members who are medically released for service-related reasons.
- Extending the regulatory priority entitlement for eligible CAF members who are medically released for reasons that are not attributable to service, from its current two years to five years.
- Allowing serving CAF members with at least three years of service, and honourably released former CAF members with at least three years of service for a period of up to five years after their release, to participate in advertised internal appointment processes for public service jobs.
- Giving preference for appointment to honourably released CAF members with at least three years of service, for a period up to five years after their release, when participating in advertised external appointment processes for public service jobs if they meet the essential qualifications of the position.

### Key Elements of Priority Hiring

#### What is a Priority Entitlement?

Priority entitlements are provided for in the *Public Service Employment Act* and the Public Service Employment Regulations. Persons with a priority entitlement, who are found to meet the essential qualifications of a job, must be appointed ahead of other qualified persons to public service jobs.

#### What is a Statutory Priority Entitlement?

The priority entitlements within the *Public Service Employment Act* are referred to as statutory priorities and have a ranked order of precedence. Individuals with a statutory priority must be considered for a position before all others, including those with a regulatory priority, and in accordance with the ranked order of precedence. Under the *Veterans Hiring Act*, all military personnel who are medically released for service-related reasons now have the highest level of statutory priority entitlement.

#### What is a Regulatory Priority Entitlement?

The priority entitlements within the Public Service Employment Regulations are referred to as regulatory priorities. Once persons with a statutory priority entitlement have been considered, those who have a regulatory priority entitlement must be considered but in no order of precedence. Regulatory priority continues to be extended to eligible CAF members medically released for non-service related reasons.

#### How and when can you activate a CAF Priority Entitlement?

A medically released or releasing CAF member should first call Director Casualty Support Management (DCSM). When contacted, DCSM will verify priority entitlement eligibility (statutory or regulatory), and provide the information and documentation needed to proceed further with the activation. Veterans Affairs Canada (VAC) will make the determination to establish that a CAF members' medical release was attributable to their military service. This determination must take place before DCSM can provide a veteran with the documentation needed for the statutory priority entitlement.

Activation can be done through the closest DND Civilian Human Resource Service Centre. Once activated, the former CAF member will have

up to five years to apply for jobs within the public service under the priority entitlement.

#### What is Mobility?

Mobility refers to the ability for CAF members with a minimum of three years of service, and honourably released veterans with a minimum of three years of service for up to five years after their release, to participate in advertised internal appointment opportunities, except for any employment equity criteria.

#### What is Preference?

Preference is related to externally advertised public service appointment opportunities, or opportunities that are open to the general public. It does not apply to internally advertised public service appointment processes. Preference applies after persons with priority entitlements have been considered.

Prior to the *Veterans Hiring Act*, there was only one category of preference for appointment within the federal public service. There are now two categories:

1. **For veterans:** Eligible veterans (ie, those with a minimum of three years of service, for up to five years after their release) who meet the essential qualifications for a position must be appointed ahead of other Canadians.
2. **For Canadian citizens:** Citizens who meet the essential qualifications must be appointed ahead of non-citizens.

#### For more information:

For specific questions related to individual cases and the *Veterans Hiring Act*, priority hiring, eligibility requirements, and available transition services, please call the DCSM at 1-800-883-6094, or e-mail at: [DCSM-DGSB@forces.gc.ca](mailto:DCSM-DGSB@forces.gc.ca).

For general information on the application process and available jobs within the federal public service please visit: [www.jobs.gc.ca](http://www.jobs.gc.ca). ♦

To further assist the men and women of the CAF with their transition to civilian life, the *Veterans Hiring Act* (Bill C-27), which came into force on July 1, provides eligible serving and former CAF members increased access to federal public service job opportunities.

As a professional institution, the CAF continues to be an employer of choice in Canada, giving its members a diverse range of opportunities for training, professional development, and unparalleled experiences while defending Canada's interests at home and abroad. The eventual transition out of uniform is a reality for anyone who enters the military, but continuing to serve this country through public service after release is now a more readily accessible option.

## EXPO showcases modern training delivery approaches to Defence Team

The Canadian Forces Support Training Group (CFSTG) recently conducted the Borden Training Council (BTC) Training Exposition at CFB Borden. The goal of the Training Expo was for instructional staff within all CFB Borden Training Establishments (TEs) to learn from their peers about recent modernization initiatives undertaken to improve the delivery of individual training.

The Training Expo was modelled as a trade-style event, in which representatives chose topics and created a display booth showcasing their modernization initiative. Representatives had the opportunity to discuss their own ideas and circulate to view the booths of others. This allowed for valuable networking opportunities and peer learning.

"From my position as an instructor, some of the displays were geared directly at what I do, and could be useful in our training environment," said Master Corporal Lyle Mason, a CFSATE avionics instructor who showcased an aircraft system faultfinding software. "I also know that instructors we talked to were very receptive to what we had on display, and the networking aspect of the expo was extremely valuable."

### Variety of training initiatives

Representatives exhibited a wide scope of training initiatives. Some TEs highlighted approaches for improving assessment, which included audience response clickers, feedback models, and online collaborative educational projects. Other TEs chose to display technological innovations including the utilization of simulators to conduct realistic field training, as well as modern approaches for designing distance learning (DL) courseware. Attendees were able to circulate and discuss initiatives at length. For many, it was easy to see how showcased items could translate to their own trade.

