

STATEMENT OF
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AND
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BEFORE THE
SENATE ARMED SERVICES COMMITTEE
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Chairman Fischer, Ranking Member Heinrich, and distinguished members of the subcommittee, I am honored to appear today as the Commander of United States Northern Command (USNORTHCOM) and North American Aerospace Defense Command (NORAD)—two complementary but distinct commands.

USNORTHCOM is the Geographic Combatant Command laser-focused on defending our homeland from an increasingly assertive set of competitors who are committed to holding the United States at risk in multiple domains.

NORAD is the bi-national U.S.-Canadian command that deters, detects, and, if necessary, defeats air threats to the United States and Canada while also providing aerospace warning and maritime warning. The six decades of NORAD's unmatched experience and shared history are proving more vital than ever as we face the most complex security environment in generations. This unique and longstanding command serves as both a formidable deterrent to our adversaries and a clear symbol of the unbreakable bond between the United States and Canada.

USNORTHCOM and NORAD are driven by a single unyielding priority: defending the homeland from attack. Revisionist powers Russia and China have changed global strategic dynamics by fielding advanced long-range weapons systems and engaging in increasingly aggressive efforts to expand their global presence and influence, including in the approaches to the United States and Canada. Our competitors currently hold our citizens and national interests at risk, and we must anticipate attacks against our defense and civilian infrastructure in the event of a conflict. As a result, it is clear that the homeland is not a sanctuary.

For that reason, improving our ability to detect and defeat cruise missile attacks is among my highest priorities. Russia has made its strategic intentions clear by investing heavily in long-range, low radar cross section cruise missiles that can be fired from aircraft or submarines

against targets well inside the borders of the United States and Canada. To safeguard our citizens and critical infrastructure, and to preserve our ability to rapidly project power abroad, it will be necessary to take deliberate and focused measures to improve our cruise missile defenses.

These shifting global military and political dynamics will be with us for the foreseeable future. Our competitors have fielded weapons systems and employed new methods in a concerted effort to exploit perceived vulnerabilities and erode our strategic advantage. The successful defense of our homeland today relies more than ever on constant vigilance by USNORTHCOM and NORAD, tightly coupled with a reinvigorated emphasis on close integration with our fellow combatant commands, the intelligence community, and our allies and partners. Collectively, these dynamics reinforce the importance of nuclear deterrence to our national security, given that nuclear deterrence backstops all U.S. military operations and diplomacy across the globe. And, should deterrence fail, USNORTHCOM and NORAD stand always ready to defeat any threat to our nations.

The threats facing our nation are not hypothetical; our competitors' reach is now global, and they are conspicuously undermining international norms and standards of behavior while possessing the capability to strike targets in North America with both nuclear and advanced non-nuclear weapons launched from well beyond our territory. In light of this reality, the homeland defense mission is more essential than ever, and USNORTHCOM and NORAD must be energized, proactive, and determined to actively shape our strategic environment. Together with our Department of Defense (DOD), interagency, and international partners, we have taken active measures to ensure the homeland defense enterprise is globally integrated, well-exercised, and positioned to take quick, decisive action to protect our interests and preserve the ability to project

all of the elements of our national power. And, should deterrence fail, USNORTHCOM and NORAD stand always ready to defeat any threat to our nations.

Threat

Russia:

Russia has posed a nuclear threat to North America for over half a century, but has only recently developed and deployed capabilities to threaten the homeland below the nuclear threshold. Russia continues to hone and flex its offensive cyber capabilities, and its new generation of advanced air- and sea-launched cruise missiles feature significantly greater standoff ranges and accuracy than their predecessors, allowing them to strike North America from well outside NORAD radar coverage.

Since 2015, Russia has employed its new air- and sea-launched cruise missiles against anti-regime targets in Syria, providing real-world training for Russian crews and demonstrating its growing precision-strike capabilities to the West. In a parallel effort, Russia has implemented a modernization program for its heavy bombers that will ensure their ability to perform nuclear and non-nuclear deterrence and strike missions in the coming decades.

Russian heavy bombers such as the Tu-95MS BEAR and Tu-160 BLACKJACK continue to conduct regular air patrols in the international airspace along the coastlines of other countries to underscore Russia's capabilities. Russian bomber crews are demonstrating increasing proficiency in their flight activities, developing a new generation of air crews capable of employing this highly visible implement of Russian deterrence and messaging in peacetime, crisis, and war.

