

Van Arty Association and RUSI Van Members News Sept 22, 2020

Newsletters normally are emailed on Monday evenings. If you don't get a future newsletter on time, check the websites below to see if there is a notice about the current newsletter or to see if the current edition is posted there. If the newsletter is posted, please contact me at bob.mugford@gmail.com to let me know you didn't get your copy.

Newsletter on line. This newsletter and previous editions are available on the Vancouver Artillery Association website at: www.vancouvergunners.ca and the RUSI Vancouver website at: <http://www.rusivancouver.ca/newsletter.html>. Both groups are also on Facebook at: <https://www.facebook.com/search/top/?q=vancouver%20artillery%20association> and <https://www.facebook.com/search/top/?q=rusi%20vancouver>

Wednesday Lunches - Lunches suspended until further notice. Everyone stay safe!!

Upcoming events – Mark your calendars (see Poster section at end)

Aug 9

to **Virtual Remembrance Run in Support of the Juno Beach Centre**

Nov 28

Sept 23 'Wednesday Lunch' Zoom meeting

Sept 30 'Wednesday Lunch' Zoom meeting

Oct 06 'Wednesday Lunch' Zoom meeting

Hyper Velocity Projectile for USS Zumwalt

A version of the Zumwalt's beleaguered Advanced Gun System shot down a cruise missile with a Hyper Velocity Projectile during a major land test.

Thomas Newdick and Tyler Rogoway The War Zone September 17, 2020



March 11, 2019, Esquimalt, British Columbia. The guided-missile destroyer USS Zumwalt (DDG 1000) approaches Canadian Forces Base Esquimalt while arriving for a port visit. The visit is an opportunity for the crew to experience the hospitality of the Canadian port, as well as showcase the US Navy's newest class of destroyers.

Photo courtesy of Royal Canadian Navy

After the successful destruction of a cruise missile by a Hyper Velocity Projectile in a land-based test, the case for the US Navy’s stealthy *Zumwalt*-class destroyers adopting the fast-flying ammunition has strengthened. These warships are arguably the Navy's most advanced and survivable, but also its most controversial — you can read more about them here — but their main guns, which take up the entire forward third of the 16,000-ton displacement vessels, lie dormant. During the recent trial, an Advanced Gun System (AGS) mounted on an M110 8-inch self-propelled Howitzer fired a Hyper Velocity Projectile (HVP) that downed a cruise missile target over the White Sands Missile Range. It was part of the US Air Force’s Advanced Battle Management Systems (ABMS) test that ran from August 31 to September 4, 2020. Although the HVP was originally designed to be fired from an electromagnetic rail gun, propelling it to speeds of over Mach 7 and to a maximum range of over 100 nautical miles, it has also been adapted to work with existing naval guns that use traditional chemical propellant, including the Mk 45 deck guns found on existing US Navy *Ticonderoga*-class cruisers and *Arleigh Burke*-class destroyers, and 155-millimeter tube artillery. As the test proved, the HVP can also be fired from a modified version of BAE Systems' Mk 51 Advanced Gun System (AGS) that arm the *Zumwalt*-class destroyer. These guns are currently dead weight, with no suitable projectile fielded. At present, a pair of 30mm cannons are the *Zumwalt*’s only usable guns.

The three types of HVP rounds.
Joseph Trevithick

Specifications

Compatible with Mk 45, Advanced Gun System (AGS), 155mm Tube Artillery, EM Railgun	
Length	
Integrated Launch Package	26 inches
Flight Body	24 inches
Weight	
Integrated Launch Package	40 lbs
Flight Body	28 lbs
Payload	15 lbs
Range	
> 50 nmi (93 km) from Mk 45 Mod 4	
> 40 nmi (74 km) from Mk 45 Mod 2	
> 70 nmi (130 km) from AGS	
> 43 nmi (80 km) from 155mm Tube Artillery	
> 100 nmi (185 km) from EM Railgun	
Maximum rate of fire	
Mk 45	20 rounds per minute
AGS	10 rounds per minute
155mm Tube Artillery	6 rounds per minute
EM Railgun	10 rounds per minute



