

Pacific Environmental Security Forum

9-12 May 2017 | Anchorage, Alaska



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**PACIFIC ENVIRONMENTAL SECURITY FORUM
ANCHORAGE, ALASKA 2017**

Dear Forum Participant,

On behalf of the U.S Pacific Command (USPACOM), we welcome you to Anchorage, Alaska and the 2017 Pacific Environmental Security Forum (PESF), which we are proud to be holding for the seventh consecutive year. Participants of the six previous environmental security forums—in Honolulu, Jakarta, Sydney, Male, Bangkok, and Nadi—were instrumental in developing environmental security projects across the region, and have informed the evolution of USPACOM's Environmental Security Program. The 2017 PESF will emphasize Environmental Security Best Practices, Biodiversity Conservation, National Guard State Partnership Program, Waste, Energy, Water, and Climate Change.

The PESF seeks to develop environmental security awareness and partnerships throughout the Indo-Asia-Pacific region. It strives to address many concerns: 1) civil-military environmental management; 2) share sustainable and integrated natural resource environment solutions and best practices; 3) showcase regional alternative climate change adaptation approaches; 4) identify ways for militaries to increase resource protection and 5) develop a "network of networks" of experienced military environmental planners to assist in operations and planning. Importantly, the PESF seeks to identify future environmental security initiatives, which we can all put into practice.

We are honored that you have made your time available to attend and appreciate your participation over the next four days and beyond.

In our desire to conserve resources, the event agenda, information paper, speaker biographies, presentation summaries, workgroup exercise scenarios, and evaluation form are all available electronically for download at <http://www.pesforum.org>. Please contact the event organizers if you have questions.

With our best wishes for a successful forum,

A handwritten signature in black ink, appearing to be "R. Moore", written over a horizontal line.

Rodney M. Moore
Captain, Civil Engineer Corps, U.S. Navy
Chief, Engineering Division
U.S. Pacific Command, United States of America

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18 April 2017

INFORMATION PAPER

SUBJECT: 2017 Pacific Environmental Security Forum (PESF)

1. Purpose: To provide stakeholders with the concept, background, description and objectives of the 2017 PESF.

2. Background: Environmental security can be broadly defined as the abundance or scarcity of environmental resources and/or environmental degradation that can critically impact security at local, regional or broader scales. Increasingly, environmental factors—extreme and frequent weather and climate events, water resources, food security and environmental disasters—can affect national and regional security by exacerbating hunger, poverty, instability and conflict. Environmental factors often have cross-border impacts. Sharing lessons-learned and encouraging militaries and governments to plan, operate, and execute in an environmentally sustainable manner that supports regional cooperation will improve security for all.

The PESF and regional meetings (RESF's) are the cornerstones of USPACOM's Environmental Security Program, which seeks to 1) increase understanding of environmental stewardship obligations among militaries in the Indo-Asia-Pacific region, and 2) design and fund civilian-military projects with partner nations that develop mutual capabilities, interoperability and resiliency to environmental security challenges. USPACOM and its partners collaborate on multiple efforts to tackle and overcome environmental security threats. This includes holding an annual PESF, where civilian and military representatives gather to discuss and share environmental security best practices and lessons-learned. It also means being a community of action to conduct regular environmental security projects that couple unique military capability with civilian expertise, deliver tangible and efficient results, and advance security in the region. Environmental security projects and cooperation are platforms for relationship building, opening doors for dialogue on other subjects too.

Ultimately, USPACOM is dedicated to promoting environmental security awareness and sustainable environmental operations, and will continue to partner with civilian and military agencies in order to achieve environmental security objectives.

3. Description:

a) WHO:

- Assemblies rotate annually between pan-Pacific and regional meetings. The 2017 event will be pan-Pacific and will include participation from 26 countries in the Indo-Asia-Pacific region.
- It will be led by the U.S. Pacific Command and supported by the Alaska National Guard.

b) WHAT:

- The 2017 PESF will be the seventh annual Indo-Asia-Pacific environmental security event organized by U.S. Pacific Command (USPACOM) and will be held in Anchorage, Alaska.
- The 2017 event will feature several themes: Environmental Security Best Practices, Climate Change, Water Security, Waste, Energy, and Biodiversity Conservation. Each theme in the 2017 PESF will include presentations by subject matter experts, sometimes followed by a panel session. Additionally, the event will include biodiversity work group activities and site visits to the Joint Base Elmendorf-Richardson, which will enforce the PESF themes and demonstrate the role of militaries therein. The event will also feature an environmental project concept development assembly, where various countries can identify key projects or topics where the military may be able to collaborate with civilian agencies and other nations. The event will conclude with an After-Action Review where all participants contribute to a final report that will support recommendations and an action timeline for implementation in the region.

c) WHEN:

- 09-12 May 2017

4. Objectives: The 2017 PESF objectives are:

- Conduct civil-military conversations on environmental security issues and lessons learned;
- Strengthen cross-country partnerships on environmental security issues; and
- Design projects to help build partner-nation capacity where needs exist.

5. Point of Contact:

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PACIFIC
ENVIRONMENTAL
SECURITY FORUM

DAY 1

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AGENDA

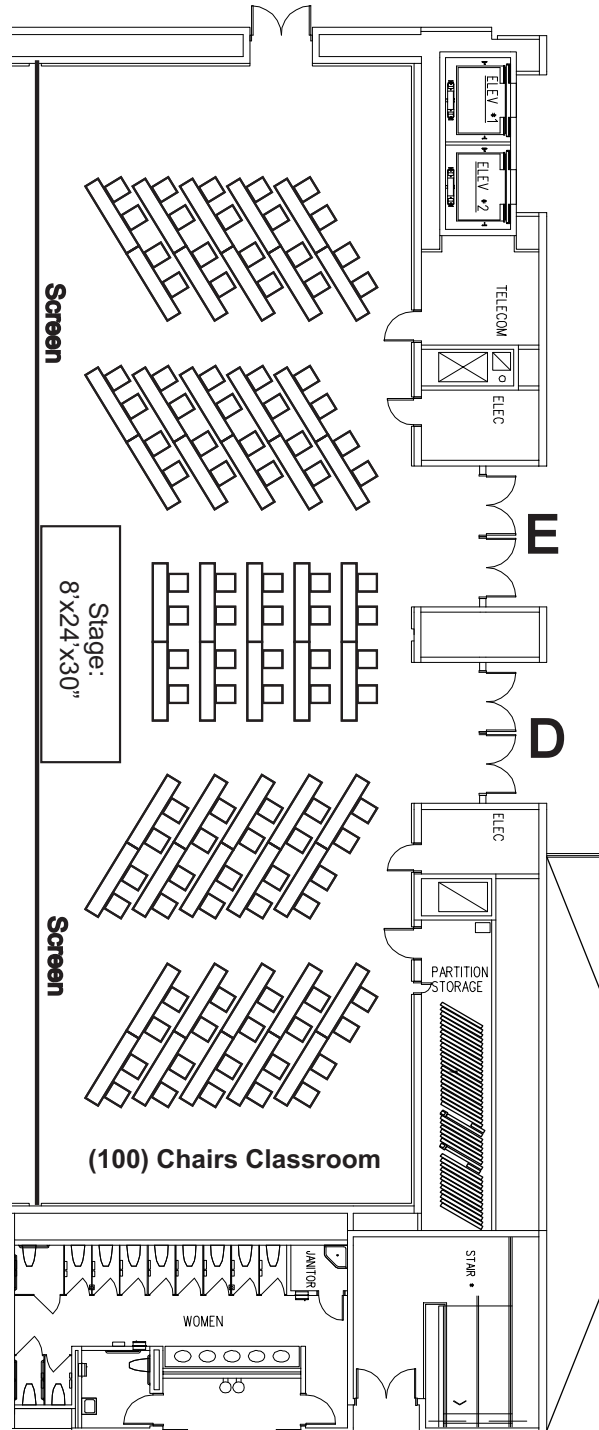
DAY 1 - ENVIRONMENTAL SECURITY BEST PRACTICES IN THE INDO-ASIA-PACIFIC REGION



TUESDAY, 09 MAY 2017

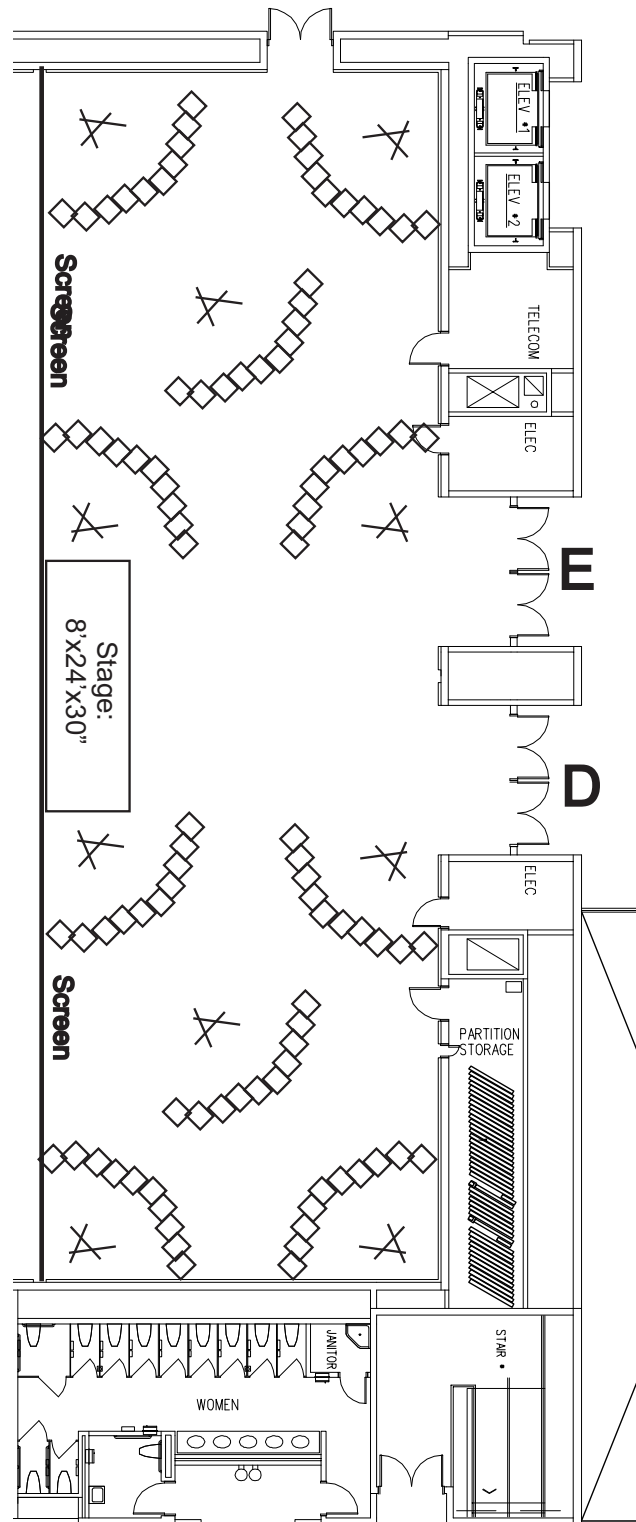
0 7 3 0 - 0 8 3 0	REGISTRATION
0 8 3 0 - 0 9 0 0	Opening Ceremony <i>Led by Major General Laurie Hummel, Adjutant General, Alaska National Guard, USA</i> Alaska Native Welcome
0 9 0 0 - 0 9 1 5	GROUP PHOTO
0 9 1 5 - 0 9 2 0	Administrative Reminders <i>CPT Amanda Plachek, State Partnership Program Coordinator, Alaska National Guard</i>
0 9 2 0 - 0 9 4 0	Shaping Environmental Security in the Indo-Asia-Pacific Region <i>Mr. Christopher Sholes, Environmental Program Manager, U.S. Pacific Command (J445)</i>
0 9 4 0 - 0 9 5 0	Moderator Introduction <i>Dr. John Wood, Director, Pacific Outreach, U.S. Pacific Command (J9)</i>
0 9 5 0 - 1 0 1 0	Global Climate Change, Ocean Acidification, and the Adoption of the Public Trust Doctrine <i>Brigadier General Aziz Mohammed, Deputy Commander, Republic of Fiji Military Forces</i>
1 0 1 0 - 1 0 3 0	Marine Environmental Conservation <i>Captain (G) Pujitha Thushara Sugathadasa, Commanding Officer, SLNS Dakshina Naval Base, Sri Lanka Navy</i>
1 0 3 0 - 1 1 0 0	BREAK
1 1 0 0 - 1 1 2 0	Imja Tsho Glacial Lake De-Watering Effort <i>Lt Col Bharat Lal Shrestha, Project Team Leader, Nepalese Army</i>
1 1 2 0 - 1 1 4 0	Environmental Security Outlook in Timor-Leste <i>Captain Domingos Oki, Engineering Officer, Directorate of Strategic Politics and International Policy, Timor-Leste Ministry of Defence</i>
1 1 4 0 - 1 2 2 0	Environmental Security Panel Session <i>Dr. John Wood, Director, Pacific Outreach, U.S. Pacific Command (J9)</i>
1 2 2 0 - 1 3 3 0	LUNCH <i>(Video 1: Chasing Ice)</i>
1 3 3 0 - 1 3 5 5	Work Group Introduction Session <i>Mr. Justin Pummell, Geographer, U.S. Army Corps of Engineers</i>
1 3 5 5 - 1 4 0 0	Work Group Activity 1: Introduction
1 4 0 0 - 1 4 4 5	Work Group Activity 1: Environmental Security Jeopardy
1 4 4 5 - 1 5 1 5	BREAK
1 5 1 5 - 1 5 2 0	Work Group Activity 2: Introduction <i>Mr. Justin Pummell, Geographer, U.S. Army Corps of Engineers</i>
1 5 2 0 - 1 6 1 0	Work Group Activity 2: Paper Balls
1 6 1 0 - 1 6 1 5	Master of Ceremony Daily Summary
1 8 3 0 - 2 0 3 0	ICEBREAKER 49 th State Brewing Company <i>Hosted by Major General Laurie Hummel</i>