A contemporary training approach incorporates best practices in instruction to ensure effective training for CAF personnel. An individualized approach to training through the use of differentiated instruction, a strong assessment framework, and horizontal collaboration between instructional staff results in more engaged students and increased knowledge retention.

"I was thoroughly impressed with the level of engagement I saw at the Borden Training Expo. Each



of the booths exemplified a training modernization transition from concept to reality," said Commander Michael Thomson SSO Standards and Training. "Benjamin Franklin said 'an investment in knowledge pays the best interest.' Given the quality of the material presented, I don't think we'll have long to wait for our return from this event."

Following the success of the first Training Expo in September 2014, the event was extended to a full-day biannual event. The May 2015 Expo had a total of 19 display booths and 220 attendees.





## ENTER THE CAF PHOTO CONTEST

Ladies and gentlemen, get your cameras ready! The Canadian Armed Forces (CAF) Photography Contest runs from July 2 to September 15, and we want you to send us your best shots.

Whether you're a seasoned professional or an amateur photographer this is the contest for you. The Photography Contest, comprising eight diverse categories, is open to all members of the Defence Team and their families. Participants will be eligible to win \$10,000 in prizes from our sponsors.

This year's contest features a new award, the Military Photographer Achievement Award, which recognizes the contributions Military Photographers have made to the CAF Community.

For 47 years, the Photography Contest has been celebrating the talented photographers who capture life in CAF communities coast to coast to coast. Keep the Photography Contest in mind as you capture special moments this summer. Family gatherings, sports tournaments, scenic vacations, work events... the possibilities are endless!

Visit [www.cafphotocontest.ca](http://www.cafphotocontest.ca) to enter.

## IT IS 25°C, THE SUN IS SHINING... what are your plans?

The Director Force Health Protection and Strengthening the Forces is very pleased to offer you a feature webpage called Summertime Living. For tasty recipes, tips for hosting your next BBQ, having safe summer fun, and more... go to! <http://cmp-cpm.mil.ca/en/health/caf-members/summertime-living.page>

# COUNT YOURSELF IN! GIVE BLOOD THIS SUMMER

## Partners For Life

DND has been a national Partner for Life with Canadian Blood Services since 2006. This past year, DND has made over 5,400 lifesaving donations.

Someone in Canada needs blood every 60 seconds, every day of the year. The summer is no different. This summer, Canadian Blood Services is asking Canadians to step up and be counted. You can help hospital patients by giving blood before August 31.

"The men and women of the Defence Team consistently step up whenever and where ever there is a need. The summertime is an especially crucial time for Canadian Blood Services and the need for blood donations is high," said Major Nathalie Auger, CAF National Champion for Canadian Blood Services – Partners for Life initiative. "Our members, both Military and Civilian, understand this and have always been there to support. I am confident they will step up again this summer."

The goal is to encourage members of the Defence Team to donate this summer in support of our pledge to exceed 5,000 donations again in 2015. As one of Canadian Blood Services' top partners, it is in us to give.



Book your appointment to save a life now! Download the GiveBlood app or visit: [www.blood.ca](http://www.blood.ca) ♦

Dear Local Champions:

We are proud to celebrate our most successful year of saving lives together as a member of Canadian Blood Services' Partners for Life program. As a Partners for Life organization, National Defence made over 5,400 blood donations across the country this past year! We simply could not have done this without your local support as an ambassador and champion of the blood program – for that we can't thank you enough. We are the first group in Canadian Blood Services' history to hit the 5,000 Blood Donation Milestone in a single year.

As you know, every member – as well as friends and family – are welcome to join the team by registering online at [www.blood.ca](http://www.blood.ca) with your Location's Partner ID #. By registering just once, all donations will be counted towards our team's goal. This year, we once again encourage you to reach out to your Canadian Blood Services representative to schedule a recruitment event at your location, promoting new member registration and face-to-face opportunities for folks to have their questions answered about the process, eligibility and booking of an appointment.

There is a particular need for our help this summer. During the summer months, new routines pick up, and regular blood donors take vacations and are involved with outdoor activities. But the need for blood never takes a summer vacation. Please consider contacting your local Canadian Blood Services Territory Manager today to talk about how you can help encourage our members to donate this summer. If you're not sure who to contact at Canadian Blood Services, let us know and we'll put you in touch.

Thank you again for everything you do! If there is anything I can do to help, please don't hesitate to be in touch.

Sincerely,  
Maj Nathalie Auger,  
CAF National Champion  
Canadian Blood Services – Partners for Life initiative



F A Q

## Ask the Expert:

Dying to lose weight!

**Q:** A close friend of mine is struggling with her body weight. She has tried exercise, weight loss pills and every diet you can think of with minimal success. At 47, she is careful about what she eats and exercises five days a week just to maintain her current bodyweight. Someone suggested she try a miracle weight loss product called DNP. Have you heard of this product and are there any safety concerns?