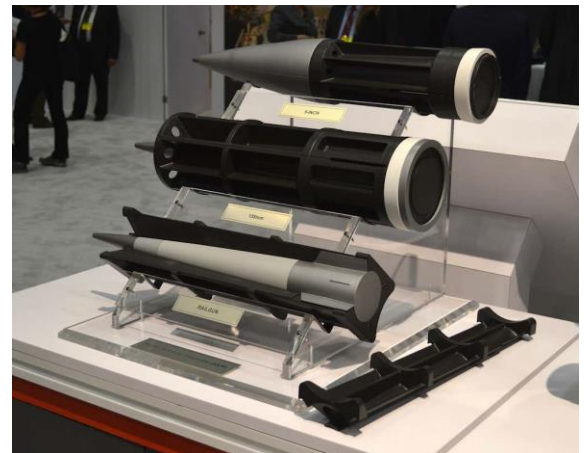
5" Compatible HVP



155mm Compatible HVP



EM Railgun Compatible HVP



The most recent land-based ABMS test — termed an “on ramp” by the Air Force — was intended to demonstrate how the system can “detect and defeat

efforts to disrupt US operations in space in addition to countering attacks against the US homeland, including shooting down a cruise missile “surrogate” with a hypervelocity weapon,” the service explained. As the test showed, at least indirectly, combining the HVP-armed AGS with the three *Zumwalt*-class hulls could add a significant new air defense capability to the already advanced warships. In particular, the new projectile could give the destroyers an effective and relatively low-cost counter to anti-ship cruise missiles or unmanned aerial vehicles, as well as conventional manned aircraft. “If you think about the kinds of threats you might face in the Middle East, the lower-end cruise missiles or a larger UAV, now you have a way to shoot them down that doesn’t require you use a \$2-million ESSM or \$1-million RAM because a Hyper Velocity Projectile — even in the highest-end estimates have it in the \$75,000 to \$100,000 range,

and that's for the fanciest version of it with an onboard seeker," Bryan Clark, from the Center for Strategic and Budgetary Assessments told *USNI News* last year.

The *Zumwalt*-class warships' 155-millimeter/62-caliber AGS was originally expected to fire the Long Range Land Attack Projectile (LRLAP). When the costs of the munition escalated to \$800,000 for a single round, the Navy ditched it on fiscal grounds and began to look at other options, including the Raytheon Excalibur 1b and BAE Systems Multi-Service Standard Guided Projectile (MS-SGP). Another BAE Systems product, the HVP, had been discussed as at least partial replacement for LRLAP, but it now appears to be a more tangible candidate for finally making the *Zumwalt*-class's deck guns relevant again. The types of missions the HVP will be able to undertake will depend on the gun system and platform, but currently, they include "naval surface fire, cruise and ballistic missile defense, anti-surface warfare and other future naval mission areas" according to BAE Systems. As such, the weapon could give the AGS a dual-role capability, tackling surface and land targets as well as airborne threats.

Firing the HVP from the AGS on the *Zumwalt* class would also provide greater range than from the far more common 5-inch Mk 45 guns. Those guns can supposedly reach out to a maximum of between 40 and 50 miles with the HVP round. According to available documentation, the HVP could be able to reach out to as far as 70 miles when fired from the AGS. This is approaching the range of the original LRLAP rounds that proved too costly to procure for just the three *Zumwalt* class destroyers. Even if it turns out the range of the HVP and AGS combo is less, its anti-air capabilities offer more flexibility than the now-defunct LRLAP rounds ever did.

As originally schemed, the *Zumwalts* were expected to provide long-range fire from littoral positions to support troops storming enemy beaches and fighting inland, but the ethos of the stealthy destroyers has since changed to focus to blue-water operations. Nevertheless, the fact remains that the three destroyers were designed around two AGS installations each, and the Navy needs to find a way of making use of them — unless it decides to remove them altogether. While the AGS aboard the *Zumwalts* has not yet fired the HVP, the projectile has been tested at sea previously. During the RIMPAC 2018 multinational exercise, the *Arleigh Burke*-class destroyer USS *Dewey* (DDG 105) fired 20 HVPs from its standard Mk 45 mounting. Another phase of at-sea testing might well involve one or more of the three *Zumwalts*, especially since the Navy decided to assign them to Surface Development Squadron 1, or SURFDEVRON, a dedicated experimental unit that is tasked with investigating a broad range of cutting-edge technologies. There is also an initiative underway that will examine equipping the *Zumwalt* class with another type of hypersonic weapon — the new Conventional Prompt Strike hypersonic missile, providing a fast-response standoff attack capability against enemy ships and targets on land. These plans would involve the removal of the warships' Mk 51

BAE SYSTEMS



AGS installations, so a decision may have to be made over which of these high-speed weapons to prioritize.