Tikahtnu D/E - AM Set
Tuesday, May 9, 2017

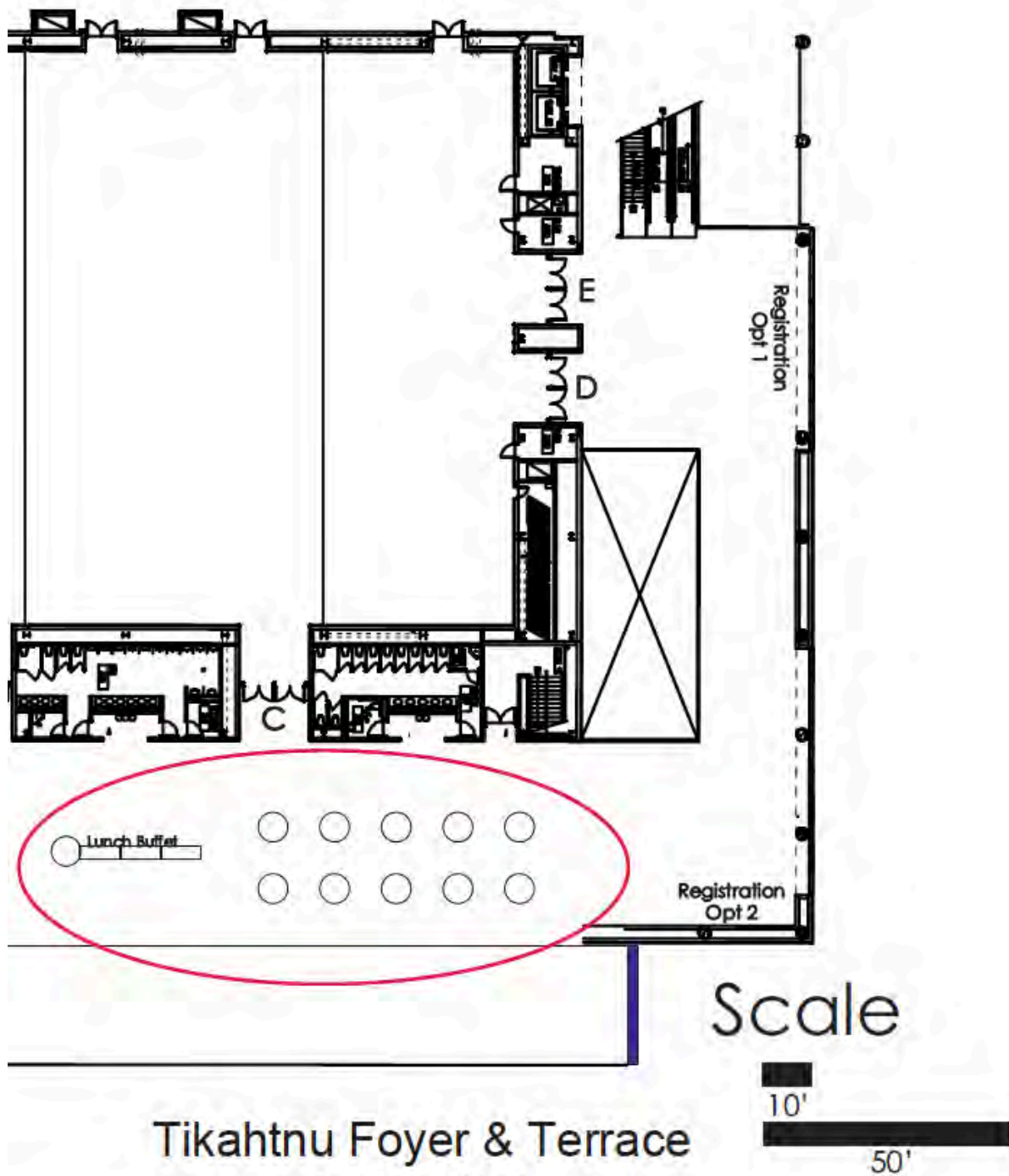


Dena'ina Tikahtnu Banquet Hall
3rd Floor

Tikahtnu D/E - PM Set
Tuesday, May 09, 2017



Dena'ina Tikahtnu Banquet Hall
3rd Floor



Tikahtnu Foyer & Terrace
Lunch Set
3rd Floor



ICEBREAKER MAP

Pacific Environmental Security Forum

DISCLAIMER

Walking Time: 20-25 minutes

Distance: 1.4 km (0.8 miles)



Legend

- 1** Inlet Towers
- 2** Dena'ina Convention Center
- 3** 49th Street Brewery
- - Walking Route

0 50 100 200
Meters



Image Date: 18 April 2017
Imagery Source: DigitalGlobe
Map Date: 21 April 2017
Map File: USA_PESF_icebreaker_map.mxd

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Pacific Environmental Security Forum Biographies & Presentation Abstracts

DAY
1

Speaker Bios and Abstracts

OPENING CEREMONY

Major General Laurie Hummel, Adjutant General, Alaska National Guard, USA

BIO



Major General Laurie Hummel is the Adjutant General of the Alaska National Guard and the Commissioner of the Alaska Department of Military and Veterans Affairs (DMVA). As the Adjutant General, she is the senior military advisor to the Governor of the State of Alaska and Commander of the Alaska National Guard, responsible for overseeing the training and readiness of 4,100 Soldiers and Airmen. She also oversees the Alaska State Defense, the Alaska Naval Militia, homeland security and emergency management, veterans' affairs, and the Alaska Military Youth Academy. MG Hummel is the official liaison between the state and the federal Department of Veterans Affairs, the Federal Emergency

Management Agency, and all military forces in Alaska.

MG Hummel commissioned into the Military Intelligence Corps from West Point in 1982. She served thirty years on active duty in a variety of intelligence assignments within the 18th Airborne Corps in Korea, and in Alaska. As a tenured professor of the Department of Geography and Environmental Engineering, she then taught cadets, led faculty, and developed curriculum at West Point. As a geographer with expertise in political demography and the geographical roots of terrorism, she served as policy consultant to the Defense Intelligence Agency and other organizations. She joined several missions in support of Operations Iraqi Freedom and Enduring Freedom: first as an advisor for a program using social and environmental science to help commanders in the field better understand cultural conditions and make smarter decision; then twice she served as an advisor to the leaders of the new National Military Academy of Afghanistan.



Pacific Environmental Security Forum Biographies & Presentation Abstracts

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INTRODUCTORY SPEAKER

Mr. Christopher Sholes, Environmental Program Manager, U.S. Pacific Command

BIO



Chris Sholes is the Environmental Security Program Manager within the USPACOM Engineering Division. His duties include overseeing environmental compliance for bilateral exercises (e.g. Talisman Saber), and planning the Pacific Environmental Security Conferences and international environmental workshops. He also monitors environmental impact assessments developed by the service components and coordinates projects with State of Hawaii offices and others on environmental matters. His previous experience includes project management of various environmental remediation projects throughout Hawaii and the Pacific including soil and water remediation and UXO clearance in Saipan, Guam,

Japan and Korea, Palmyra and other remote islands. He has five degrees including two from the London School of Economics in International Relations and Economics and an MS in Systems Engineering from the Naval Postgraduate School. He is a certified contracts manager (CPCM) and certified project manager (PMP) from the respective US national certifying organizations.

Since its inception in 2010 he has developed the Environmental Security Program as a means for the U.S. Army Corps of Engineers, IWR, 130th Prime Power and other DoD components to engage internationally and innovatively, furthering the USPACOM engagement strategy to enhance partner nation resilience, capacity building, facilitate interoperability, and build trust and access for occasions of mutual benefit.

The goal of the USPACOM ENSEC Engagement Program, incorporating the Commander USPACOM's lines of operation, is to strengthen relationships and partner-nation capacity development. This program, as part of the Defense Environmental International Cooperation (DEIC) program, is an effective and cost-efficient way to also support the SECDEF's Security Cooperation Guidance goals of: (i) Build defense relationships that promote specific U.S. security interests, (ii) Develop allied and friendly military capabilities and willingness for coalition operations with the U.S. military, and (iii) Improve force interoperability.

From the Pacific Environmental Security Conference series, USPACOM has spun-off oil spill response workshops in South and Southeast Asia, is planning an SVP approach to waste management solutions, has funded alternative energy solutions to remote location, and established environmental stewardship practices with Australia and other partner nations.



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THEME LEADER

Dr. John R. Wood Director, Pacific Outreach U.S. Pacific Command (J9)

BIO



Dr. John Wood is the Director, J9, Pacific Outreach at U.S. Pacific Command (HQ USPACOM) at Camp Smith, Hawaii. As the HQ USPACOM J9, Dr. Wood leads the Command's Strategic Public - Private Partnership Outreach; Outreach to non - traditional security entities such as academia, think tanks, NGOs and private sector; PACOM staff academic development and speaker series; USPACOM All - Hazards campaign to reduce the risks of natural disasters, build resilient communities through innovative and strategic partnerships, and plan, align, and synchronize PACOM's humanitarian response; interagency alignment in Washington, D.C. and in PACOM by coordinating the embedded Liaison Officers; economic –security intelligence and analysis for the command; historical office to provide historical context to real-time operations and to create and catalog USPACOM commander histories; and Legislative Affairs outreach to U.S. Congress and Hawaii state government to accomplish USPACOM's mission, strategy, and priorities.



Pacific Environmental Security Forum Biographies & Presentation Abstracts

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PRESENTER 1

Brigadier General Aziz Mohammed, Deputy Commander, Republic of Fiji Military Forces

BIO



Brigadier-General Dr Aziz MOHAMMED was born on 7th July 1964. He was educated at Gospel High School/University of the South Pacific and then Bond University, Gold Coast, Australia. On 25th November 1986 he was enlisted into the then Republic of Fiji Military Forces. He was appointed officer cadet on 26th August 1986 and was commissioned in the ranks of Second Lieutenant. He served with 1FIR (UNIFIL) in 1986–1987 and in October 1991–October 1992. He also served with the Second Battalion Fiji Infantry Regiment [2FIR(MFO)] in Sinai, Egypt in September 1988 to September 1989. He also served as Military Observer with the United Nations Iraq Kuwait Observers Mission

(UNIKOM). Brigadier-General Dr Aziz Mohammed also attended various military courses overseas and locally. He obtained his Bachelor of Law Degree from Australia. On 23 February 1996 he was appointed a Barrister & Solicitor of the High Court of Fiji. He was appointed a Commissioner of Oaths in March 1996. In December 1998 Brigadier-General Dr Aziz Mohammed was appointed as Legal Practitioner of the Supreme Court of the Australia Capital Territory, Legal Practitioner of the High Court of Australia as well as Practitioner of the Supreme Court of Tasmania. In February 2009 Brigadier-General Aziz was awarded the Doctorate in Law. Brigadier-General Dr Aziz Mohammed holds various appointments within the military from Platoon Commander, Company Second-in-Command, Staff Officer, Directorate Army Legal Services and Chief of Staff Headquarters Republic of Fiji Military Forces. Currently Brigadier-General Dr Aziz Mohammed is the Deputy Commander, Republic of Fiji Military Forces. He is married to Lubna with 3 children.

ABSTRACT

Global Climate Change, Ocean Acidification and The Adoption Of The Public Trust Doctrine

GLOBAL CLIMATE CHANGE and its multiple implications for Fiji, the Melanesian Spear Group affiliated islands and regional island nations in general do not require any great, substantial additional introduction.



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In the ongoing debate and public discussion on global climate change so far, we venture to suggest that ocean acidification has received inadequate attention particularly with

respect to scientific research that urgently needs to be done. As far as we have been able to ascertain, no real time research of any significance on ocean acidification is being done in Fiji's territorial waters. This is a matter of enormous policy and political importance.