—MCpl Goodfriend

**A:** Dear MCpl Goodfriend:

Dinitrophenol or DNP is an industrial chemical used to make things such as antiseptics, explosives, pesticides, herbicides and wood preservatives. Its potential as a weight loss agent was accidentally discovered during the First World War, when munitions factory workers were observed to be losing weight. DNP was introduced as a weight loss agent in the US in the 1930s and was quickly taken off the market because it caused significant and potentially fatal side effects.

Despite being considered unsafe for human consumption, DNP is now being sold as a weight loss agent on the black market. It comes in several forms: yellow powder, yellow crystals, capsules and as a cream. DNP is being used primarily by body builders who want to look “ripped” and people who are trying to lose some unwanted pounds.

DNP works by making one of the body's energy production systems very inefficient and the energy being wasted is lost as body heat. To compensate for this inefficiency, the body is forced to fuel its operations by burning fat stores. While this sounds great, DNP has been shown to cause a very high incidence of side effects which include: potentially fatal increases in body temperature, profuse sweating, fatigue, insomnia, nausea, vomiting, dizziness, dehydration, electrolyte depletion, restlessness, flushed skin, rapid breathing, rapid heart rate, headache, shortness of breath and cataracts.

An additional concern is that the dose of DNP needed to produce weight loss is very close to the lethal dosage for this substance. Unfortunately, once you have taken more DNP than your body can handle there is no known antidote for this substance. To date, there are over 60 published deaths attributable to its use.

The bottom line: Please advise your friend that DNP is not a miracle weight loss drug — it is a very dangerous industrial chemical that is unsafe for human consumption. Unfortunately as long as this product continues to be used, people will literally be dying to lose weight. Exercise is medicine!

—Dr. Darrell Menard MD Dip Sport Med

**For more information on taking control of your health and well-being, visit [Strengthening the Forces](#).**



# CANADA

## at the USA Volleyball Open National Championship

For the first time in their history, both the Canadian Armed Force's International Military Sports Council (CISM) men and women's volleyball teams participated in the prestigious USA Volleyball Open National Championships in Detroit, Michigan.

Invited by the US Armed Forces CISM program, 33 CAF personnel representing the best military volleyball athletes from across the country competed against the US Army, Navy, and Air Force teams, as well as civilian club teams. This 86th annual event is considered one of the largest national championships in any sport in the US and brought an estimated 550 teams and over 6,000 players together.

### CISM Men's team

In the beginning of the competition, the men's volleyball team came out strong against US All-Navy, All-Army teams and a civilian club team swinging hard with dominating victories. The following decisive matches were nail-biters and our Canadian men's team came up short losing in the quarter-finals. Overall, the men's team was ranked 15 out of 42 teams in their division.

“This was a great learning experience for us. With each team we faced, we were forced outside of our comfort zone and had to adapt to changing situations and styles of play,” said Major Craig Johnston, men's head coach. “We benefited greatly from this experience and it better prepared us for our final CISM exhibition match against the USA military All-Star team.”

### CISM Women's team

Things started out slowly for the women's team, playing the two strongest teams in the pool first, including the women's All-Air Force team and a civilian club team, losing to both in two straight sets.

Day two was a different story, as the women went on to play the All-Navy team, beating them in two straight sets, and taking a set off of the All-Army team in a very close match. The women were fortunate to have another chance to challenge the All-Army team in the quarter finals beating them 25-10, 25-19. Unfortunately, the women were not able to keep their elimination round winning streak going, losing to a defensively strong civilian club team in the semifinals, finishing 11 out of 27 in the A Division.

“This was a great opportunity to play some strong teams in preparation for the military world games this year,” says Warrant Officer Darral Rafus, women's team head coach. “As the tournament progressed so did we as a team. In the final match against the US military All-stars, we came up just short in spite of playing some really long rallies and some of the best ball of the weekend.”

The summation of this year's training will prepare our volleyball athletes for the 6th Military World Games that will be held in South Korea in October. ♦



The CAF CISM women's volleyball team compete in the US.



Aviator Kyle Vangenne (#1) spikes the ball against the Buffalo team in the quarter-final match, with MCpl Ivan Karin (#12) and WO Jim Davidson (#2) supporting the spike.

PHOTO: Henry Litjens Photography

PHOTO: Capt Dennis Noel

**KEEPING THE DEFENCE TEAM  
HEALTHY**





# OP DISTINCTION: Bringing the Maple Leaf to the Land of Tulips

A large crowd stood in the pouring Dutch rain, many of them 90-year-old Second World War veterans, who made the transatlantic journey in order to pay their respects and to mourn colleagues. The main purpose of this visit was to bury Private Albert Laubenstein for the second time. He was a Canadian casualty of the Second World War from the Lincoln and Welland Regiment whose remains were discovered in 2014.

Pte Laubenstein's next of kin were present for the burial and stood next to members of his Niagara-based Lincoln and Welland Regiment, Dutch and Canadian dignitaries. He was 30 years old when he died in the early morning of January 26, 1945 as part of Op ELEPHANT at Kapelsche Veer. His unmarked battlefield grave was rediscovered in June 2014 on the bank of the river Maas near Sprang-Capelle. Pte. Laubenstein's remains were identified through Dutch-Canadian collaboration using a combination of dental records, historical context, and artifacts.