Patrols by Russian military aircraft off the coasts of the United States and Canada have grown increasingly complex in recent years. NORAD fighter aircraft routinely intercept Russian

military aviation missions inside the U.S. and Canadian Air Defense Identification Zones, and there is no indication that Russian leadership intends to reduce the number of these missions in the near future.

In addition to its highly capable cruise missiles that enable its anti-ship and land-attack missions, Russia has introduced the Severodvinsk-class guided missile submarine, which is armed with advanced land-attack cruise missiles and is much quieter and more lethal than previous generations of Russian attack submarines. Russia's growing non-nuclear capabilities provide Moscow a range of options to dissuade an adversary from escalating and to terminate a conflict on terms favorable to Moscow, increasing the potential for miscalculation or opportunistic actions.

Russia has demonstrated a willingness to conduct disruptive cyberattacks and cyber-enabled influence operations against its competitors, as it demonstrated during the 2016 election cycle in the United States. In a crisis or conflict, we would expect Russia to conduct cyber operations against critical infrastructure in an attempt to compel de-escalation.

In the Arctic, Moscow is planning to deploy surface vessels armed with the modular KALIBR-NK cruise missile system that will offer highly precise land-attack capabilities and introduce a new cruise missile threat from our northern approaches. Separately, Moscow continues to bolster its military defenses in the Arctic with the deployment of a K-300P Bastion coastal defense cruise missile system on the New Siberian Islands, significantly increasing Russia's ability to defend and control a large stretch of the Northern Sea Route.

Finally, Russia is developing multiple weapon systems specifically designed to circumvent U.S. missile defenses and hold our homeland at risk. This includes the Intercontinental Ballistic Missile (ICBM)-delivered AVANGARD hypersonic glide vehicle, which was highlighted in a

speech by Vladimir Putin in March 2018 and is expected to become operational in the next few years, complicating our missile warning mission.

China:

China is pursuing a comprehensive military modernization program that includes a rapid expansion of its strategic nuclear capabilities while working to improve the survivability of its nuclear forces and increase their ability to ensure a credible second-strike capability. Over the last decade, China has supplemented its modest silo-based ICBM force with dozens of road-mobile ICBMs capable of delivering multiple independently targetable reentry vehicles that could significantly increase the number of survivable warheads available for a retaliatory strike. During that same timeframe, China operationalized its first class of ballistic missile submarines, adding a second leg to its strategic deterrent. China maintains its longstanding no-first-use nuclear policy, but its growing nuclear, conventional, and cyber capabilities are significant.

China's military strategy and ongoing People's Liberation Army (PLA) reforms reflect the abandonment of its historically land-centric mentality, as evidenced by emerging doctrinal references to strategies that would move potential conflicts away from Chinese territory, suggesting that PLA strategists envision an increasingly global role for their military.

On the economic front, China plans to invest heavily in infrastructure projects in Asia, Europe, Latin America and the Caribbean, and Africa through its Belt and Road Initiative in a major effort to develop stronger economic ties with other countries and shape their interests to align with China's, simultaneously seeking to deter confrontation or international criticism of China's approach to sensitive issues.

In the cyber domain, Chinese leaders view computer network operations as a low-cost deterrent that demonstrates capabilities and resolve to an adversary and allows them to manage

the escalation of a conflict by targeting critical military and civilian infrastructure. Ongoing military reforms are aimed at accelerating the incorporation of information systems that enable forces and commanders to carry out missions and tasks more effectively.

Advanced Threat Technologies:

Defending the United States and Canada against long-range weapons systems capable of striking targets in the homeland is a major focus of both USNORTHCOM and NORAD. Russian aircraft and submarines are now armed with long-range cruise missiles designed to evade radar detection, while both Russia and China are developing and testing maneuverable hypersonic glide vehicles. In the cyber domain, our adversaries continue their non-stop efforts to penetrate defense and civilian networks. Collectively, these advanced technologies could be capable of creating strategic effects with non-nuclear weapons, potentially affecting national decision making and limiting response options in both peacetime and crisis.

North Korea:

After decades of research and development activity marked more by failure than success, North Korea's ICBM program turned the corner in 2017 when North Korea successfully flight-tested multiple ICBMs capable of ranging the continental United States and detonated a thermonuclear device, increasing the destructive yield of its weapons by a factor of ten. Following these successes, Kim Jong Un declared the completion of his nuclear ICBM research and development program, implying the production and deployment of these systems would soon follow.