Given that global climate change is a massive problem of many parts and given that it has been politically moved to center stage, what is now urgently needed is an instrument that serves as a focal point to drive and implement policy. We suggest with great respect that that instrument should be the PUBLIC TRUST DOCTRINE. In fact the public trust doctrine is "joined at the hip" to the precautionary principle which Fiji has already accepted as have several other island states in Oceania.

Adoption of the Public Trust Doctrine as national policy or as regional policy is a no cost issue. Moreover, the public trust doctrine carries no political downside. How can anyone, Opposition parties included, no matter how unthinking or argumentative, oppose a policy that seeks to protect the interests of future generations by protecting what is called "intergenerational equity?"



Pacific Environmental Security Forum Biographies & Presentation Abstracts

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PRESENTER 2

Captain (G) Pujitha Thushara Sugathadasa, Commanding Officer in SLNS Dakshina Naval Base, BSC (Defence), Sri Lanka Navy

BIO



Captain (G) Pujitha Thushara Sugathadasa joined the Sri Lanka Navy on 05th October 1988 as an Officer Cadet of the 06th Intake in the General Sir John Kotalawala Defence University in Sri Lanka and counts 26 years of unblemished service. Captain (G) Pujitha Thushara Sugathadasa is a specialist Gunner graduated from Gunnery school INS Dronacharya, Kochin, India in 2000/2001. He has undergone a Surface Vessel Gun maintenance course in China during 2006/2007.

He has held a number of key appointments, both afloat and ashore. He counts nearly half of his carrier at sea. He has served and commanded Surveillance Command ships, Fast Gun Boats, Fast Attack Crafts, Fast Missile Vessels and offshore Patrol Vessels. He has held appointments as Executive Officer for onshore bases and Commanded SLNS Walagamba, SLNS Buwaneka shore bases. Apart from the above, he also held the Staff Officer Operations (North), Captain Operation Department (West), and A/Director COORD (Naval) & Duties of Joint Planning & Force Development under the Defence staff of OCDS.

Further, Captain (G) Pujitha Sugathadasa has held the appointment as Acting Naval Armament Officer in Trincomalee, Commander Coastal Protection Squadron North & North West to protect the coastal belt of Sri Lanka, and presently he serves as Commanding Officer in SLNS Dakshina Naval Base.

Captain (G) Pujitha Sugathadasa is a Distinguished graduate of Sir John Kotalawala Defence University Sri Lanka. He has also been bestowed with Surface Warfare Badge and Fast Attack craft badge in recognition of his exemplary service at sea.

He is a good sportsman and represents the Inter Command Badminton and Basketball teams. He is married to Shanthi and blessed with a son Devin and daughter Devanga.



Pacific Environmental Security Forum Biographies & Presentation Abstracts

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ABSTRACT

Marine Environmental Conservation

A Pollution free marine Environment around Sri Lanka for the sustainable national development and the well being of its people and the economy by the year 2020.”

The marine environment is an integral aspect of the overall eco system and essential to be preserved for the future generations. As Sri Lanka is an island nation, the health and wellbeing of the oceans, the land and the people are all linked with each other. Sri Lanka relies heavily on the ocean and coastal resources for fishing industry, trade and tourism for economic development. Therefore, the protection of marine environment is absolutely important to harness the ecosystem.

Inshore and coastal waters of Sri Lanka are exposed to various types of pollutants from inland, coastal and offshore sources. These sources release high amount of pollutants in to the sea daily. The industrial wastes, Agrochemical drains from agriculture farming, domestic wastes, production of toxic metabolites by agricultural activates, oil pollution as a consequence of international ships sailing route with the heavy maritime traffic are the main reason of marine pollution.

Issue identified related to, maritime conservation such as, illegal construction/ discharge, Coastal erosion, beach sand mining & coral mining, beach pollution, loss of coastal vegetation.

In this context, the Sri Lanka Navy has a vital role and responsibility to monitor, protect and manage the maritime resources/environment and marine pollution.



Pacific Environmental Security Forum Biographies & Presentation Abstracts

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PRESENTER 3

Lt Col Bharat Lal Shrestha, Project Team Leader, Nepalese Army

BIO



Lieutenant Colonel Bharat Lal Shrestha enrolled in the Nepalese Army in 1997, joining the Department of Engineer as an engineer officer. Successive postings have taken him to almost every remote district in Nepal, notably to undertake a range of staff duties such as those of construction road engineer officer for number of High hill mountain road to link number of districts to the national road network. Engineer for Construction and launching of Bailey bridges in Engineering Operations; Executive Assistant to the Director general at Department of Engineer Headquarter, Kathmandu; Planning Officer (Infrastructure: Road and buildings) Department of

Engineer Headquarter, Kathmandu; Senior Training officer at Nepalese Army Vocational Training Institute, Kathmandu; Actively involved in rescue and rehabilitation operations during Water Induced disasters in different locations across the country; Involved in Disaster response Exercise & Exchange and CIMIC Exercises; Senior planning officer for Earthquake rehabilitation and reconstruction work at Department of Engineer, Nepalese Army headquarter; Team Leader in Imia Tso glacial lake lowering in collaboration with Ministry of Population and Environment, Department of Hydrology & Metrology, government of Nepal.

Lieutenant Colonel Bharat Lal Shrestha has also served as Construction Engineering officer in the Nepalese Army Engineering Company of the MONUC mission in Democratic Republic of Congo (DRC).

Lieutenant Colonel Bharat Lal Shrestha has a Bachelors in Civil Engineering from Mehran University of Engineering and Technology, Pakistan and a Master's of Science in Engineering Management from the Acme Engineering College, Kathmandu. He was awarded the Chief of Army Commendation medal for his service at Department of Engineer HQ, and the Foreign Service Medal for his service as the Construction Engineering officer in MONUC mission DRC.



ABSTRACT

Imja Tsho Glacial Lake De-Watering Effort

Nepal is ranked the fourth most vulnerable country in the world to climate change. The country's average temperature is rising at an annual rate of about 0.06°C, and the trend is much higher in the mountainous regions. This contributes to glacial retreat and expansion of lakes, thus increasing the Glacial Lake Outburst Flood (GLOF) risks.

Located at an altitude of 5010m in Sagarmatha National Park (SNP), Imja Glacial Lake was identified during the 1960's as a small supra lake in Khumbu region near Mount Everest. In 2014, the lake expanded to an area of 1.28 square km, with a depth of 148.9 meters holding 75.2 million cubic meters of water.

As an international bid could not materialize in 2015, the Government of Nepal made the decision to involve the Nepalese Army on February 16, 2016. The lowering of Imja Glacial Lake by 3.4 meters was one of the most technically challenging climate change adaptation projects ever assigned to the Nepalese Army, and the first of its kind in Nepal. The entire construction work was completed within six months (October 2016). The engagement of the Nepalese Army (NA) in lowering the glacial lake produced satisfactory results and supported National Capacity Building. This initiative has set a national milestone in climate adaptation works. The collaborative results have made a difference in reducing GLOF risks.



Pacific Environmental Security Forum Biographies & Presentation Abstracts

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PRESENTER 4

Captain Domingos Oki, Engineering Officer, Directorate of Strategic Politics and International Policy, TimorLeste Ministry of Defence

BIO



Captain Oki was born on 10 September 1981, in Oeltam, a small country town bordering TimorLeste and Indonesia in the -TimorLeste enclave of Oe-cusse- - which was first conquered by the Portuguese people in the 15th century prior to entering the main island of Timor. His parents are farmers and he was brought up in an orphanage managed by an American Priest from Pennsylvania, Father Richard Dashbach-, SDV.

Captain Oki enlisted into the military as a private soldier in 2002. He is an engineering officer and currently works at the TimorLeste Ministry of Defence, in the Directorate of Strategic Politics and International Policy. Prior to this posting, he was an advanced military training facilitator, an engineering instructor, and the chief of planning and training at Military Headquarters Joint Operation Centre (J3). He was then appointed as the Chief of Timorese Defence Force International Cooperation and Multilateral Engagements from 2009–2015 and the Vice Chief of Cabinet for the TimorLeste Chief of Defence Force from mid 2016 until early 2017.

Captain Oki is a full time officer and proudly serves the nation. He has attended various military and civilian courses both in TimorLeste and overseas. In 2006, Captain Oki became the first Timorese military member to complete a Military Academy from the prestigious Royal Military College of Australia at Duntroon, Canberra. He also graduated from the Australian School of Engineering at Moorebank, Sydney, in 2007, specializing in construction and project management.

Captain Oki was an Australian Defence Cooperation Scholar (DCSP, 2012) and is a 2014 graduate from the Advanced Security Cooperation Course at the Asia Pacific Centre for Security Studies (APCSS) in Hawaii. In 2014 he was named as the distinguished Alumnus of the year, from amongst 97 students around the Asia Pacific region and beyond. He is also a 2015/2016 British Chevening Scholar.

Captain Oki has performed in various training and staff officer roles both at the Ministry of Defence and the Timorese Military Headquarters. He was a liaison officer from the Timorese Military to the United Nations Integrated Missions in TimorLeste (UNMIT) and the International Stabilisation Force (ISF), the United Nations Police (UNPOL) and the Timorese National Police (PNTL) from 2007 to 2008. This was one of the most critical jobs during the political crisis and required him to establish a sound working relationship



Pacific Environmental Security Forum Biographies & Presentation Abstracts

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between the Police and Military after escalated tensions resulted in a large exchange of fire between the two institutions. He was awarded a certificate of excellence by the ISF Commander for his role as a Military Ambassador during the UNMIT mission in TimorLeste.

Captain Oki has attended various bilateral, multilateral and international engagement programs and seminars, including the ASEAN ARF, the Shangri-La Dialogue, the Jakarta International Dialogue (JIDD), and the Shangxian Forum in Beijing (China), among others.

Captain Oki has a Bachelor of Professional Studies from the University of New England, Australia, majoring in Human Resource Development and Peace Studies, which he studied by distance education from TimorLeste; with his only visit to the campus being on graduation day in April 2011! He has a number of Graduate Diplomas, a Masters of International Security Studies from Macquarie University, Australia (2013) and a Master of Science in International Defence and Security from Cranfield University at the Defence Academy of the United Kingdom (2016). His main research area is focusing on the Emerging Security Challenges facing TimorLeste and their importance to TimorLeste's bid to join ASEAN.

Captain Oki lives with his family in Dili, TimorLeste. He is married and blessed with a son. In his leisure time, he enjoys building, reading, running, and gardening.

ABSTRACT

Environmental Security Outlook in Timor-Leste

Timor – Leste is a young country in the world, 15 years of Independence, 191st member state of the United Nations in September 2002, member of the Portuguese Speaking Countries (CPLP), Member of the ASEAN ARF since 2005, Observer in the EU, PIF, and is yet to be made an ASEAN member.

Timor-Leste faces many challenges including poverty, unemployment issues and serious Environmental security and sustainability concerns. Environmental security and sustainability are the biggest issues facing the country. Issues include waste management, water management, resource management and protection, energy protection; Marine environment protection (Fisheries–Bio-security, Agricultures); Biodiversity conservation and Wildlife protection.

The presentation will concentrate on the current environmental concerns facing the country and how the government intends to face these challenges in the future. It will also analyze how our multilateral partners can best help us, including by better coordinating their donor effort to support Timor-Leste to resolve priority issues.

It will conclude by presenting some mechanisms on how to best respond to the environmental issues facing Timor–Leste.