## CAF Contribution

The private's military burial was one of many commemorative events that occurred in early May to mark the 70th Anniversary of the Liberation of The Netherlands as part of Operation DISTINCTION, the CAF contribution to the government commemoration program that began in 2012. More than 150 CAF members participated, including a guard of honour comprising units that participated in the liberation, The Royal 22<sup>e</sup> Regiment Band, and members of the Lincoln and Welland Regiment.

The 70 members of the guard of honour were drawn from Canadian regiments from across the country that had fought fiercely during the liberation of the Netherlands. The 48-piece band, based on la Musique du Royal 22<sup>e</sup> Régiment, augmented by Reserve Force musicians from 2 Canadian Division, performed at the event.

## Commerative Events

Events like this are important in forging links to the past, recognizing national and international accomplishments that have been instrumental to the growth and prosperity of our country, and ensuring that the losses and sacrifices of the war are remembered for years to come. It is important as well to remember the Second World War veterans, the youngest of which were 90, who made the transatlantic journey in order to pay their respects to long-gone, but still-mourned colleagues.

The Dutch were keen to pay their respects to both living and fallen Canadian soldiers. After fighting and overcoming the Nazi oppressors and forming an unbreakable bond with the thankful people of the Netherlands, this may well be the last time that many of these veterans will be able to stand on former battlefields and in cemeteries to reflect, reminisce, and remember. ♣



Sgt Stephen Champ plays the last post during the interment ceremony of Pte Albert Laubenstein, a member of the Lincoln and Welland Regiment who died fighting during the Second World War, at the Bergen-op-Zoom Canadian War Cemetery in Noord-Brabant, the Netherlands.



Members of the bearer party carry the remains of Pte Albert Laubenstein, a member of the Lincoln and Welland Regiment, who died fighting in Kapelsche Veer during the Second World War, to their final resting place at the Bergen-op-Zoom Canadian War Cemetery in Noord-Brabant, the Netherlands.

## Thunderbird Challenge helps Military Police CELEBRATE 75 YEARS

A one-day event focussing on fitness, an obstacle course, pistol shooting and combat rifle competitions had military police (MP) from across the country competing in the Thunderbird Challenge.

This non-for-profit event was to help celebrate the history and heritage of the 75th anniversary of the Military Police and spark the immense esprit de core in today's new generation of MPs.

The original Thunderbird Challenge was an Air Force Military Police event initially held during the 1990s primarily at 17 Wing Winnipeg that was brought back to life as part of the recent celebrations.

Thunderbird Challenge is designed to encourage competition and training aimed at developing and improving marksmanship, tactical and professional skills needs for both day-to-day, as well as contingency operations faced by our MP force.



Maj Todd Somerville, 2 MP Regt in Ottawa participates in the pistol shooting portion of the Thunderbird Challenge.

Sgt Reg Marshall, 2 MP Regt takes part in the obstacle course during the Thunderbird Challenge.

PHOTOS: Cpl Michael J. MacIsaac

## This Date in Military History – JULY 8

### July 8, 1954

Canada's first icebreaking arctic patrol vessel, HMCS *Labrador*, is commissioned. HMCS *Labrador* was the first ship to circumnavigate North America in 1954 transiting the Northwest Passage and back to Halifax through the Panama Canal. She served from 1954 to 1957.



HMCS *Labrador*, Modified Wind-class Arctic patrol vessel, Royal Canadian Navy, 1954.

### July 8, 1944

Actions by Major David Currie of the 29th Armoured Reconnaissance Regiment at St. Lambert-sur-Dives earn him the Victoria Cross.



Check out the Directorate of History and Heritage's site at: [www.cmp-cpm.forces.gc.ca/dhh-dhp/his/her-pat/sdcmh-dshmc-eng.asp](http://www.cmp-cpm.forces.gc.ca/dhh-dhp/his/her-pat/sdcmh-dshmc-eng.asp) for more history facts.



DEFENCE  
ETHICS  
PROGRAMMEPROGRAMME  
D'ÉTHIQUE DE  
LA DÉFENSE

## Defence Ethics Programme

### Ethically, what would you? The Swim Club Coach

Readers responses to 'The Swim Club Coach' dilemma in the May issue, have been received from ranks ranging from privates to majors. Those responding took the extra effort to outline the requirement to interview Cpl Smart (or Cpl Not-So-Smart as one contributor dubbed him) to better understand his situation.

In the scenario, Cpl Smart was described as "well-liked", "respected" and "hardworking" and most respondents advised that for these reasons they would sit with Cpl Smart to identify the underlying reasons behind the deceit. Many had thoughtful suggestions to offer, such as ordering or suggesting Cpl Smart make use of SISP financial counselling services and to review the member's CAF Family Care Plan.

A reader also stressed the requirement for more informal feedback discussions so that problems could be addressed before Cpl Smart took matters into his own hands.

Although a few readers were forgiving, the vast majority identified a requirement for disciplinary action, and with good reason. Notwithstanding his very difficult personal situation, Cpl Smart has deliberately lied to the chain of command for personal gain and this behaviour cannot simply be met with an attempt at compassion and understanding alone.