A land-based test of the AGS prior to installation aboard USS Zumwalt.
USN

The *Zumwalts* will also likely receive the SM-6 missile, which is primarily an anti-air weapon, but it has secondary anti-ship and land-attack capabilities that are growing more prominent. These missiles, when used to attack targets on the surface of the Earth, would act as quasi-ballistics missiles and would have terminal velocities approaching hypersonic. They can also be housed in the *Zumwalts'* existing Mk57 vertical launch system cells but it, combined with an HVP-capable AGS would give these ships a relatively wide array of highly flexible additional strike and air defense capabilities. What we don't know is what modifications would be needed to the *Zumwalt* class destroyers' guns and their complex ammunition handling systems to make the HVP round work in an acceptable manner. Still, remodeling the guns and their below-deck infrastructure to work with the HVP may be a far more attractive and less costly option than ripping them out in full and replacing them with something totally different. We are still some way off seeing the full potential of the HVP, but it clearly shows considerable promise for lower-cost air defense both on land and at sea, as well as its other strike-related abilities. If the *Zumwalt*-class's already installed AGS can be adapted to accept it, it would address the embarrassing issue of a \$23-billion program that has yielded three gun-armed warships with no ammunition to fire from them.

US Army AI Uses Human Brain as a Combat Sensor

Kris Osborn

What if a dismounted squad is navigating rigorous terrain amid high-intensity combat, tasked with finding enemy Humvees, yet the enemy targets are dispersed and hidden? However, what if the squad used AI and computers to find the enemy instead of trying to overcome all of their environmental and line-of-sight challenges? Enemy force location patterns and information from multiple soldiers' viewpoints might all be instantly calculated and fed back to soldiers and decision makers in a matter of seconds. This concept, designed to use biological elements of the human brain as sensors, is fast evolving at the Army Research Laboratory. The science is based upon connecting high-tech, AI-empowered sensors with the electro-chemical energy emerging from the human brain. A signal from the brain, scientists explained, can be captured "before the brain can cognitively do something." Electrical signals emitted by the human brain resulting from visual responses to objects seen can be instantly harnessed and merged with analytical computer systems to identify moments and locations of great combat relevance. This is accomplished by attaching a conformal piece of equipment to soldier glasses, engineered to pick up and transmit neurological responses. "The computer can now map it if, when a soldier looks at something, it intrigues them. The human brain can be part of a sensing network," J Corde Lane,

PhD Director, Human Research and Engineering, Combat Capabilities Development Command, Army Research Laboratory, told Warrior in an interview.

Perhaps an entire group of soldiers all see something at once, yet from different angles. That response data can then instantly be aggregated and analyzed to, if needed, dispatch a drone, call for air support or direct ground fires to a specific target. A collective AI system can gather, pool and analyze input from a squad of soldiers at one time, comparing responses to one another to paint an overall, wholistic combat scenario picture. “With opportunistic sensing, we can identify where those humvees are. Now I know dynamically where the threat objects are for the mission. This group of individuals has given me that information without them having to radio back. Information is automatically extracted by soldiers doing their normal behavior,” John Touryan, Researcher, Cognitive Neural Sciences, Army Research Lab, told Warrior in an interview. AI-empowered Machine Learning can factor prominently here, meaning the computer analytics process can identify patterns and other interwoven variables to accurately forecast where other Humvees might be based on gathered information. Such a technology might then accurately direct soldiers to areas of great tactical significance.