Kim Jong Un developed these strategic weapons to deter the U.S. from overthrowing his regime, and he almost certainly has plans to use them against our Homeland should a conflict erupt on the Peninsula. Meanwhile, North Korea's cyber capabilities continue to grow, as does

the country's willingness to employ them during peacetime, as North Korea demonstrated by its cyber attacks on Sony Pictures in 2014.

Iran:

Iran is not yet able to strike the United States with strategic weapons, and its leaders have declared a unilateral 2000 kilometer range restriction that limits its missile force to threatening only regional targets in the Near East. Iran's SIMORGH space launch vehicle has yet to successfully place a satellite in orbit, but its most recent launch in January 2019 demonstrated continued progress on long-range missile technologies. Although we have no information to indicate that Iran intends to test and deploy an ICBM, the SIMORGH would be capable of ICBM ranges if configured for that purpose, and progress on the vehicle could enable Iran to field an ICBM in as little as a few years if its leaders chose to pursue that objective.

However, Iran has the largest ballistic missile arsenal in the region and has expended significant resources on its space launch and civil nuclear capabilities that could enable it to develop a nuclear-armed ICBM relatively quickly if its leaders chose to do so. In the meantime, Iran retains the ability to conduct attacks abroad via covert operations, terrorist proxies, and its growing cyber capabilities. Iran considers disruptive and destructive cyberspace operations as a valid instrument of statecraft and a means of imposing costs on its adversaries, even during peacetime.

Defending the Homeland

Homeland defense is USNORTHCOM's essential mission and the number one priority of the DOD per the 2018 National Defense Strategy. In light of the complex and significant threats to our homeland, USNORTHCOM and NORAD take assertive, proactive measures each day to shape our strategic environment, deter aggression, and ensure that we are always ready to defeat

any adversary should deterrence fail. As the Commander of USNORTHCOM and NORAD, I view everything the commands do through the lens of homeland defense, and I am committed to ensuring that each of our missions help to deter adversaries, preserve decision space, and maintain the ability for our national leaders to project power and exert influence in the best interest of our nations.

In pursuit of their own perceived national and ideological interests, our competitors have developed advanced capabilities and demonstrated their intent to hold our homeland at risk in multiple domains and along numerous avenues of approach to North America. In light of that reality, we simply do not have the luxury of waiting for others to act before we formulate a response. Instead, USNORTHCOM and NORAD work constantly to shape our theater while making it obvious to potential adversaries that they will face overlapping dilemmas and extraordinary costs should they choose to challenge us. This active and continuous enterprise requires strong relationships and close coordination with our fellow combatant commands, the military Services, the U.S. Federal interagency community, and our international allies and partners.

The diverse threats arrayed against the United States and Canada challenge our defenses in a number of domains and along multiple avenues of approach. The men and women of USNORTHCOM and NORAD work around the clock to monitor those approaches and are ready to respond at a moment's notice should our adversaries chose to challenge our defenses.

Ballistic Missile Defense:

USNORTHCOM continues to prioritize our mission to defend the United States against potential intercontinental ballistic missile (ICBM) attacks from North Korea and Iran, should Iran develop that capability. I remain cautiously optimistic that North Korea can be convinced

that it is in their best interest to abandon its nuclear weapons and ICBM programs. In the meantime, I continue to emphasize the necessity of fielding improved discriminating radars, a more survivable sensor network, and improving the reliability and lethality of our interceptor fleet in order to remain well ahead of North Korea or Iran's capability to strike the defended area.

I am confident in the ability of the Ground-based Midcourse Defense System to defend the United States against ICBMs fired from North Korea or Iran, if Iran develops an ICBM, but that confidence is contingent on our continued pursuit of system-wide enhancements to outpace our adversaries' rapid technological advancements.

The success of the Ballistic Missile Defense mission is also dependent on strong cooperation between USNORTHCOM as the supported warfighting command and the technical experts of the Missile Defense Agency (MDA). The MDA Director, Lt Gen Sam Greaves, is an outstanding partner, and I am grateful to him and the entire MDA team for their dedicated support of this enormously complex, no-fail mission. I fully support MDA's plans to field the Long-Range Discrimination Radar, Homeland Defense Radar-Hawaii, and Pacific Radar, along with the Redesigned Kill Vehicle and a selectable 2- or 3- stage interceptor booster.

Additionally, I believe we must pursue space-based sensors to detect and track advanced threats from Russia and China. Each of these improvements to our sensor network and interceptor fleet will help to ensure our ability to defend the United States against an ICBM attack now and into the foreseeable future.