At the same time, generally accepted practices of disciplinary action can be adjusted for various circumstances; such as first time or repeat offences or precedents (how similar situations involving other staff were treated) in the same unit, and so forth. This action appears to fall somewhere in the middle of the spectrum. Given his extreme financial pressures, a time-based penalty may be better adapted to the case, such as the imposition of extra duties. One reader had mentioned that Cpl Smart's vacation allowance should be used to cover the misused sick days.

Any solution should be compatible with the relevant rules on Conduct and Performance Deficiencies (DAOD 5019-0).

With regards to the Defence Ethics values and principles in the situation, the following are the clearest and most obvious: the principles of Serve Canada Before Self and Obey and Support Lawful Authority; and the values of Integrity, Stewardship and Excellence.

Another aspect of this scenario is loyalty in regard to workplace dynamics, where the supervisor [Capt Jones] is blissfully ignorant to Cpl Smart's moonlighting. Communication within the unit Capt Jones leads appears to be broken as dishonesty is apparently the preferred policy. This is probably the more serious ethical lesson from the misadventures of Cpl Smart. Why is this kind of thing going on? What else are the people in charge unaware of and how many other people think it's okay – or at least preferable – not to report a fault?

Several respondents noted that the workplace needs to be better supervised. One reader suggested Capt Jones take remedial action with one or more of the subordinates who should have known to confirm the member's unusual moonlighting situation during working hours. The captain also needs to figure out what he can do differently to ensure his staff practice greater openness in the future – "sending the right messages".

The DEP staff thanks those who responded to this dilemma. Suggestions for future scenarios are always welcome at: [+Ethics-Ethique@ADM\(RS\) DEP@Ottawa-Hull](mailto:+Ethics-Ethique@ADM(RS) DEP@Ottawa-Hull).



# BARRIER WALL ART TELLS STORIES

The omnipresent concrete barriers that line the roads and surround their compounds can sometimes leave CAF personnel serving in Kuwait feeling a little "closed-in", despite the open desert that surrounds many of the airfields from which they operate.

### Transforming from Grey

Fortunately, for the artistically inclined, these flat grey walls also serve as excellent canvasses for expressing unit pride and esprit de corps. A quick walk through Camp Canada or Camp Patrice Vincent reveals a wide variety of artwork reflecting units, operations, exercises and people. Some American art dates to the late 1990s, during that nation's enforcement of the "No-Fly Zone" over Iraq. Other paintings are more recent – those commemorating the Canadian air bridges between Kuwait and Afghanistan in the final years of Op ATHENA, for example.

With the Canadian deployments to Kuwait as part of Op IMPACT, members have been using their paint brushes to make new contributions to the décor of their camps, reflecting those who inspire them and that which binds them together.

### Meaningful artwork

Among the first walls to go up during Op IMPACT was the "Camp Canada" barrier wall at the front gate of the CAF's Kuwait "Hub". Adorned with the Canadian Joint Operations Command badge, this wall serves as the "welcome home" sign for returning long range patrol and air-to-air refuelling personnel, and for members of the many support trades who work in and around the busy base.

Another recent addition to the barrier wall art in Kuwait is also the most poignant: the Camp Patrice Vincent wall, which was painted by two Air Task Force–Iraq members over the course of five days in memory of Warrant Officer Patrice Vincent, who was intentionally killed on October 20, 2014, by a hit-and-run driver in Saint-Jean-sur-Richelieu, Quebec. The pair of dedicated artists completed the project with just hours to spare before it was revealed to Canadian and Coalition members on parade during the 2014 Remembrance Day ceremony. Among the most vibrant and new walls on the base, it stands out, catching many eyes of the passing Canadian and foreign military members each day. The painting serves to remind members to uphold the values which WO Vincent upheld.

### Commemorating Successes

There have also been additions from the Air Detachment members to commemorate Rotation 0 and the work the busy crews did to achieve early successes within the Air Task Force. Some – the new long-range patrol detachment mural, for example – are found in places such as Camp Canada, while others, such as the Roto 0 fighter detachment mural, are closer to the flight lines.

Barrier art is often created at night, using projectors to put the design on the wall so artists can trace on the outlines. Working at night also enables the artists to avoid the mid-day heat. To mitigate the effects of the harsh desert environment such as driving wind, flash rainstorms and high temperature, oil and enamel paints are often used. While durable, it also means longer working days and evenings.

For personnel deployed on Op IMPACT, the splash of colour against the often monochromatic base landscape is welcome, and the efforts of the volunteer artists are greatly appreciated. As a new batch of CAF personnel rotates in to continue operations against ISIS, there will surely be more stories to tell on the concrete walls of Kuwait. ♦



This hand-painted concrete barrier wall marks Rotation 0 of the Royal Canadian Air Force Fighter Detachment in Kuwait.



Concrete barrier wall art celebrates the contributions of the CP-140 Aurora community to the Coalition efforts in Kuwait.

PHOTOS: Combat Camera

## RCAF BAND ROCKS ALERT



PHOTO: Cpl Ray Haack

After a long journey took them through several airfields, including Thule Air Base in Greenland, the six-piece RCAF Rock Band arrived at CFS Alert, kicking off a project which was months in the making. The Spitfire Kings from 17 Wing Winnipeg were on a mission to deliver a series of special performances at the Arctic Club – the suitably named mess of CFS Alert.