Touryan explained it this way, saying that an AI system could, in effect, say “this group of soldiers is very interested in humvees and vehicles so let me analyze the rest of the environment and find out where those are, so that when they come around the corner they are not going to be surprised that there is a Humvee right there.” By drawing upon an integrated database of historical factors, previous combat and known threat objects, the AI-generated computer system could even alert soldiers about threats they may not be seeing. The computer could, as Touryan put it, find “blind spots.” “What we hope is that within this framework, AI will understand the human and not just be rigid. We want it to understand how soldiers are reacting to the world,” Lane explained.

Tanks Have Rarely Been More Vulnerable

Some armies are scrapping theirs. Others are innovating

Science & Technology Sept 12, 2020 edition



Tank battles are rare these days. Crews that wish to prove themselves can turn instead to the Tank Biathlon, part of the International Army Games—a sort of Olympics with guns—organised each year by Russia. On September 5th Russian tanks raced and blasted their way to victory over teams from China, Belarus and Azerbaijan. A

century after its debut at the Battle of the Somme, the tank—an armoured vehicle typically

equipped with a cannon on a turret—remains the backbone of most armies. The International Institute for Strategic Studies (IISS), a think-tank, counts over 5,000 in Europe, and 54,000 globally. Nothing else can move soldiers around, shield them and wield big guns all at once. Russia was able to slice through Ukraine’s defences with its superior t-72s in 2014. Their absence can be keenly felt. The mostly tank-free offensive against Islamic State in 2016-17 was grinding and bloody, even with help from American bombing. “High-intensity combat operations between technologically comparable countries is unimaginable without the large-scale use of tanks,” says Viktor Murakhovsky, a retired colonel of Russia’s Tank Troops. Yet in some recent conflicts, tanks have struggled. In February Turkish drones destroyed dozens of Syrian tanks in a two-day killing spree. In the past, camouflage could hide tanks from most planes. Today, sensors can pick out things like engine heat and tracks on the ground. “It must be doubted whether existing concepts of armoured manoeuvre will remain viable,” concluded Nick Reynolds and Jack Watling, both experts at the Royal United Services Institute UK, another think-tank.

Some armies are therefore cutting back. America’s Marine Corps, which has more tanks than most European nations, said in March that it planned to scrap them, to focus on countering China in the Pacific. The tank, it said, had a “long and honourable history in the wars of the past” but was “operationally unsuitable for our highest-priority challenges in the future”. (America’s army still has plenty.) Britain, the first country to make use of the tank, is debating how far to prune its own ageing fleet, to free money for next-generation weapons. The Netherlands scrapped its heavy armour almost a decade ago, though it now leases 18 tanks from Germany. For most countries, the answer is not to junk the tank but to modernise it. One big change is the view from inside. Tankers of the 1980s saw the battlefield through a pair of periscopes, “a bit like looking through a straw”, says Mr Watling. The newest ones are studded with cameras and other sensors that project a 360-degree view on panoramic displays inside. Such “see-through armour” allows the gunner to aim at one target while the commander looks for the next. Doing away with periscopes also avoids breaks in the armour. Mr Murakhovsky thinks future tanks will use drones to peer around corners and over hills.

Tanks are also beefing up their defences. “Active protection systems” are designed to neuter threats before they hit a tank’s armour. “Soft-kill” methods detect and misdirect the radio, infrared or laser beams that guide anti-tank weapons to their targets. “Hard-kill” systems, such as Russia’s Afghanit and the Israeli Trophy and Iron Fist, intercept and blow up missiles as they home in (the catch being that nearby infantry could be caught in the blast). Ben Barry, a former brigadier in the British Army and now at the IISS, reckons that many of NATO’s anti-tank weapons would struggle to penetrate the newest Russian protection systems. But these adornments come at a price. Tanks are expensive as it is (a new Russian T-14 Armata costs \$4m, for instance). Operating the machines can cost several hundred dollars per kilometre. Piling on defences to protect soldiers—politically essential in wars of choice—adds to the bill, and the machine’s weight. For that reason, only a few NATO countries are investing in hard-kill protection. And even snazzy new defences are struggling to keep up with innovations in attack. Mr Barry notes that the Israeli Trophy system carries just two rounds, so firing several missiles at the same time could defeat it. “The death of the tank comes round every five years or so,” says Jon Hawkes, head of land warfare for Janes, a research company. “But the tank is more vulnerable now than it

has ever been. We're reaching the apex of the armour versus gun race—and armour has lost that race.”