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PACIFIC
ENVIRONMENTAL
SECURITY FORUM

DAY 2

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AGENDA

DAY 2 - ENVIRONMENTAL SECURITY TRACKS



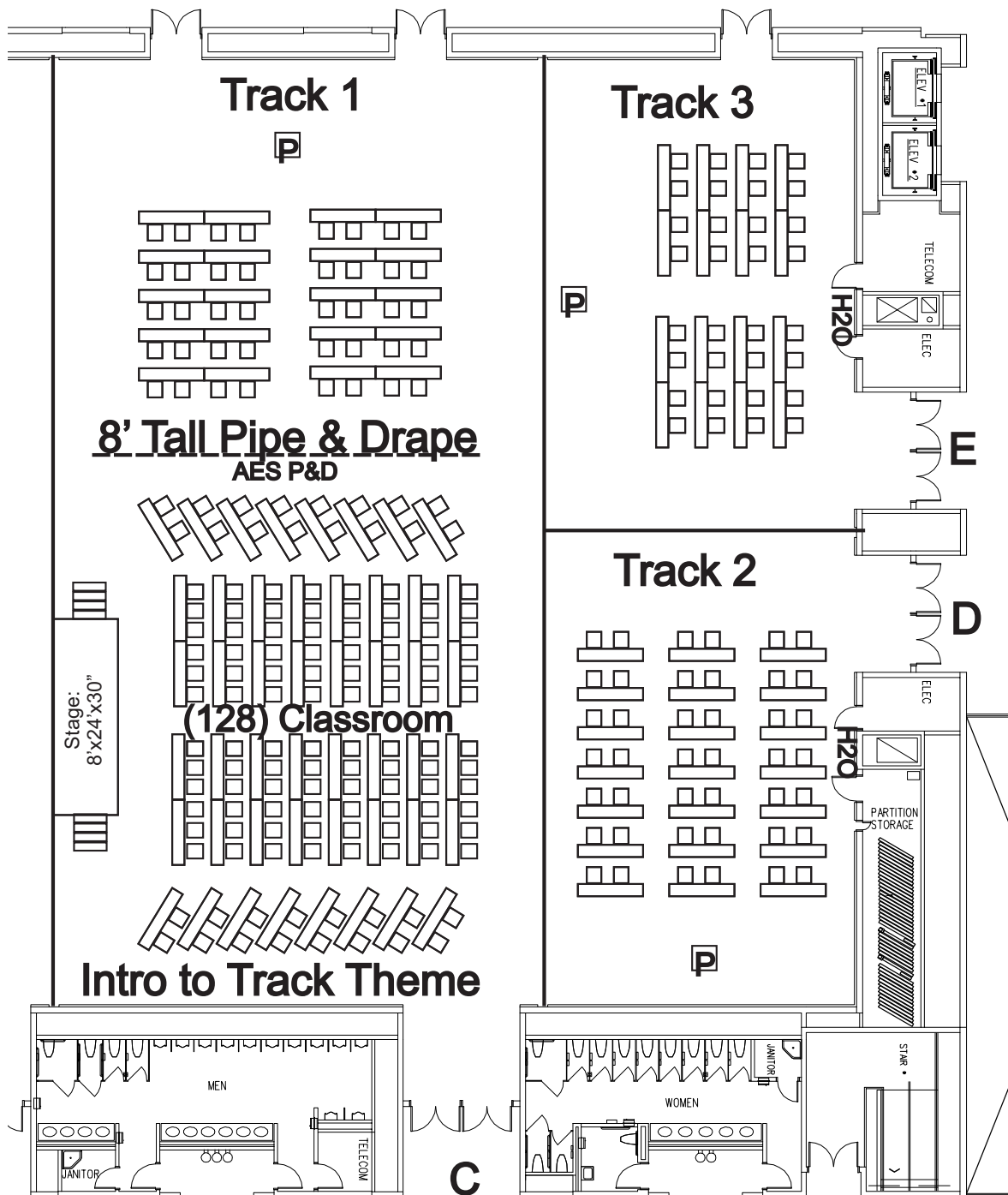
WEDNESDAY, 10 MAY 2017

0 8 4 5 - 0 8 5 0	Administrative Remarks		
0 8 5 0 - 0 9 0 0	Introduction to Track Themes <i>Major General Laurie Hummel, Adjutant General, Alaska National Guard, United States of America</i>		
0 9 0 0 - 0 9 1 0	TRANSITION		
0 9 1 0 - 0 9 2 0	STATE PARTNERSHIP PROGRAM (SPP) TRACK Introduction <i>Major General Laurie Hummel, Adjutant General, Alaska National Guard, USA</i>	CLIMATE CHANGE TRACK Introduction <i>Dr. Douglas Causey, Director, Applied Environmental Research Center, University of Alaska - Anchorage</i>	WATER SECURITY TRACK Introduction <i>Dr. Roger Babcock, Professor, Civil & Environmental Engineering, University of Hawai'i at Mānoa</i>
0 9 2 0 - 0 9 4 0	ADEC Regulation of Rural Alaska Landfills <i>Robert Blankenburg, PE, Solid Waste and Pesticides Program Manager, Alaska Department of Environmental Conservation</i>	Climate Change and Biodiversity <i>Dr. J. Jerome Montague, Native Affairs and Natural Resources Advisor, Alaskan Command, USA</i>	Puttalam Water Supply Project <i>Mr. Michael Macmillan, Supervisory Project Manager, Alaska District, U.S. Army Corps of Engineers</i>
0 9 4 0 - 0 9 4 5	TRANSITION		
0 9 4 5 - 1 0 0 5	Environmental Security Challenges: From Threat to Opportunity <i>Dr. Geoff Dabelko, Professor and Director, Environmental Studies Program, Ohio University</i>	Climate Change Impacts on Maritime Security: An Indonesian Navy Perspective <i>First Admiral Muhammad Ali, Vice Assistant for Planning and Budgeting to the Chief of the Indonesian Navy</i>	Water Supply of Ulaanbaatar City, Mongolia <i>Mr. B. Purevjav, Control Department Head of Operations, Ulaanbaatar City Water Supply and Sewerage Authority, Mongolia</i>
1 0 0 5 - 1 0 1 0	TRANSITION		
1 0 1 0 - 1 0 3 0	Food Security <i>Brigadier General Zachary F. Doser, Director of the Joint Staff, Nevada National Guard, USA</i>	Climate Change Adaptation on Water Resources in Korea: Current Status and Future Perspectives <i>Dr. Su-Hyung Jang, Principal Researcher, K-Water Institute</i>	Water Scarcity in an Uncertain World <i>Mr. Robert Bowers, Principal Hydrologist, H2Alluvium, New Zealand</i>
1 0 3 0 - 1 1 0 0	BREAK		
1 1 0 0 - 1 1 1 0	SPP TRACK (CONT.) Introduction <i>Major General Laurie Hummel, Adjutant General of the Alaska National Guard, USA</i>	WASTE TRACK Introduction <i>Ms. Karen Baker, SES, Chief of Environmental Division, Headquarters, U.S. Army Corps of Engineers</i>	ENERGY TRACK Introduction <i>Mr. Joel Neimeyer, Federal Co-Chair, Denali Commission</i>
1 1 1 0 - 1 1 3 0	Hawaii State Partnership Program & Environmental Security <i>Major General Arthur "Joe" Logan, Adjutant General, Hawaii National Guard, USA</i>	Attu Island Environmental Remediation <i>Lieutenant Colonel Jason Buursma, Deputy Commander, Alaska District, U.S. Army Corps of Engineers</i>	Integrating Renewables in Rural Alaska <i>Mr. Forest Button, Manager, Project Development & Key Accounts, Alaska Village Electric Cooperative, USA</i>
1 1 3 0 - 1 1 3 5	TRANSITION		

DAY 2 (CONTINUED)

1 1 3 5 - 1 1 5 5	Responsible Mining in Mongolia: What Does It Take From a Workforce Development Perspective <i>Dr. Rajive Ganguli, Professor of Mining Engineering, and Director, Mineral Industry Research Laboratory, University of Alaska Fairbanks</i>	Da Nang Environmental Remediation Program <i>Colonel Dau Xuan Hoai, Deputy Director, Centre for Environmental Treatment Technology, Vietnam</i> <i>and</i> <i>Dr. Andrew L. Sayers-Fay, Environmental Consultant, Chemist and Remediation Advisor, U.S. Agency for International Development</i>	Modular Diesel Power Systems for Rural Villages <i>Mr. David Lockard, P.E., Lead Engineer - Rural Energy, Alaska Energy Authority, USA</i>
1 1 5 5 - 1 2 0 0	TRANSITION		
1 2 0 0 - 1 2 2 0	USGS Research in the Arctic and Pacific <i>Dr. John Pearce, Division Chief, U.S. Geological Survey Alaska Science Center</i>	Oil Spillage in Sundarban: A Serious Wakeup Call <i>Commodore Yahya Syed, Deputy Director General, Bangladesh Coast Guard</i> <i>and</i> <i>Mr. MD Alamgir, Joint Secretary and Director, Department of Environment, Bangladesh</i>	Rural Mooring Points: A Simple Project Leads to Big Benefits <i>Ms. Jocelyn Fenton, Physical Scientist, Alaska District, U.S. Army Corps of Engineers</i>
1 2 2 0 - 1 2 2 5	TRANSITION BACK TO PLENARY		
1 2 2 5 - 1 2 3 5	Site Visit Overview <i>CPT Amanda Plachek, State Partnership Program Coordinator, Alaska National Guard</i>		
1 2 3 5 - 1 3 0 0	TRAVEL TO SITE VISIT (Box lunches on vans)		
1 3 0 0 - 1 7 0 0	SITE VISIT CIRCUIT Stop 1: William Jack Hernandez Sport Fish Hatchery Stop 2: Wildlife Education Center Stop 3: Wildlife & Range Management on Eagle River Flats Stop 4: Anchorage Landfill and Methane Gas Power Plant		
1 7 0 0 - 1 7 3 0	RETURN (SITE VISIT)		

Wednesday, May 10, 2017



Dena'ina Tikahtnu Banquet Hall
3rd Floor

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Speaker Bios and Abstracts

STATE PARTNERSHIP PROGRAM (SPP) TRACK – THEME LEADER

Major General Laurie Hummel, Adjutant General, Alaska National Guard, USA

BIO



Major General Laurie Hummel is the Adjutant General of the Alaska National Guard and the Commissioner of the Alaska Department of Military and Veterans Affairs (DMVA). As the Adjutant General, she is the senior military advisor to the Governor of the State of Alaska and Commander of the Alaska National Guard, responsible for overseeing the training and readiness of 4,100 Soldiers and Airmen. She also oversees the Alaska State Defense, the Alaska Naval Militia, homeland security and emergency management, veterans' affairs, and the Alaska Military Youth Academy. MG Hummel is the official liaison between the state and the federal Department of Veterans Affairs, the Federal Emergency

Management Agency, and all military forces in Alaska.

MG Hummel commissioned into the Military Intelligence Corps from West Point in 1982. She served thirty years on active duty in a variety of intelligence assignments within the 18th Airborne Corps in Korea, and in Alaska. As a tenured professor of the Department of Geography and Environmental Engineering, she then taught cadets, led faculty, and developed curriculum at West Point. As a geographer with expertise in political demography and the geographical roots of terrorism, she served as policy consultant to the Defense Intelligence Agency and other organizations. She joined several missions in support of Operations Iraqi Freedom and Enduring Freedom: first as an advisor for a program using social and environmental science to help commanders in the field better understand cultural conditions and make smarter decision; then twice she served as an advisor to the leaders of the new National Military Academy of Afghanistan.



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STATE PARTNERSHIP PROGRAM (SPP) TRACK - PRESENTER 1

Robert Blankenburg, PE, Solid Waste and Pesticides Program Manager, Alaska Department of Environmental Conservation (ADEC), USA

BIO



Robert J. (Bob) Blankenburg, P.E., is the Solid Waste and Pesticides Program Manager for the Alaska Department of Environmental Conservation (ADEC), and has led the program for 9 years. He has worked in the environmental field for 25 years in both the public and private sectors, and has managed environmental programs and environmental compliance under a number of federal environmental laws, including RCRA, FIFRA, CERCLA, and NPDES, as well as several State of Alaska environmental laws and regulations. He has a Bachelor of Science in

Chemical Engineering from the University of Washington. He currently serves as the Materials Management Subcommittee Chair with the Association of State and Territorial Solid Waste Management Officials (ASTSWMO).

ABSTRACT

ADEC Regulation of Rural Alaska Landfills

Waste management in Alaska poses a number of challenges, based on the rural nature of much of the state. Alaska is a large state, with climatic conditions ranging from rainforests in Southeast Alaska, to wetlands in Western Alaska, and arctic/permafrost conditions in Northern Alaska. Poor solid waste management poses a risk to human health and the environment. Rural Alaska faces significant challenges with solid waste management that are not faced in other areas of the United States, including isolated small villages with no road access, resource challenges, and gaps in technical knowledge.

ADEC's Solid Waste Program implements the Environmental Protection Agency (EPA)-approved program to regulate solid waste management statewide. For Rural Alaska villages, Alaska administers its Class III landfill regulations, which is a designation unique to Alaska.



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The goal of this presentation is to demonstrate to participants the challenges faced in solid waste management in Rural Alaska, and work that ADEC has focused on to regulate landfills and improve landfill management in these villages, including addressing emerging challenges, such as climate change.



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STATE PARTNERSHIP PROGRAM (SPP) TRACK - PRESENTER 2

Dr. Geoff Dabelko, Professor and Director, Environmental Studies Program, Ohio University

BIO



Geoffrey D. Dabelko is Professor and Director of the Environmental Studies Program at the George V. Voinovich School of Leadership and Public Affairs at Ohio University in Athens, OH. He teaches and conducts research on natural resources, conflict, and peacebuilding; global environmental politics; climate change and security; and environmental leadership. He is currently focusing on the conflict and peacebuilding potential of climate change responses and co-directing an environmental peacebuilding study abroad program in the Balkans. From 1997-2012, he served as director of the Environmental Change and Security Program (ECSP), a nonpartisan policy forum on environment, population, and security issues at the Woodrow Wilson International Center for Scholars in Washington, D.C. He

continues to work as a senior advisor to the Wilson Center where he works with policymakers, practitioners, and scholars grappling with the complex connections that link environment, health, population, conflict, and security.