"Almost every person on station was in attendance while the band launched into a carefully crafted classic rock show," said Sergeant Mike Hall, leader of the Spitfire Kings.

Immersed with instantly recognizable tunes by Deep Purple, Ozzy Osborne, The Guess Who and Rush, the enjoyment of the audience was quite obvious by a cheering crowd for the entire show.

Looking back on their 10-day journey onto Ellesmere Island, members of the Spitfire Kings feel privileged to have made a contribution to the esprit de corps of Canada's "Frozen Chosen" at CFS Alert.

"The RCAF band is a mission enabler," said Colonel Joël Roy, 17 Wing Commander. "Quality of life on deployment is very important to energize personnel for the mission; the RCAF Band is a resource that can contribute to that in a meaningful way." ♦



# Updates to geobuoys support RCAF ARCTIC SURVEILLANCE

For roughly two weeks this spring from late April to early May, a team of scientists, technologists and logistics support staff from Defence Research and Development Canada (DRDC) evaluated the performance of newly improved geobuoys on behalf of the Royal Canadian Air Force (RCAF).

"In order to conduct Arctic underwater surveillance in areas where the surface of the ocean is covered in ice, geobuoys play an important role in detecting and tracking underwater sounds," said Major Glenwood Gullison, from Directorate of Air Requirements in the RCAF.

Geobuoys contain vibration sensors that can detect sound that travels through the water and into the ice; they are one of the best ways to detect underwater sounds below the ice.

"Science and technology plays a pivotal role in the development of Department of National Defence capabilities," said Maj Gullison. "The trial conducted by DRDC is part of this capability development and is an important contributor to maintaining airborne intelligence, surveillance and reconnaissance for the RCAF."

"Due to their specific expertise and extensive experience in underwater acoustics and geobuoy technology, they are uniquely positioned to conduct the evaluation of the redesigned geobuoy," Maj Gullison added.

## Development and Testing

DRDC has been instrumental in the development and testing of geobuoys since their conception in the 1980s.

"DRDC is the only organization with the unique expertise to effectively test the product in operational conditions," said Scott Campbell, an Undersea Sensor Systems Engineering Manager from DND.

This year's trial is testing the effectiveness of the geobuoy's modifications. The geobuoys were modified by updating the battery, weight and centre of gravity. The goal is to validate the technical refresh in an operational environment.

## What are Geobuoys?

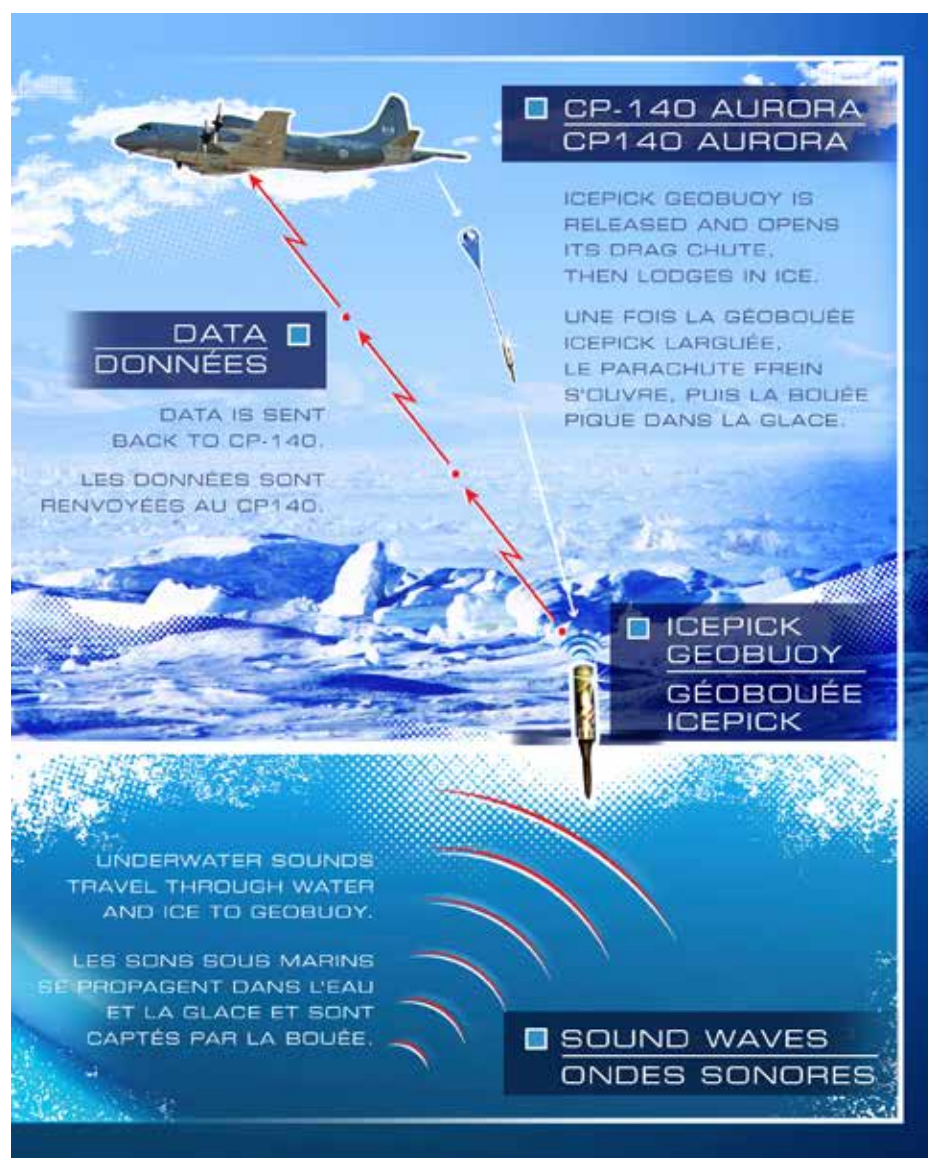
The geobuoys are cylinder-shaped and contain a vibration sensor and radio transmitter, as well as a parachute on its tail and an icepick for a nose. They are dropped from an aircraft to conduct under ice acoustic surveillance.