To counter the rapid evolution of our adversaries' missile technologies, we will require advanced defensive technologies such as space-based sensors and directed-energy missile defeat technology in the near future. A space-based sensor network, in particular, will provide far

greater coverage, survivability, and persistence—all of which are necessary to maintaining confidence in our ability to deter, detect, and defeat missile threats to the homeland.

At present, the DOD is striking an effective balance between ensuring our ability to defend against current and near-term threats while simultaneously investing in the research and development of advanced technologies capable of defeating future threats. This vision for meeting anticipated requirements is strongly articulated in the recently published Missile Defense Review, and I fully support the plan for defending the homeland.

Arctic Northern Approaches:

It has become clear that defense of the homeland depends on our ability to detect and defeat threats operating both *in* the Arctic and passing *through* the Arctic. Russia's fielding of advanced, long-range cruise missiles capable of flying through the northern approaches and striking targets in the United States and Canada has emerged as the dominant military threat in the Arctic, while diminished sea ice and the potential for competition over resources present overlapping challenges in this strategically significant region. Meanwhile, China has declared that it is not content to remain a mere observer in the Arctic and has taken action to normalize its naval and commercial presence in the region in order to increase its access to lucrative resources and shipping routes.

I view the Arctic as the front line in the defense of the United States and Canada, and as the DOD Advocate for Arctic Capabilities and the Combatant Commander responsible for defending the approaches to the homeland, I constantly assess the changing environmental and strategic conditions throughout the region—across borders and operational boundaries—in an ongoing, active, and collaborative effort to mitigate the risks associated with increased civilian and military presence in the northern approaches to North America.

The effort to rapidly adapt to the evolving strategic landscape and associated challenges in the Arctic includes a deliberate and ongoing effort to fully assess our collective missions and associated requirements in the region. As one key example of those ongoing assessments, in 2018, USNORTHCOM planners conducted a Homeland Defense Mission Analysis for the Arctic Region. This comprehensive, classified assessment of our capability to operate in the far north revalidated a number of known capability gaps in the region and provided an updated overview of current and future requirements.

As confirmed by our Mission Analysis, civil and military operations in the Arctic are impeded by limited communications capability, harsh environmental conditions, and vast distances between population centers. Improving communications and domain awareness in the region are among my top priorities for the region, and the DOD and the military Services have demonstrated their support of those requirements through investment in programs such as the Multi User Objective System (MUOS)—a satellite-based communications network that significantly expands the ability of U.S. and Canadian assets to operate in the far north.

To detect and track potential airborne threats, to include Russian long-range bombers and cruise missiles, USNORTHCOM and NORAD both rely on radar systems such as the North Warning System (NWS), a network of aerospace surveillance radars in northern Canada. In August 2018, NORAD, working in close coordination with USNORTHCOM, the Canadian NORAD Region, and the U.S. Navy's Naval Air Warfare Center, conducted an operational assessment of the NWS against representative targets, and the data collected from the test will inform the design for the air domain defense of the United States and Canada for years to come.

Air Domain:

Variants of the advanced cruise missiles that could fly through our northern approaches also present a threat along our coasts. Russian Severodvinsk-class submarines are capable of firing low radar cross section cruise missiles against critical targets along our coasts. This emerging threat requires advanced capabilities to ensure surveillance, detection, identification, targeting, and destruction to protect the homeland and key strategic targets in the United States and Canada.

The Homeland Defense Design will be a phased approach to employ advanced detection and tracking technologies to defeat a cruise missile attack against the homeland. However, the rapidity of our competitors' development of advanced cruise missile technology demands a continued, aggressive, and focused commitment to ensure our ability to defeat a cruise missile attack.

Conclusion

Today and every day, the men and women of USNORTHCOM and NORAD are standing watch over our homeland. These dedicated professionals work around the clock surveilling our skies, monitoring our oceans, and ensuring that we are always ready to counter a staggering range of threats to our homeland, ranging from intercontinental ballistic missiles and long-range bombers to lethal opioids and cyberattacks. The strategic and technological innovation that will be required to defend our nation in the coming years depends entirely on the quality and experience of our people.

Today and always, our people are our strength, and I am proud to lead the outstanding Airmen, Sailors, Soldiers, Marines, and civilians of USNORTHCOM and NORAD. While the threats facing our nation can be daunting, I have absolute confidence in our ability to meet any

challenge and defeat any adversary because of the dedicated professionals I am honored to lead.

We Have the Watch.