Tactics, rather than technology, can help redress the balance. Massed tank formations can dominate if they get within 2km of their target, in range of their guns, says Mr Watling. Before they get there, however, they can be pummelled with long-range artillery and missiles. That means that, in the tank battles of the future, armoured forces would probably fight more slyly, using concealment, cover, darkness and dispersal—much as Serbia did against NATO in 1999. If they can be kept safe, tanks remain uniquely potent weapons. In war games set in the Baltic states, Russian tanks with air cover—to bat away threats like the drones that picked off Syrian tanks in February—“easily punch through” lighter NATO forces, says Chris Dougherty of the Centre for a New American Security, a think-tank in Washington. In war games set in Taiwan, he says, China struggles to seize the island without heavy armour. Heavy metal still counts.

US Army Abrams Accidentally Fired on Another Tank

Happened during training exercise.

Colton Jones NEWSARMY Jul 22, 2020



A US Army M1A2 Abrams main battle tank accidentally fired on another tank during a training exercise at Fort Bliss.

Photo by Abigail Meyer

On July 20, an incident with friendly fire occurred at the Fort Bliss training ground in Texas during firing at moving targets. Some sources reported that one of the Abrams tanks hit another tank from its own cavalry regiment from a distance of 2,600 meters. One soldier was injured in an accident when the M1002 multi-purpose training round hit his tank. The tank's crew responded quickly to render aid. The 120mm training ammunition, used by Abrams tanks during exercise, includes the M865 kinetic energy and the M1002 multi-purpose tank training rounds. The M1002 is matched ballistically to the time-of-flight parameters of the M830A1, thus creating realistic training. The tailcone stabilizer provides a safety feature, which limits the overall flight range to under 8km, reducing the requirement for extreme-range safety fans.

In a statement to Military Times, officials from the 1st Armored Division confirmed that an M1 Abrams accidentally fired on another tank at Fort Bliss. One soldier was injured, received immediate medical assistance, and is recovering in stable condition, according to Lt Col Lindsey Elder, an Army public affairs officer. 1st Armored Division has started an investigation into the incident, Elder said in an email to Military Times. “Until the investigation is complete, we have no further comment,” she said.

Vancouver Artillery Association Yearbook Updates

VAA Virtual Lunch every Wednesday at Noon PDT - <https://zoom.us/j/710845848> - Drop in for 10 minutes or stay for an hour

Important Announcement for all members of the Vancouver Artillery Association.

On 17 October 2020, The Royal Canadian Artillery Association will be holding their Annual General Meeting and Leadership Symposium. During the AGM a vote will be taken to approve the constitutional changes required for local Association members to also be members of the RCAA. Your vote is needed to ensure that the Vancouver Artillery Association stays affiliated. Please register for the AGM at <http://rca-arc.org/>

Gunner Wallace Reece Brunt's medals have been returned to Vancouver.

<https://www.vancouvergunners.ca/whats-new/yearbook-update-20206079209>

The Conference Room Library Shelving project is moving along. Check out the latest here.

<https://www.vancouvergunners.ca/conference-room.html>

St Barbara's Day Salute in Chilliwack

<https://www.vancouvergunners.ca/whats-new/yearbook-updates-1984-1986-1988>

The Regiment fires a salute at Fort Langley. <https://www.vancouvergunners.ca/1980.html>

Artillery Recruiting ad 1954 <https://www.vancouvergunners.ca/1954.html>

Artillery Recruiting ad 1950 <https://www.vancouvergunners.ca/1950.html>

Gunner Harold Innes <https://www.vancouvergunners.ca/harold-innes.html>

Honorary Captain Munro appointed Chaplain 15th (Vancouver) Coast Brigade RCA

<https://www.vancouvergunners.ca/1940---15th-vcr-coast-bde-rca-casf.html>

Honorary Captain Munro is wounded in Italy. <https://www.vancouvergunners.ca/1945.html>

Gunner Thomas Shott's story, member 68th Overseas Depot Battery.