In ideal circumstances, the geobuoys fall pointing straight down and make a solid connection with the ice in order to effectively sense sounds travelling through the water and into the ice.

Additional geobuoys were also hand planted after the air drop, for specific tests. Ambient sound levels, ice motion and underwater noise were picked up by geobuoy sensors during tests.

"It's important to test and improve geobuoy technology in order to keep devices reliable and relevant in their role of monitoring underwater sounds," said the trial's lead scientist Dr. Garry Heard of DRDC, a veteran researcher who has worked in the Arctic for several decades. "We need to know who is travelling in Canada's Arctic."

"In accordance with the *Canada First Defence Strategy*, the CAF must ensure the constant monitoring of Canada's maritime approaches, including the Arctic, in order to detect threats to Canadian security as early as possible," said Maj Gullison. "This includes underwater intelligence, surveillance and reconnaissance missions in the Arctic Ocean, conducted by the RCAF." ♦



## MULTI-TARGET TRACKER SOFTWARE ENHANCES COMMERCIAL RADAR PRODUCTS

Software that enables radar to track multiple targets at the same time has been added to the sigma S6 radar product line developed by Rutter Inc., a Canadian company based in St. John's, Newfoundland.

The software was developed by Defence Research and Development Canada (DRDC) scientists using filter-based dynamic models as well as advanced data association algorithms. The algorithms developed by DRDC's scientists can initiate and maintain track of a number of targets. They determine the criteria used to group data and select which targets to track, from noisy data. In the simplest terms, DRDC's software is what makes the tracker track. The unique and powerful tracker is a significant component of the radar line.

### Partnerships = Success

Partnerships are at the core of DRDC's success. DRDC actively pursues opportunities for defence and security collaboration with partners from industry, academia, other government departments, agencies and international allies to help develop the knowledge and technology needed to defend Canada's interests. As the national leader in Defence, security, science and technology DRDC provides the Defence Team,

the public safety and national security communities with knowledge relevant to science and technology.

"The software allows you to track fast, highly manoeuvring and slower moving marine targets at the same time," said Stephen Hale, director of Sales and Marketing at Rutter in reference to new tracker. "The system allows this with minimal configuration and interaction from the end user."

"The Kalman filter is an algorithm to reduce the noise. It won't remove it all, but it will significantly reduce the measurement error," explained Dr. Jack Ding, a Defence scientist.

Rutter's radar products track over an azimuth sector of 360° and can pick up all the targets within range. Their older generation radar processor could track manoeuvring targets, but Rutter recognized they wanted to improve their abilities and to reduce the amount of user intervention required for their application.

### Testing the tracker software

To test whether the tracker software was a good fit, DRDC was given a series of unknown radar contacts to process.

From there, a licensing agreement was developed and Rutter's team

incorporated the tracker into their sigma S6 product line.

"It's a testament to the work they had done; we didn't find any glaring problems in the development. It was extremely clean," described Desmond Smith, Director of Research and Development at Rutter.

"The end result is a much more effective tracking algorithm with much better

results and much less user input. That's exactly what we were aiming for," said Mr. Hale.

Dr. Ding explained how the tracker software is part of a larger multi-function radar simulator that is used in international partnerships with Australia, the UK, the US and other allied nations.

### Simulator supporting RCN

Currently the simulator is used to support the Royal Canadian Navy's new ship programs, in helping decide radar requirements for future procurements.

Radar products like these are used internationally in a number of shipborne and shore-based applications, including oil spill detection, ice detection and navigation and small target detection.

Dr. Ding explained that as an employee of the federal government, he feels positive about supporting the Canadian economy and helping Canadian industry to develop new products to better compete on the world stage, but he also sees a benefit in having DRDC work in the marketplace.

"By working with industry, it helps us to understand the nature of the algorithms, so we can tell our clients that this tracker has been tested and processed a certain amount of targets," Dr. Ding said.



A computer interface showing a rescue craft travelling at 48.5 knots doing manoeuvres in Newfoundland & Labrador. The yellow trails on the screen shows its route, captured through Rutter's sigma S6 Small Target Detection and Surveillance system.