Dabelko has directed grants from a range of international and national organizations such as the UN Environment Program and the US Agency for International Development. He was principal investigator for USAID-funded efforts including the "Health, Environment, Livelihoods, Population and Security (HELPS) Project" and the "Resources for Peace Project." He worked previously at Foreign Policy and the Council on Foreign Relations. He is an adjunct professor at the Middlebury Institute of International Studies at Monterey and has taught at the Georgetown University School of Foreign Service. Dabelko is co-editor of *Green Planet Blues: Critical Perspectives on Global Environmental Politics* (5th ed., 2014) and *Environmental Peacemaking* (2002). He was a lead author for the 5th assessment of the Intergovernmental Panel on Climate Change Working Group II Chapter 12 on Human Security released in 2014. Other recent publications appeared in the *Bulletin of Atomic Scientists*, *Climatic Change*, *Environment*, *Environment*, and *Ensia*. Dabelko is a member of the United Nations Environment Programme's Expert Advisory Group on Environment, Conflict, and Peacebuilding and an advisory board member of Screenscope's "Journey to Planet Earth" PBS documentary initiative. On campus, he serves as chair of the Kennedy/Frontiers in Science Lecture Committee and is a member of the Ohio University Press Board.



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Dabelko has a Ph.D. in government and politics from the University of Maryland and an AB in political science from Duke University.

ABSTRACT

Environmental Security for Peace

Security actors regularly assess potential threats stemming from changes in the climate, natural resources, the environment, and extreme weather events and the diverse political, economic, and social responses to them. These environmental security challenges also present opportunities for civilian and military security actors to pursue confidence-building and trust-building collaborations. These environmental peacebuilding efforts can contribute to stability and security goals while addressing underlying environment and natural resource management issues. This presentation will feature a diverse set of national and international examples that illustrate the dynamics of these efforts and their potential security benefits, narrowly and broadly defined.



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STATE PARTNERSHIP PROGRAM (SPP) TRACK - PRESENTER 3

Brigadier General Zachary F. Doser, Director of the Joint Staff, Nevada National Guard, USA

BIO



Brigadier General Doser entered service in the United States Army in 1986. He was commissioned a 2nd lieutenant in the Infantry Branch, after graduating as a Distinguished Military Graduate from the University of Nevada Reserve Officers Training Corps program. Brigadier General Doser has served in every command position from platoon leader through brigade command. He most recently served as the Chief of Staff, Nevada Army National Guard. Upon selection for promotion to the rank Brigadier General, he was assigned to the position of Assistant Adjutant General—Army, Nevada National Guard and Director Joint Staff. Brigadier General Doser is a graduate of the U.S. Army War College and holds a Master Degree in Strategic Studies.

Brigadier General Doser is a veteran of OPERATION DESERT STORM/SHIELD/GUARDIAN and OPERATION ENDURING FREEDOM. During his Afghanistan deployment, he served as a military advisor to the Afghanistan National Security Forces and Chief of Staff in Afghanistan Regional Security Assistance Command—East (ARSIC-East).

His military decorations include the Legion of Merit, Bronze Star Medal, Afghanistan Campaign Medal, Southwest Asia Service Medal, Meritorious Service Medal (3 OLC), Army Commendation Medal (6 OLC), Air Force Commendation Medal, Army Achievement Medal (2 OLC), State of Nevada Commendation Medal, State of Nevada Humanitarian Service Medal, Combat Infantrymen's Badge and Basic Airborne Wings.

Brigadier General Doser is a member of the Reno Police Protective Association, American Legion and the Veterans of Foreign Wars.

Brigadier General Doser is currently employed by the City of Reno, Nevada Police Department. During his career he has served as a patrol officer, field training officer and a detective in the Department's Domestic Violence Unit and Sex Crimes/Child

Abuse Unit. In 2013, He was recognized by the City of Reno with the "Alliance for Victim's Rights Award." He, his wife (Martana), daughter and three grandchildren all live in Reno, Nevada.



ABSTRACT

Food Security

Climate change poses “immediate risks to national security” and these rapid changes in the climate are already exacerbating natural disasters, water, food, energy and health insecurities, contributing to conditions that can lead to conflict, state instability, and state failure, straining military readiness, operations and strategy, and making existing security threats worse.

August of 2016, the Nevada National Guard, in conjunction with the University of California, Fresno, conducted a food security exchange in Tonga, in order to identify threats to food resources. Tonga, as an isolated country within the Southwest Pacific, is comprised on 170 islands of which 36 islands are inhabited. During times of natural or man-made disasters, many Tongan’s rely on local available food crops for humanitarian relief prior to international support arriving in country. During the response and recovery phase of an emergency, both Tonga and the U.S. recognize that the availability, access, utilization and stability of food resources can severely impact operations.

The aim of this discussion is to provide an overlook of what the exchange entailed and future opportunities for Nevada, Tonga and our international partners to work together in order to protect natural food resources. Two areas of success were focused on use of coconuts, as an uncontaminated source of water and the reduction of mangrove trees should be taken into consideration as the first area of change for Tonga’s food security. Reductions of mangrove trees has contributed to costal erosion which has impacted the environment.



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STATE PARTNERSHIP PROGRAM (SPP) TRACK - PRESENTER 4

Major General Arthur “Joe” Logan, Adjutant General, Hawaii National Guard, USA

BIO



Major General Arthur “Joe” Logan was appointed as the Adjutant General, Hawaii on 1 January 2015. As Adjutant General, he oversees the training and readiness of 5,500 Soldiers and Airmen of the Hawaii National Guard. He also serves as the Director, Hawaii Emergency Management Agency, provides direct support to the Office of Veterans Services, and is the Homeland Security Advisor to the Governor. General Logan received his commission in 1984 from the Hawaii Army National Guard Officer Candidate School, Hawaii Military Academy. With more than 36 years of service, he has served in significant positions of authority and responsibility to include: Commander, 227th Engineer

Company; Brigade Engineer Officer, 29th Separate Infantry Brigade; Commander, 1st Battalion, 487th Field Artillery; Counterdrug Coordinator, Hawaii Army National Guard; Commander, Regional Police Advisory Command, Operation Enduring Freedom, Kabul, Afghanistan; Chief of Staff, Hawaii Army National Guard, and Chief of Staff, Joint Staff, Hawaii National Guard. Before assuming his current position, he served as the G3, Hawaii Army National Guard.

ABSTRACT

Hawaii National Guard State Partnership Program and Environmental Security

Strengthening climate change mitigation and disaster resilience to support a green economy is a mission objective in the Integrated Country Strategy, Indonesia FY 2015-2017. Justification for this objective stems from the fact that Indonesia is currently the third largest global leader of greenhouse gases . Annual dry seasons produce hotspots and increase the likelihood for peat land fires that have continual social, environmental, human, and economic costs felt throughout the region.

In November of 2015, The Indonesian Disaster Management Agency (BNPB) with the United States Agency for International Development (USAID) submitted an observations and recommendations report to the Government of Indonesia (GOI). The report focused



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on three topics: continued implementation and training of the Incident Command System (ICS), integration of remote sensing capabilities, and strategic and tactical firefighting operations .

Hawaii has and will continue to work together with Indonesia and regional partners to increase peat land fire mitigation and response capacity. The discussion will highlight key engagements that directly align with GOI priorities, ICS objectives, and Theater Security Cooperation Plan (TSCP) Lines of Effort (LOE). Topics include, but are not limited to rotary wing firefighting engagements, crisis management observations, and imagery integration.



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STATE PARTNERSHIP PROGRAM (SPP) TRACK - PRESENTER 5

Dr. Rajive Ganguli, Professor of Mining Engineering, and Director, Mineral Industry Research Laboratory, University of Alaska Fairbanks

BIO



Dr. Rajive Ganguli is a Professor of Mining Engineering, and Director, Mineral Industry Research Laboratory, at the University of Alaska Fairbanks. He has three degrees in mining engineering, bachelor's from Osmania University, India (1991), master's from Virginia Tech (1995) and doctoral from the University of Kentucky (1999). He has worked as a mining engineer in two countries, India and the USA. He also consults with the mining industry through his company.

Dr. Ganguli has developed over \$15M in research and educational initiatives. These include assisting the Erdenet Copper Mine in Mongolia, developing training opportunities for mining industry workforce (a \$8.1 million US Department of Labor grant), creating a \$4.2M endowment for graduate students, and

designing the American University of Mongolia.

Dr. Ganguli is currently a Fulbright Specialist, and visited Ukraine and Russia as part of his tours. He has authored two chapters in the current edition of the SME Mining Engineering Handbook ("Systems Engineering", "Mine Monitoring, Communications and Control"), a massive tome that is published about once every 20-25 years.

Dr. Ganguli was inducted into the Alaska Innovator's Hall of Fame in 2017 for the development of a mill simulator for mine training.

ABSTRACT

Responsible Mining in Mongolia: What Does It Take From a Workforce Development Perspective

The University of Alaska Fairbanks has been engaged in Mongolia since 2010 in various mining and education related initiatives. This presentation gives a short overview of the mining industry and the education system in Mongolia, followed by information on



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activities of University of Alaska Fairbanks in Mongolia. These activities include scholarship program for Mongolians, research and academic partnership with Erdenet Copper mine, partnership with Mongolian University of Science and Technology, and development of American University of Mongolia.



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STATE PARTNERSHIP PROGRAM (SPP) TRACK - PRESENTER 6

Dr. John Pearce, Division Chief, U.S. Geological Survey Alaska Science Center

BIO



Since 1990, Dr. Pearce has worked at the Alaska Science Center (ASC) as a wildlife biologist and geneticist on a variety of bird projects focusing on species of shorebird, waterfowl, and landbird. Beginning in 1994, he also worked in the USGS Molecular Ecology Laboratory in order to add a genetics component to our study of wildlife populations and avian influenza viruses. Since 2012, Mr. Pearce has been Chief of the Wetlands and Terrestrial Ecosystems Office, overseeing broad science initiatives on wildlife response to climate change, avian disease, environmental health, and genomic investigations in the state of Alaska and adjacent regions that share wildlife questions and resources with Alaska.

ABSTRACT

USGS Research in the Arctic and Pacific

The U.S. Geological Survey (USGS) provides sound and unbiased scientific research for management agencies within the Department of the Interior, other state and Federal agencies, and the public. The science information provided by USGS is used for decision making by agencies that are responsible for management of wildlife and development of energy resources, for understanding hazards (tsunamis and earthquakes), zoonotic disease, and invasive species, and for public planning in areas where these topics interface with human communities.

The USGS has science centers around the country, including the Pacific and Alaska regions, and conducts scientific research throughout the Pacific Basin. The aim of this discussion is to provide an overview of the mission of the USGS and current USGS research and science delivery within the Pacific Basin that should be of interest to the international Pacific Environmental Security Forum community. These topics include wildlife resources, human health and zoonotic disease, disturbance and ecological change, food and water security in the Pacific Islands, urban planning in areas of potential volcanic and tsunami activity, and impacts of these topics to industry, the economy, and tourism.



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CLIMATE CHANGE TRACK - THEME LEADER

Dr. Douglas Causey, Director, Applied Environmental Research Center, University of Alaska – Anchorage

BIO



Douglas Causey, PhD is Director of the Applied Environmental Research Center and the BEI Center for Strategic Projects and Research, Principal Investigator of the Arctic Domain Awareness Center of Excellence, Senior Advisor on Arctic Policy to the Chancellor, and Professor of Biological Sciences at the University of Alaska Anchorage. He arrived to UAA in June 2005 from Harvard University where he was Senior Fellow of the Kennedy School of Government and Senior Biologist at the Museum of Comparative Zoology. From 1995-2000, he represented the National Science Foundation at organizational meetings leading to the formation of the Arctic Council and was NSF's Arctic Representative during the Gore-Chernomyrdin negotiations on US-Russian Science Policy. An ecologist

and evolutionary biologist by training, he has authored over one hundred ninety publications on topics as diverse as the biology of Arctic marine birds, high Arctic coastal systems, and bat-borne diseases. His research focuses on the environmental correlates of Arctic climate change, and he has published extensively on policy issues related to the Arctic environment, national security, and bioterrorism and public health.



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CLIMATE CHANGE TRACK - PRESENTER 1

Dr. J. Jerome Montague, Native Affairs and Natural Resources Advisor, Alaskan Command, USA

BIO



Dr. Montague is Native Affairs and Natural Resources Advisor, Alaskan Command, JBER, Alaska. Alaskan Command (ALCOM) is a subordinate unified command of the U.S. Northern Command (NORTHCOM) primarily responsible for civil support and homeland security and also oversees the Alaska unit of North American Aerospace Defense Command, and other missions as assigned by the Commander in Chief, NORTHCOM. Montague evaluates natural resource issues for military policy implications with primary emphasis on climate change he also oversees implementation of the Department of Defense's American Indian and Alaska Native policy in the ALCOM.

Most of Dr. Montague's career has focused on resolving conflict surrounding the effects of industrial and military activities on natural and cultural resources important to aboriginal people. He has worked both at investigating resource impacts and negotiating solutions all over the world including Papua New Guinea, Russia, Canada, Australia, and Indonesia as well as with tribes and resources throughout Alaska and the American West.