<https://www.vancouvergunners.ca/whats-new/yearbook-updates-1916-1917-1966>

Remember – Stay healthy and stay safe!

(if you haven't paid your dues yet, please do so ASAP. You can send payment by e transfer to Leon Jensen president.vcrgunners@gmail.com)



Who (or What) Is It?

Last Week: Workers bring out incendiary bomb 'snuffers', used during the Blitz, from the factory where they were made. Basically, they are oversized candle snuffers lined with asbestos, that anyone could use, which causes the bomb to burn itself out without spreading the fire.

Photo by A J O'Brien/Getty Images

This Week: In our trove of museum photos, artwork, and cultural items, such as housewives (which were issued to all soldiers in both world wars.....not the homo sapiens kind, by the way [the items, not the soldiers]), are some postcards. Many are of limited historic interest, such being mass-produced, generic ones of Base Borden, etc. However, some of the older ones are of a type no longer made (actually, are any postcards still made these days?): those printed in limited editions from personal shots.



This week's image is one of those. It was taken by a participant in the events pictured, and then made into postcards, to be used as souvenirs of the times. Ours has suffered either from exposure to the sun, light being the enemy of almost all museum artefacts, or imperfect developing (the

postcards were made directly from the negative, using paper already printed with the postal bit on the back). So, the bell tents (I lived in one of those in the summer of 1963 at Clear Lake Cadet Camp), and the standing figures on the left are not really visible. What is visible is a lady in white, and a large number of what people once called "Orientals". Given that Asia is to the west of British Columbia, that term, never really a pejorative, has fallen from use. These men appear to be uniformly dressed, and in good spirits, but who are they, and where is this? That is for you to tell us. We have one hint: these chaps, and the museum referred to in our quiz of two weeks ago, have a connection. If you know that, then you get a bonus point.

So, put your thinking caps on and get to work. Let the editor, Bob Mugford (bob.mugford@outlook.com), or the author, John Redmond (johnd.redmond@telus.net) know your answers. Xie!

From the 'Punitary'

What do you call an owl that does magic tricks? A: Hoodini

Murphy's Other Laws

The first step in getting out of the hole you dug for yourself is to stop digging.

Quotable Quotes

Blessed is the man, who having nothing to say, abstains from giving wordy evidence of the fact.
- *George Eliot*

Wednesday Digital Video Lunch

No need to worry about COVID-19 when you go digital. Pop into our video lunch **at noon** on Wednesdays and say hi. All you need is a laptop, tablet or smartphone. These sessions are being hosted by the Vancouver Artillery Association and are **open to all** – especially those who attended Wednesday lunches.

Join us to check up on your old lunch buddies.

<https://zoom.us/j/710845848>

Zoom is the leader in modern enterprise video communications, with an easy, reliable cloud platform for video and audio conferencing, chat, and webinars across mobile,



desktop, and room systems. Zoom Rooms is the original software-based conference room solution used around the world in board, conference, huddle, and training rooms, as well as executive offices and classrooms. Founded in 2011, Zoom helps businesses and organizations bring their teams together in a frictionless environment to get more done. Zoom is a publicly traded company headquartered in San Jose, CA.

[Join our Cloud HD Video Meeting now](#)

Use the link above on your computer Zoom program or dial in on your phone 778 907 2071 Meeting ID: 710 845 848

Invite 2 friends! We have room for 100! See you on Wednesdays at noon. Bring your own lunch and beverage of choice.

Virtual Remembrance Run in Support of the JBC

August 9 - November 28, 2020



Members of the Royal Canadian Army Service Corps participate in a one-mile race as part of a wider I Canadian Corps sports meet in the United Kingdom, 1943 (Canadian Army Newsreel No. 12).



The Juno Beach Centre Association is partnering with VR Pro (<https://www.vrpro.ca/events/Home.html>) for our first Remembrance Run fundraiser! This is a virtual running (or walking) event for participants of all ages.

Registration is available on the Running Room website.
<https://www.events.runningroom.com/site/17167/>

DISTANCES

Click on a logo to register for that distance.