## Op OPEN SPIRIT l'Op OPEN SPIRIT

Royal Canadian Navy clearance divers assist a diver as they prepare to get out of the water during Op OPEN SPIRIT. The operation is a multinational underwater mine clearing exercise to rid the waters near Estonia of mines laid during the First and Second World Wars.

Des plongeurs démineurs de la Marine royale canadienne aident un plongeur à sortir de l'eau, lors de l'Op OPEN SPIRIT, un exercice multinational de déminage sous-marin qui a lieu près de l'Estonie et qui consiste à détruire les mines datant de la Première Guerre mondiale et de la Seconde Guerre mondiale.



PHOTO : Cpl Chris Ringus

MS Evan Beaton (right), a clearance diver from Fleet Diving Unit (Atlantic), observes a student as she lifts an object to the surface during Ex TRADEWINDS 15 in St. Kitts and Nevis.

Matc Evan Beaton (à droite), plongeur démineur de l'Unité de plongée de la Flotte (Atlantique), regarde une étudiante remonter un objet à la surface lors de l'Ex TRADEWINDS, à Saint Kitts et Nevis.

## SUMMER TRAINING

# Snapshots Les entraînements D'ÉTÉ EN UN CLIN D'ŒIL

## Ex AMALGAM DART 15-2 L'Ex AMALGAM DART 15-2

A CF-18 Hornet refuels from a CC150T Polaris north of Inuvik, Northwest Territories during Ex AMALGAM DART 15-2.

Un CF-18 Hornet se ravitaile à partir d'un CC150T Polaris au nord d'Inuvik, dans les Territoires du Nord-Ouest durant l'Ex AMALGAM DART 15-2.

PHOTO : Cpl Arthur Ark



A CAF explosive ordnance disposal team member investigates a simulated improvised explosive device at CFB Esquimalt during Ex ARDENT DEFENDER.

Un membre de l'équipe de neutralisation d'explosifs et de munitions des FAC examine un engin explosif improvisé simulé à la BFC Esquimalt au cours de l'Ex ARDENT DEFENDER.

PHOTO : LS/Mat 1 Zachariah Stopa

A member of a CAF explosive ordnance disposal team prepares equipment to be used in the examination of a simulated improvised explosive device at Victoria International Airport during Ex ARDENT DEFENDER.

Un membre de l'équipe de neutralisation d'explosifs et de munitions des FAC prépare l'équipement qui sera utilisé pour examiner un engin explosif improvisé simulé à l'aéroport international dans le cadre de l'Ex ARDENT DEFENDER.

PHOTO : LS/Mat 1 Zachariah Stopa



## CAF | Les FAC

# participate in participent à Ex TRADEWINDS 15 / l'Ex TRADEWINDS 2015

CAF personnel participated in the annual US-led multinational Ex TRADEWINDS 15 that took place in the Caribbean from May 31 to June 24.

The exercise involved several agencies responsible for maritime interdiction and ground security. The CAF deployed both maritime and land assets in a training and support role. Drills involved ships, aircraft and personnel from 19 nations, as well as participation by key regional groups such as the Caribbean Disaster and Emergency Management Agency, the Regional Security System and the Caribbean Community Implementation Agency for Crime and Security.

Les FAC ont participé à l'exercice multinational TRADEWINDS 2015 dirigé par les É.-U. qui s'est déroulé dans les Caraïbes du 31 mai au 24 juin.

L'exercice implique plusieurs organismes chargés des interceptions maritimes et de la sécurité terrestre. Les FAC ont déployé des ressources maritimes et terrestres dans un rôle d'instruction et de soutien pour l'exercice de cette année. Les activités d'entraînement ont rassemblé des navires, des aéronefs et des représentants de 19 pays, de même que d'importants groupes régionaux comme la Caribbean Disaster and Emergency Management Agency, le Système de sécurité régionale et la Caribbean Community Implementation Agency for Crime and Security.



## CAF members work to improve

# explosive threats

## Les membres des FAC travaillent à renforcer la lutte contre

# les menaces liées aux explosifs

More than 175 CAF personnel, 11 partner nations and civilian law enforcement agencies conducted Ex ARDENT DEFENDER 2015 at CFB Esquimalt and throughout Greater Victoria, B.C from May 25 to June 5.

Held annually, Ex ARDENT DEFENDER improves participants' readiness to counter explosive threats, including improvised explosive devices. The training simulated a complex contemporary operating environment and enhanced relationships with allies and civilian law enforcement partners as they practiced response protocols.

Quelque 175 membres du personnel des FAC, 11 pays partenaires et des organismes civils d'application de la loi ont mené l'Ex ARDENT DEFENDER 2015 à la BFC Esquimalt et dans l'ensemble du Grand Victoria, en C.-B. du 25 mai au 5 juin.

L'Ex ARDENT DEFENDER, qui a lieu chaque année, améliore l'état de préparation des participants à la lutte contre les menaces liées aux explosifs, ce qui comprend les engins explosifs improvisés. L'entraînement, qui a simulé un environnement opérationnel contemporain complexe, a permis de renforcer les liens avec les alliés et les partenaires civils d'application de la loi pendant qu'ils mettaient en pratique les protocoles d'intervention.