ABSTRACT

Climate Change and Biodiversity

Although the topic is often discussed, the public remains poorly educated about climate change, what is causing it and what can be done about it. It is a complicated subject in which most explanations leave audiences with more questions. This presentation is based in ecology, the study of the interaction between the physical and biological world. Climate change is the result of these interactions. The author takes an ecological approach to explain climate change, by looking at the basic processes of the earth and following the flow of energy in the human and natural world from 500 million years ago to the present, what is happening with our climate and the likely future becomes clear. The fundamental facts of a global view of climate change over millennia are eye opening. The effects of past climate change on biodiversity will be summarized along with projections of the likely effect of current climate change on future biodiversity.



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CLIMATE CHANGE TRACK - PRESENTER 2

First Admiral Muhammad Ali, Vice Assistant for Planning and Budgeting to the Chief of the Indonesian Navy

BIO



First Admiral (FADM) Muhammad Ali was commissioned as an Ensign in 1989 following his graduation in the 35th Class of the Indonesian Naval Academy. Specializing as a Submariner, he spent most of his career afloat on submarines holding appointments as Division Head, Operations Officer, Executive Officer, and Commanding Officer. He also held Command of the Indonesian Navy Submarine Squadron. Ashore, FADM Ali served as staff in Operation and Planning offices, giving him a broader exposure to different aspects of Naval organization. He also had the distinction to serve as the Aide to the Vice President of the Republic of Indonesia for three years. In 2015, he was selected for Flag Rank and has served as

Expert Staff of the Chief of Navy in Economy and Management. Following that, FADM Ali commanded the Western Fleet's Maritime Security Group. His current appointment is Vice Assistant for Planning and Budgeting to the Chief of Indonesian Navy, overseeing the challenging task of developing the future force of the Indonesian Navy. FADM Ali is happily married with two children. In his free time, he enjoys playing golf and running.

ABSTRACT

Climate Change Impacts on Maritime Security: An Indonesian Navy Perspective

Defense concepts traditionally identify how state defends its territory against foreign countries. However, in current time there is a shift in the definition of defense itself. One of the issues that created the shift is climate change, which in turn has changed the form of threats that have to be faced by many countries. Climate change not only endangers global economy but also affecting military, especially its effectiveness.

There are three aspects of the challenges faced by military forces due to climate change; namely readiness, operations and strategy. Readiness means the ability to carry out tasks in a timely manner. In military terms, readiness is always related to a stable and secure military infrastructure and logistic. Any extreme weather events may hamper military readiness. Moreover, climate change also impacts military operation on war as well as other than war. Climate change could be a burden for supply chains of



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military logistic to support armed forces engaged in war. The increasing intensity of natural disasters due to climate change also put strains on the capacity of armed forces to deliver humanitarian assistance and disaster relief (HADR).

Furthermore, climate change can impact military strategy as well. Climate change effects on water security may increase the possibility of destabilizing conditions in strategically-significant regions of the world. The risks can escalate the likelihood of conflicts which eventually increase militaries involvement to resolve or provide post-conflict assistance. All of these dynamics will put stresses and strains on military strategies.

Therefore, to face climate change issues, the military need to change their mindset in order to maintain its effectiveness in readiness, operation and strategy.



CLIMATE CHANGE TRACK - PRESENTER 3

Dr. Su-Hyung Jang, Principal Researcher, K-Water Institute

BIO



Dr. Su-Hyung Jang joined the Water Resources Research Center, K-water Institute in July 2014 as a Principal Researcher. He has worked on climate change adaptation for sustainable water supply in Korea since 2014. He completed his Ph.D. in 2006 through Korea University in Seoul, Korea and the title of his thesis was “an establishment of operation and management system for a reservoir with flood control purpose.” After receiving his Ph.D., he made an effort to resolve the practical applications in the water resources engineering fields. He also looked at a comprehensive assessment of water resources, environmental and climate change impacts using a regional hydro-climate model while he was in UC

Davis from June 2008 to June 2014.

He received the ASCE Society Award, J. James R. Croes Medal for the paper, “Physically Based Estimation of Maximum Precipitation over Three Watersheds in Northern California: Atmospheric Boundary Condition Shifting” and the Best Technical Paper Award on ASCE-EWRI’s Journal of Hydrologic Engineering for the paper, “Downscaling Global Climate Change Simulations to Regional Scales: Statistical Downscaling versus Dynamical Downscaling” in 2016.

ABSTRACT

Climate Change Adaption on Water Resources in Korea: Current Status and Future Perspectives

According to the International Panel on Climate Change (IPCC), climate change has accelerated globally and regionally, affecting both scientific and socioeconomic sectors such as water resources, agriculture, forest ecology, fisheries and health care. Among these sectors, the most vulnerable sector to climate change is water resources, including the influences of floods, droughts and changing precipitation patterns. Thus, collaborative efforts are required to understand the adverse effects of climate change and to formulate effective adaptation measures that minimize the potential damages. A number of studies related to climate change and water resources have been conducted in Korea. However, most of these studies have focused on climate change impact assessments of water resources and not on developing actual adaptation strategies for



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the country. For this reason, the Ministry of Land, Infrastructure and Transport (MOLIT) in Korea funded to develop national water resource management technology for climate change adaptation and to build a foundation for contributions to the global water industry. This study introduced the research fields, adaptation strategies and key performances in order to establish standardized guidelines for climate change impact assessments. It is also addressed the fundamental issues on climate change impact studies to implement effective policies and practical fields.



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WATER SECURITY TRACK – THEME LEADER

Dr. Roger Babcock, Professor, Civil & Environmental Engineering, University of Hawaii-Manoa

BIO



Dr. Roger Babcock is a Professor of Civil & Environmental Engineering in the College of Engineering and a researcher with the Water Resources Research Center at the University of Hawaii at Manoa. He obtained his Ph.D. in Civil Engineering from UCLA. Dr. Babcock worked for Carollo Engineers in the early 1990s and has been at the University of Hawaii since 1995. Dr. Babcock conducts research on biological wastewater treatment, on-site wastewater treatment, water recycling, membrane bioreactors, bioremediation, stormwater runoff management, and effects of sea-level rise on wastewater infrastructure. Dr. Babcock also has Professional Engineering licenses in California and

Hawaii, does consulting work for several Hawaii firms, and is director of Hawaii's Statewide Wastewater Operator Training Center.



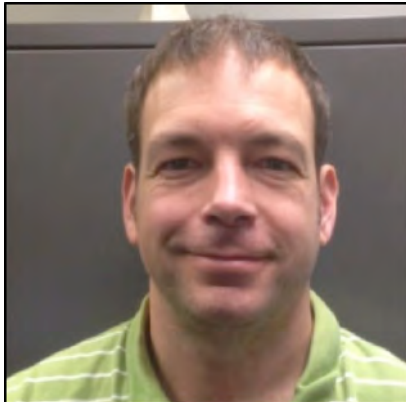
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WATER SECURITY TRACK - PRESENTER 1

Mr. Michael Macmillan, Project Manager, Alaska District, U.S. Army Corps of Engineers

BIO



Michael Macmillan assumed duties as the Section Supervisor for the Alaska District's Asia Office in October 2016. As the supervisor, he oversees the completion of humanitarian assistance projects in partnerships with the U.S. Pacific Command, U.S. Agency for International Development and U.S. Department of State. Since 2009, the Asia Office has executed more than 200 projects and gained broad experience throughout the Asia-Pacific region in countries such as Bangladesh, Cambodia, Laos and Vietnam. Most recently, the program has expanded to India, Mongolia, Nepal, Sri Lanka, Myanmar and Korea.

Since 2011, Macmillan has managed the U.S. Pacific Command's Humanitarian Assistance programs in Vietnam and Sri Lanka as a project manager. Using host nation contractors, he was responsible for the construction management and completion of 86 completed and ongoing projects in these countries.

From 2007-11, he worked as an Environmental Scientist in the Alaska District's Environmental Engineering Section. In that position, Macmillan worked on numerous Formerly Used Defense sites, environmental cleanups of contaminated sites, and wetland mapping projects throughout Alaska.

From 1996-2003, Macmillan managed crews as a foreman performing earthquake retrofitting on projects such as the Golden Gate Bridge, Oakland Bay Bridge, and Grand Coulee Dam in private industry.

Macmillan is a 2007 graduate from Central Washington University with a Bachelor of Science in Natural Sciences. He is married to Nikki Macmillan and has two children, Callisa, 21, and Grayson, 7.

ABSTRACT

Puttalam Water Supply Project

Located in western Sri Lanka, the Puttalam project was identified as a priority by the US Ambassador to Sri Lanka and the Department of State to improve the living conditions of the poorest families in the surrounding communities. The water project was a relatively



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low dollar effort costing \$87,000 to connect 371 households to city water. Installation of the water connections took one year from October 2013 to October 2014.

The project consisted of installing a connection from the city's main water supply to a metering device and spigot at each identified location. Previously, residents spent four to five hours per day walking several miles to collect potable water at distribution sites. During drought events, water availability was unpredictable. Non-potable water for washing and bathing would be unavailable making living conditions very difficult. Now, clean water is accessible to each community throughout the year. The household connections are shared at each connection with the entire community. The project was intended to help about 1,200 people. The number has grown to more than 4,000 because extended families and neighbors share the water connections.

Once people had access to clean water, the secondary benefits became apparent in the communities. Instead of spending a majority of their days collecting water, people were able to focus on tasks such as fishing, working as laborers, and selling goods in the market. The women in one community started a Women's Co-op to join together making goods. Parents now have extra income they use to send their kids to school. Access to clean water greatly improved the living conditions of each community.



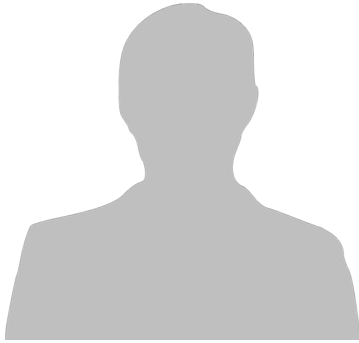
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WATER SECURITY TRACK - PRESENTER 2

Mr. B. Purevjav, Control Department Head of Operations, Ulaanbaatar City Water Supply and Sewerage Authority, Mongolia

BIO



Mr. Purevjav is the Control Department Head of Operations at the Ulaanbaatar City Water Supply and Sewerage Authority in Mongolia.

He has been involved with studying and applying techniques for water supply and sewerage systems since 1979. Mr. Purevjav holds a Master's degree in Hydro-construction engineering from the Technical University in Mongolia and a Master's degree in Water and Environmental Engineering from the University of Surrey, UK.

ABSTRACT

Water Supply of Ulaanbaatar City, Mongolia

Abstract forthcoming



WATER SECURITY TRACK - PRESENTER 3

Mr. Robert Bower, Principal Hydrologist, H2Alluvium, New Zealand

BIO



Mr. Robert (Bob) Bower is a globally recognized leader in developing Managed Aquifer Recharge (MAR) as a tool for Integrated Water Management Systems (IWMS). IWMS is a 'systems thinking' approach to the adaptive management of both surface and groundwater resources leading to sustainable water supply and delivery solutions for urban and rural communities, industrial clients and governmental authorities. His 20 years of experience in hydrology, hydrogeology and water resource engineering has included on-the-ground water projects throughout Australasia, North America and New Zealand. Bob is a pioneer of several 'first of their kind' programmes to address water conflict and degradation in a collaborative approach with stakeholders to achieve economic, environmental, social and cultural objectives. In 2006, Bob was a co-recipient of the National Watershed Councils (USA) Walter C. Loudermilk Award for his leadership on restoring river flow to an American "Top 10 most endangered" river. He is a senior member of the International Association of Hydrogeologists' ISMAR group, a member of both the Royal Society of Science (New Zealand) and Hydrological Society of New Zealand, and a recipient of numerous awards and commendations. He lives with his family in Christchurch, New Zealand where he currently leads two nationally recognized MAR pilot Programmes. He is a US Army Disabled Veteran (1980s), who has also served in the AmeriCorps and USAID programmes.

ABSTRACT

Water Scarcity in an Uncertain World – Applying the tools of Managed Aquifer Recharge (MAR) to issues of water scarcity and climate adaptation

The purpose of this talk is to challenge the audience to consider a different way of using groundwater storage to improve water security and reliability by examining our ability to manage and replenish this vast resource in a sustainable and cost effective way. Groundwater systems are the 'planet's largest freshwater reservoirs' with far more storage capacity than the total of all man-made surface reservoirs. Increasing water scarcity is being driven by our ever increasing population demands combined with ever decreasing reliability. 'Approximately 21 of the world's 37 largest aquifers are being overexploited, pumped faster than they can recharge.' (Tally, 2016). Reducing water



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availability is driven by this overexploitation results is exacerbated by climate-driven change in weather patterns which poses a significant risks to global food supplies and international political stability.

Security risks associated with mass migrations and trans-boundary water conflicts are increasing (Dalin, et. al. 2017). Traditional approaches such as surface water reservoirs and more recent options such desalination systems do show promise as viable water solutions. But they also represent “single points of failure” and tempting targets for “security incidents.” (Schoonover, 2016). This talk will present the tool of Managed Aquifer Recharge (MAR) as part of an integrated and conjunctive management approach to capturing, distributing and storing water sustainably and securely. It will cover the benefits and challenges of using groundwater storage and provide some case studies on how MAR is being applied to address both water scarcity and climate change driven issues such as rising sea levels.