<https://www.events.runningroom.com/applications/?raceId=17167&eventId=50553&vrindex=3>



<https://www.events.runningroom.com/applications/?raceId=17167&eventId=50554&vrindex=3>



<https://www.events.runningroom.com/applications/?raceId=17167&eventId=50554&vrindex=3>

Scroll down to learn about the significance of these distances.

RACE DETAILS

Register now for one of three virtual race distances and receive a race kit including this beautiful, oversized, commemorative medal (pictured below) along with a Juno Beach collector coin, race bib, an imprinted neck gaitor, a Remembrance Day Poppy, and a beautifully printed Juno Beach

D-Day souvenir map, and more! Then, run or walk your event distance of choice anytime between September 1 and November 28, 2020. \$10 from each entry will go to support the Juno Beach Centre honouring those brave men and the sacrifices they made. (Click any one of the race event logos above or the registration button below to register.) Applicants can set up a fundraising page through your Running Room account, after you have registered for the Run.



All you need to do is go to the Fundraising tab (at the top of the registration page) and select Raise Funds to set up your fundraising page. Each participant will receive a unique Remembrance Day / Juno Beach commemorative medal. The design features the image of a Landing Craft,

Assault (LCA) manned by Royal Canadian Navy sailors on D-Day approaching Juno Beach with a load of troops. The medal's ribbon is inspired by the France & Germany Star, the campaign medal received by those who landed at Juno Beach and/or served in France, Belgium, Holland, or Germany between D-Day (6 June 1944) and Victory in Europe or V-E Day (8 May 1945).

CONTACT INFORMATION

For more information please contact Kelly Hendry-Arnott

- Email: kelly@vrpro.ca
- Phone: 905 512-2488



REMEMBRANCE RUN DISTANCES EXPLAINED

What is the “Strongpoint 1500m”?

Juno Beach (Normandy, France) was well fortified. Mines, barbed wire, and beach obstacles to Allied tanks and landing craft littered the sands. German machine guns, mortars, and artillery, often positioned in concrete bunkers, overlooked the likely Allied landing areas. Strongpoints in the German-held towns of Courseulles-sur-Mer, Bernières-sur-Mer, and Saint-Aubin-sur-Mer dominated the beaches. Courseulles was the most heavily defended area attacked by British and Canadian forces on D-Day. The strongpoints at Courseulles and nearby Graye-sur-Mer contained a dozen concrete machine-gun posts covering a total of six artillery pieces overlooking the beach. Today, the Juno Beach Centre stands on the same ground as *Stützpunkt (Strongpoint) 31*, located on Mike Red Sector of Juno Beach. This shorter distance event (1500m) is for ideal children, older participants, and anyone else who does not want to run or walk the 8k or 21k distances. It is named for the strongpoint and 1500 metre stretch of beach overcome by the Royal Winnipeg Rifles, the 1st Hussars (6th Canadian Armoured Regiment), and the 6th Field Company, Royal Canadian Engineers on D-Day.

What is the significance of the “Juno Beach 8K”?

D-Day, June 6, 1944, was among the greatest moments of the 20th century. The landings started the battle to liberate France from Nazi Germany. The Canadians stormed an 8-kilometre stretch of sand featuring coastal villages fortified into German strongholds. Code-named JUNO, some 14,000 Canadian soldiers with hometowns from coast to coast landed here. A further 7,000 British

troops joined them. When you run this fall, you are running in remembrance of every Canadian or Allied soldier who landed at Juno Beach.

Why is it named the “Remembrance 21.1K”?

The total number of troops landed on Juno Beach on D-Day was approximately 21,000. We offer a half-marathon (which is 21.1 kilometres long), in honour of those troops.



<https://www.events.runningroom.com/site/17167/>

Local entrants who enter any of these events – please send me your ‘Donation’ links and I will put them in this newsletter. – Ed.

Fellow Gunners

I am running/walking a half-marathon to raise money for the Juno Beach Centre. A half-marathon is approximately 21 kilometres and I am running/walking this distance in honour of all 21,000 Allied troops who landed on Juno Beach on June 6, 1944. You can support the Juno Beach Centre by pledging in support of me or by registering for this Remembrance Run fundraiser.