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WASTE TRACK – THEME LEADER

Ms. Karen Baker, SES, Chief of Environmental Division, Headquarters, U.S. Army Corps of Engineers

BIO



As Chief of the Environmental Division at Headquarters, U.S. Army Corps of Engineers (USACE), Ms. Baker oversees USACE's environmental mission and a team of professionals who enable its worldwide military and civil works environmental responsibilities. The program provides technical management, design, and execution of \$1.6 billion in environmental services to include environmental cleanup, compliance, pollution prevention and natural and cultural resources management for the Department of Defense, Army and Air Force installations and other interagency partners. Ms. Baker has more than 20 years combined private industry and Department of Army civilian experience and has served in a variety of leadership positions in strategic planning, energy/environmental policy, and public affairs.



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WASTE TRACK - PRESENTER 1

Lieutenant Colonel Jason Buursma, Deputy Commander, Alaska District, U.S. Army Corps of Engineers

BIO



Lieutenant Colonel (LTC) Jason Buursma assumed duties as Deputy Commander of the Alaska District, U.S. Army Corps of Engineers in March 2017. He manages the Alaska District's resources, manpower and programs, annually executing military construction, civil works and environmental programs throughout Alaska. He also directs operations during emergency contingencies.

In 2016, he deployed to Afghanistan as the 62nd Engineer Detachment (FEST-A) Commander in support of Operation Freedom's Sentinel. Previously, he served at the Brigade S3 for 20th Engineer Brigade in 2015. From 2013-2014, LTC Buursma served as Battalion S3 and then XO for 27th Engineer Battalion (Airborne). He was the Brigade Plans Officer for the 20th Engineer Brigade. In 2012, LTC Buursma served as the Engineer Operations Officer as part of the XVIII Airborne Corps Engineer Section at Fort Bragg, NC.

After attending the Command and General Staff College in 2010, LTC Buursma deployed to Baghdad, Iraq, in 2011 with XVIII Airborne Corps HQ. As part of the USF-I staff during Operation New Dawn, he served as the officer-in-charge of the strategic engineer advisory team, "Team Muhandis," and as a liaison officer to US Division-South and US Division-Center. From 2008-2009, LTC Buursma volunteered to be a part of a Division Military Transition Team (MiTT) where he advised the 2nd Iraqi Field Engineer Regiment in Mosul, Iraq, in support of Operation Iraqi Freedom.

From 2006-2008, he served as company commander for Echo Company and later HHC, 1st Battalion, 72nd Armor, 1st Heavy Brigade Combat Team. In 2005, his assignment was in the Republic of Korea as the Assistant Battalion S3 for the 1st Brigade Special Troops Battalion. From 2001-2003, his first assignment was in Fort Lewis, WA, as Mobility Platoon Leader and Mobility Support Platoon Leader in 18th Engineer Company, 3rd Brigade Combat Team (Stryker), 2nd Infantry Division. In 2000, LTC Buursma graduated from Wheaton College and was commissioned as an Engineer Officer.

LTC Buursma's military education includes the Engineer Officer's Basic and Advanced Courses, Combined Arms Staff and Services School, and the Command General Staff College. His civilian education includes a Bachelor's of Science in Computer Science, and a Master's of Science in Engineering Management. He has also earned a Project Management Professional certification.



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His awards and decorations include the Bronze Star Medal, Defense Meritorious Service Medal, Meritorious Service Medal (two Oak Leaf Clusters), Army Commendation Medal (one Oak Leaf Cluster), Army Achievement Medal (three Oak Leaf Clusters), Senior Parachutists Badge, Sapper Tab, Ranger Tab, and German Parachutist Badge. LTC Buursma is married to the former Angela Stewart of Lynchburg, Virginia. They have three daughters, Abigail, 5, Grace, 3, and Sadie, 2.

ABSTRACT

Attu Island Environmental Remediation

In 2016, the Alaska District of the US Army Corps of Engineers conducted a 45-day removal of 52 above ground petroleum storage tanks, 90 tons of drums, and 10,000 tons of grossly contaminated soil on the westernmost Aleutian Island of Attu. This site presented a number of challenges such as adverse weather, limited access, unexploded ordnance concerns, and complex cultural and biological considerations. In addition to planning and conducting the remediation of two gross hazards, the USACE team traveled nearly 1,000 miles on foot, using small wheeled vehicles to develop a comprehensive contaminant survey of a 70-year-old military site which was both a battlefield and a military encampment housing up to 7,000 personnel and their equipment during WWII, through the Cold War, and ending with a manned Long Range Navigation (LORAN) station for the US Coast Guard.

As a current National Historic Landmark, National Wildlife Refuge, and Designated Wilderness, with adjacent Threatened and Endangered Species, the coordination and planning to mitigate impacts to cultural or historic sites and features, as well as unintended damage to the wildlife or environment, involved multiple agencies and took place over several years. This presentation will review the best practices used to accomplish the 2016 fieldwork and some lessons learned.



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WASTE TRACK – CO-PRESENTERS 2

Dr. Andrew L. Sayers-Fay, Environmental Consultant, Chemist and Remediation Advisor, U.S. Agency for International Development

BIO



Dr. Sayers-Fay recently completed a two-year assignment as an Environmental Remediation Advisor in Vietnam for the U.S. Agency for International Development, where he oversaw remediation of dioxin contamination from Agent Orange use during the Vietnam/America war.

Previously, Dr. Sayers-Fay was the Deputy Director for the Alaska Department of Environmental Conservation, Division of Water. He has also worked as an environmental consultant addressing water quality permitting and compliance. He has a Doctorate in Agricultural & Environmental Chemistry from the University of California, Davis and a Bachelor of Science in Chemistry from Georgetown University. Dr. Sayers-Fay's areas of interest include environmental fate and transport of

contaminants, remediation, water quality standards, and water & wastewater treatment and permitting.

His wife, Kimberly, is an Alaska-based Assistant U.S. Attorney working on assignment for the U.S. Embassy in Bogotá, Colombia where they currently live with their three children.

ABSTRACT

Bilateral Collaboration and Joint Management for the Environmental Remediation of Dioxin Contamination at Danang Airport, Vietnam

At the request of the Government of Vietnam (GVN), the U.S. Government agreed to clean up dioxin contamination at Danang Airport remaining from Agent Orange use in the U.S.–Vietnam War. The Project will eliminate the risk of dioxin exposure to the surrounding community while developing Vietnamese capacity for environmental assessment and remediation activities. The Project is being jointly implemented by the United States Agency for International Development (USAID) and the Vietnamese Ministry of National Defense (MND) through a memorandum of understanding signed in May 2011 after site characterization, environmental assessment, and selection of In-Pile Thermal Desorption® (IPTD) as the treatment strategy. MND's Air Defense Air Force



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Command (ADAF) is the project owner and is responsible for ensuring the Project meets all applicable Vietnamese environmental regulations and agreed upon cleanup requirements. USAID is responsible for the design, procurement, and oversight of U.S. contractors performing the work and engaging with GVN stakeholders to maintain effective partnerships. In May 2015, the Project confirmed successful treatment of approximately 45,000 cubic meters of dioxin-contaminated material in the first of two phases, enabling the beneficial reuse of the area for expansion of the Da Nang International Airport. The second phase of approximately 45,000 cubic meters of dioxin-contaminated soil and sediment has reached treatment temperature. This Project, planned for completion by June 2018, has required adaptive management and dynamic teamwork between USAID and ADAF further strengthening the bilateral relationship and helping to turn an issue of contention into one of collaboration.

Colonel Dau Xuan Hoai, Deputy Director, Centre for Environmental Treatment Technology, Vietnam

BIO



Colonel Dau Xuan Hoai is the Deputy Director of the Center for Environmental Treatment Technology within the Vietnamese Ministry of National Defense. He has been involved with studying and applying techniques for cleaning up soil decontaminated by Agent Orange in Bien Hoa and Da Nang airbases since 1997. Colonel Hoai holds a Master's degree in Environmental Chemistry from the University of Wollongong, Australia and has received training on the Chemical Weapons Convention.

ABSTRACT

An Overview of Agent Orange Contamination and Remediation Process at Da Nang Airport of Vietnam

Da Nang Airbase is currently one of the three dioxin hot-spots in Vietnam. Many studies of environmental remediation has been carried out. Recently, the cooperation between the USAID and the Vietnam Ministry of Defense (MOD) to clean up large quantities of contaminated soil has achieved remarkable results.



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Many studies have shown that soil and sediment samples have high concentrations of dioxin, exceeding permission limits set by Vietnamese Government and international standards. According to a study conducted by the USAID, dioxin concentrations of contaminated soil varies from 6,820ppt-TEQ to 365,000ppt-TEQ. An investigations co-conducted in January and April 2009 by Hatfield Consultants and the Office of the Vietnam National Steering Committee 33 indicates that: the concentrations of dioxins are extremely high in the northern end of Da Nang Airport and refer as a significant dioxin "hot spot" with TCDD concentrations in soil ranged from 858pp-TEQt to 361,000ppt-TEQ and in sediment varies from 674 to 8,580ppt-TEQ.

Since August 2012, the Vietnam MOD and the USAID kicked off the "Da Nang Environmental Remediation Project" by In-Pile Thermal Desorption (IPTD) technology with a total initial investment of \$ 41 million. The purpose of the project is to treat about 90,000m³ of soil and sediment on an area of approximately 19ha. The first phase ended in May 2016 with 45,000 m³ of soil and sediment was cleaned up. Results of analysis and monitoring showed that the treated soil had dioxin content lower than permitted by international and Vietnamese standards. The second phase was started on October 2016 which aims to decontaminate other 45,000m³ of soil and is expected to be completed by mid-2017. Also 60,000m³ of soils has dioxin concentration below 1,000ppt-TEQ will be loaded and compacted in a landfill.

The coordination between the US and Vietnamese governments has yielded satisfactory results in overcoming the consequences of the Vietnam war, demonstrating effective cooperation between the two countries. Hopefully, the efforts of two Governments and the international communities, other dioxin contaminated areas in Vietnam, such as Bien Hoa and Phu Cat airbase will soon be cleaned in the coming years.



WASTE TRACK – CO-PRESENTERS 3

Commodore Yahya Syed, Commander, Bangladesh Coast Guard

BIO



Commodore Yahya Syed, (C), BCGMS, ndc, afwc, psc, BN, joined the Bangladesh Navy as a cadet in 1981. After initial training at Britannia Royal Naval College, Dartmouth, England, he was commissioned into BN in 1983. He did his specialization course in Signal Communication from Karachi, Pakistan in 1993. He is a graduate of the Asia Pacific Centre for Security Studies Hawaii, USA. He completed his Command and Staff course from the College Interarmées de Défense, Paris, France, in 1997. He is an alumnus of the National Defence College, Mirpur, and possesses two Masters Degrees, in War Studies and Strategic Security Studies. He accredited his Masters of

Business Administration (MBA) degree from the Preston University, Wyoming, USA in 2001. He has held an equal number of important and challenging appointments, both, afloat and ashore. He has contributed to every facet of Bangladesh Navy; efficiently, and with an impeccable track record, from Operations, Policy and Plans to Human Resource Management and Administration, which remains as a silver lining in the annals of his service. He commanded a number of men of war including a British Frigate and one of the biggest Base BNS SHAHEED MOAZZEM and has performed various staff duties in the Naval Headquarters/Area Headquarters. He spent around two years as the Member Harbour and Marine of the Chittagong Port. He served as the Deputy Commandant of Defence Services Command and Staff College, Mirpur. He also served as the Chief Military Personnel Officer (CMPO) in UNAMID and UN Military Observer and Military Liaison Officer in the ONUCI in Ivory Coast. He is vastly travelled person who visited the USA, Canada, Australia, Mexico, UK, France, Germany, Italy, Switzerland, Sweden, Norway, Finland, Denmark, China, Egypt, Morocco, Malaysia, Austria, Hungary, Singapore, India, Saudi Arabia etc. A Freeman of the city of Dhaka, his spare time is dedicated to family activities although he occasionally finds space for a little golf, guitar and reading philosophical anthropology books.

Commodore Syed lives in Dhaka with his wonderful wife Fatema, a school Principal, and is the proud father of Zara and Zahin. He took over his current assignment as the Deputy Director General of Bangladesh Coast Guard on 7 July 2014. In the present appointment as the Deputy Director General, he has proficiently handled the conflicting demands in a continually enlarging charter of duties. Coastal Security, Search and Rescue, Pollution Control, coordination with Coastal States and various stakeholders have been his major thrust areas. He was promoted to his present rank in February 2012.