To donate and help us achieve our fundraising goal, please go to my fundraising home page at this link:

<https://www.runningroom.com/dashboard/giving/?raceId=17167&eventId=50555&memberId=UDVXZA9pWzoAa1dgUWA%3D>

You will see a box that says “**Make a Donation**” – do so, and follow the instructions

Thanks! UBIQUE!

HLCol Don Foster P.Ag, CIM, FCSI
Director | Juno Beach Centre Association



2020 BMO CDCB Customer Appreciation Contest



The contest for the defence community is back!

Service members and their families, reserves, recruits, veterans and retirees, as well as staff of Department of National Defence, the RCMP and the Canadian Coast Guard are eligible for **FREE* banking** with the Performance Plan chequing account - no minimum balance required.

Visit bmo.com/cdcbcontest for offer details.

Open an account between June 15 and October 12, 2020 and you will automatically be entered into the "CDCB Customer Appreciation Contest" for a chance to win a **grand prize of \$20,000 cash** or one of **12 prizes of \$5,000 cash!**

Already a BMO CDCB customer?

Don't miss out on your chance to win.

Visit bmo.com/cdcbcontest to enter the contest.

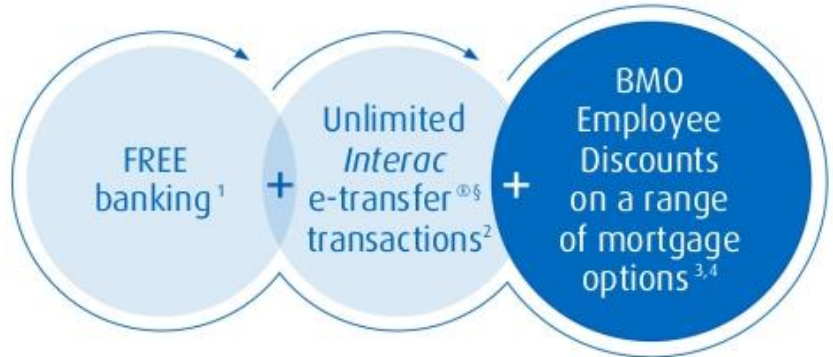
BMO  Official bank of the
Canadian Defence Community

*No purchase necessary. The 2020 CDCB Customer Appreciation Contest (the "Contest") begins on June 15, 2020, at 12:00:01 a.m. Eastern Time and ends on October 12, 2020, at 11:59:59 p.m. Eastern Time (the "Contest Period"). There are thirteen (13) prizes in total (each a "Prize"), with total prizes valued at \$80,000 available to be won. There will be one (1) Grand Prize of \$20,000 cash and an additional twelve (12) prizes of \$5,000 cash. Odds of winning depend on the number of eligible entries received. Before being declared a winner, a correctly answered mathematical question is required. Full contest details are available at bmo.com/cdcbcontest. The monthly Performance Plan fee is waived. You are responsible for all transaction, service, and product fees not included in the Plan.

Our strategy is simple –
Do more for you.



BMO is proud to be the official bank of the **Canadian Defence Community**, and to provide exclusive offers to you.



Mortgages

- BMO Employee Discounts on a wide range of mortgage options^{3,4}
- Flexibility to move or break your mortgage through the Integrated Relocation Program⁵
- 130-day mortgage rate guarantee – the longest of any major bank in Canada⁶



Bank Accounts

- FREE banking with the Performance Plan¹
- Unlimited *Interac* e-transfer[®] transactions²
- OnGuardSM Identity Theft Protection Service at no charge^{7,8}
- Keep the same accounts no matter how many times you relocate
- Access to CreditViewSM – the free, instant way to get your credit score⁹



Lines of Credit

- BMO Employee Discounts on unsecured and secured personal lines of credit³
- Student line of credit with preferential pricing and flexibility¹⁰



Credit Cards

- Choose the BMO Support Our Troops CashBackSM or AIR MILESSM MasterCardSM
- No annual fee¹¹
- Support Canadian Forces Morale and Welfare Services with every purchase you make
- Visit bmo.com/sot to find out about the welcome offers