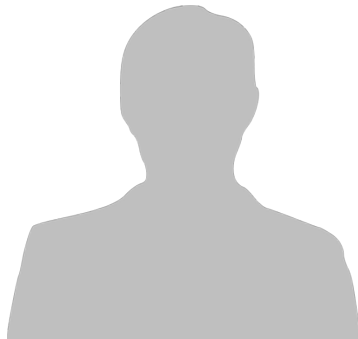


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Mr. Md. Alamgir from the Ministry of Environment, Bangladesh

BIO



Mr. MD Alamgir is currently the Joint Secretary and Director (Dhaka Division) of the Department of Environment in Bangladesh, which entails issuance of Environment Clearance Certificates, monitoring and compliance. His previous postings include Deputy Secretary in the Ministry of Education, Deputy Secretary in the Ministry of Home Affairs, and Senior Assistant Secretary in the Economic Relations Division under the Ministry of Finance. Mr. Alamgir holds a Master's in Public Policy (MPP) from Lee Kwan School of Public Policy, National University of Singapore, as well as a graduate degree in Substance

Abuse, Drug Control and Rehabilitation Policy from Johns Hopkins University, under the Hubert Humphrey Fellowship.

ABSTRACT

Oil Spillage in Sundarban: A Serious Wakeup Call

The 2014 Sundarbans oil spill was an oil spill that occurred on 9 December 2014 at the Shela River in Sundarbans, Bangladesh, a UNESCO World Heritage site. The spill occurred when an oil-tanker named Southern Star VII, carrying 350,000 litres (77,000 imp gal; 92,000 US gal) of furnace oil, was in collision with a cargo vessel and sank in the river. By December 17, the oil had spread over a 350 km² (140 sq mi) area. The oil spread to a second river and a network of canals in Sundarbans, which blackened the shoreline. The spill threatened trees, plankton, and vast populations of small fish and dolphins. The spill occurred at a protected mangrove area, home to rare Irrawaddy and Ganges dolphins. By 12 January 2015, 70,000 litres (15,000 imp gal; 18,000 US gal) of oil had been cleaned up by local residents, the Bangladesh Coast Guard, and the government of Bangladesh.



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ENERGY TRACK – THEME LEADER

Mr. Joel Neimeyer, Federal Co-Chair, Denali Commission

BIO



Joel Neimeyer serves as Federal Co-Chair of the Denali Commission, an innovative federal agency that is a federal-state partnership designed to provide critical utilities, infrastructure and support for economic development in Alaska. The Commission has been in existence since 1998 and delivers federal services in the most cost effective manner possible.

He was appointed in April 2014 by U.S. Commerce Secretary Penny Pritzker. He has 30 years experience as a civil engineer in planning, designing and constructing rural Alaska infrastructure projects.

He presently serves as a Board Member for the Anchorage Neighborhood Health Center, is Chair of the Municipality of Anchorage On-Site Technical Review

Board, and serves as a Council Member to the White House Council on Native American Affairs and the White House Council on Rural Affairs.



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ENERGY TRACK - PRESENTER 1

Mr. Forest Button, Manager, Project Development & Key Accounts, Alaska Village Electric Cooperative, USA

BIO



Forest Button is the manager of project development and key accounts, and manages the development of alternatives to diesel generation for AVEC. He also manages relationships with AVEC's largest customers and is the project manager for AVEC's many construction projects funded by various state and federal agencies.

Mr. Button has 25 years of experience in management and engineering. He has successfully negotiated contracts and managed projects throughout Alaska in various industries. He has worked for State and Federal agencies, private corporations, and been self-employed. He came to AVEC in 2012 as a contract project manager charged with

management of capital projects.

Mr. Button holds a Bachelor of Science degree from the University of Alaska Fairbanks, and is a Licensed Professional Land Surveyor in the state of Alaska.

ABSTRACT

Integrating Renewables in Rural Alaska

Alaska Village Electric Cooperative, Inc. (AVEC) is a non-profit electric utility serving residents in 57 locations throughout rural Alaska and covers the largest area of any retail electric cooperative in the world. AVEC is owned by those it serves. AVEC has more power plants than all other electric cooperatives in the State of Alaska combined. More than 150 diesel generators run a cumulative total of over 400,000 hours a year. That is equal to nearly 950 trips by diesel truck around the world each year, nearly 23,000,000 road miles. AVEC purchases more than seven million gallons of fuel annually, which is stored in bulk fuel tank farm facilities. As technology progresses, AVEC actively works with the State of Alaska and other agencies to explore alternative energy sources. Thirty-four wind turbines are installed in 11 communities with interties to four other communities. In order to fully utilize renewables, storage capacity must be integrated to stabilize power fluctuation and keep spinning reserve to a minimum. Grid bridging may be the answer.



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ENERGY TRACK - PRESENTER 2

Mr. David Lockard, P.E., Lead Engineer – Rural Energy, Alaska Energy Authority, USA

BIO



David Lockard has worked for AEA since 1994 managing the design and construction of bulk fuel tank farms, diesel powerhouses, and other energy projects in Alaska's rural villages. At various times he has managed Alaska's Bulk Fuel Tank Farm, Geothermal, Ocean and River Energy, and Solar Energy Programs. David is the Lead Engineer for AEA's Rural Energy Program, and holds a Master's Degree in Mechanical Engineering from the University of Wisconsin Solar Energy Lab. He is a licensed professional mechanical engineer in the State of Alaska (#ME-10021).

ABSTRACT

Modular Diesel Power Systems for Rural Villages

The Alaska Energy Authority (AEA) has been designing and constructing diesel powerhouses in rural Alaska villages since the early 1990's. Since the Denali Commission started funding these projects in 2000, AEA has built 50 powerhouses in rural Alaska. Over the years these facilities have evolved from stick-built buildings to custom-fabricated steel modules on heavy I-beams. The powerhouses are designed for initial operation and testing in Anchorage, which minimizes the time and expense of commissioning, and delivery by truck and barge to the final destination. These modules typically include high-efficiency diesel gensets with marine manifolds for optimal heat recovery, used oil blending systems, Supervisory Control And Data Acquisition (SCADA) systems that are accessible remotely by satellite dish or local internet, and automatic paralleling switchgear. The controls are designed to integrate renewables. Since fuel expense dwarfs capital cost and maintenance over the life of the powerhouse, the emphasis on fuel efficiency and heat recovery result in the lowest life cycle cost.



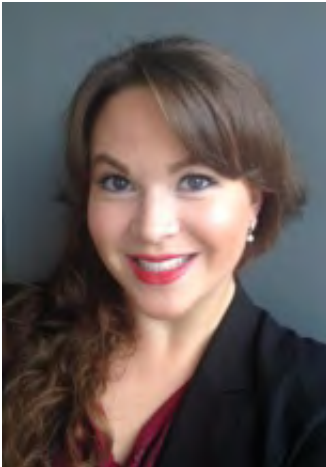
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ENERGY TRACK - PRESENTER 3

Ms. Jocelyn Fenton, Physical Scientist, Alaska District, U.S. Army Corps of Engineers

BIO



Ms. Fenton is a project manager and physical scientist for the US Army Corps of Engineers, Alaska District. Her current projects involve environmental quality and compliance, rural transportation and infrastructure, and Arctic operations. Jocelyn holds a Bachelor of Science in natural science and a Master's degree in environmental engineering from the University of Alaska. She has a hands-on background from performing remote field studies and logistics, incident response, environmental compliance, and contaminated sites monitoring and rehabilitation.

ABSTRACT

Rural Mooring Points: A Simple Project Leads to Big Benefits

The Denali Commission's waterfront development program addresses ports, harbors, and other waterfront needs with a focus on improvements to regional ports and construction of barge landing and docking facilities. Commission projects are vital to improving the quality of life in rural Alaska and select projects have been executed by the U.S. Army Corps of Engineers-Alaska District (District) on behalf of the Commission since 2007. To date the Commission has funded 15 studies, 23 designs, 10 construction, and 2 other technical services projects for a program total of over \$25M.

In 2009 the District completed an analysis of barge mooring and fuel/freight transfer needs at Alaska's coastal and riverine communities. This work was undertaken because the Commission's transportation program had identified barge landing infrastructure improvements as a critical element in improving surface transportation in rural Alaska. One of the key improvements identified by this study was the installation of mooring points to provide for the safe and efficient transfer of fuel and other cargo from barges.

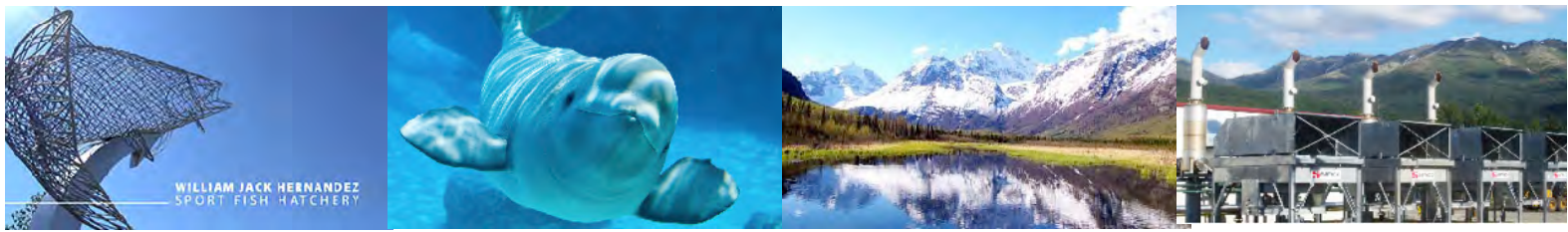
Mooring points typically consist of 12" diameter circular steel pilings driven approximately 30' into the ground with pile top modifications for mooring line attachments. Without stable and solid mooring points, barges would continue to push



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the bank with engine power during deliveries, increasing erosion impacts, instability, and fuel consumption. With established mooring points barges can firmly anchor to the shore, allowing barges to shut off engines while transferring cargo, limiting erosion impacts, the possibility of fuel spills and lost cargo, and increasing fuel efficiency.



SITE VISIT CIRCUIT

Each participant will be assigned a van that will take them to the following stops on the Site Visit Circuit. At each stop there will be a tour and a discussion about the location and its significance to environmental security.

All vans will visit each site, but not necessarily in the order below to evenly distribute the visitor numbers.

William Jack Hernandez Sport Fish Hatchery

William Jack Hernandez was a non-commissioned officer stationed at Fort Richardson, and in 1957 he negotiated a cooperative agreement between the US Army, the Alaska Department of Fish and Game, and the Fort Richardson power plant, to allow the plant's cooling pond to be used as a fish hatchery on-base. Later, the William Jack Hernandez Sport Fish Hatchery (WJHSFH) was built in 2011 and was so named as a tribute to his pioneering fish hatchery program, which replenished lakes and streams on post and throughout the community. The Alaska Department of Fish & Game now operates the hatchery on land controlled by Joint Base Elmendorf-Richardson (JBER). Fish raised there are transferred to stock over 200 locations around Alaska, including military installations (JBER, Eielson, Greeley, and Fort Wainwright). This program allows biologists to protect wild populations of Chinook and Coho salmon, rainbow trout, and Arctic char by directing sport fishing towards stocked waters.

While the Fort Richardson Hatchery no longer produces fish, it supports the WJHSFH by providing winter storage of fish stocking equipment, housing for critical after hours personnel, and shop space for special projects.

Eagle River Flats and Cook Inlet Beluga Whale

Eagle River Flats (ERF) is an 865-hectare estuarine wetland within JBER, which is important for both natural resource management and military training as a munitions impact area. High waterfowl mortalities at ERF were first noted in the early 1980s and were caused by ducks and swans ingesting white phosphorous particles as debris from artillery ammunition. In 1990, the Army stopped using white phosphorous in training rounds on wetlands nationwide, as a result of these ERF findings. The Army remediated the shallow ponds at ERF and met its 1% waterfowl mortality rate goal by 2006 ahead of schedule.

ERF also provides habitat critical to the Cook Inlet Beluga Whale (CIBW), an endangered species. JBER has conservation measures in place to protect the whales' habitat and prey, measures which include educating JBER residents and visitors on the presence and protection of the endangered species, as well as developing methods that better identify beluga whale presence. Currently the Army conducts winter-only training at ERF, which was implemented to complete the white phosphorus removal. Furthermore, the Army is developing an Environmental Impact Statement (EIS) to analyze the impacts of potential year-round firing at ERF.

Landfill Gas Power Plant

The JBER Landfill Gas Generating Plant is a partnership between the Municipality of Anchorage Solid Waste Services Department, Doyon Utilities, and the Department of Defense to beneficially use landfill gas produced by the Anchorage Regional Landfill. The project uses landfill gas, a byproduct of waste decomposition in the landfill, to fuel five Jenbacher JGS 420 internal combustion generating units that produce 7 Megawatts of electricity. The electricity is delivered to the Fort Richardson side, providing 50% of its power requirements in the winter and 100% in the summer. In addition to an estimated energy cost savings of \$73 million over 50 years, the power plant and standby generators can provide complete energy independence for JBER-Richardson in an emergency. The project team is working on interconnectivity to deliver power to the Elmendorf side.

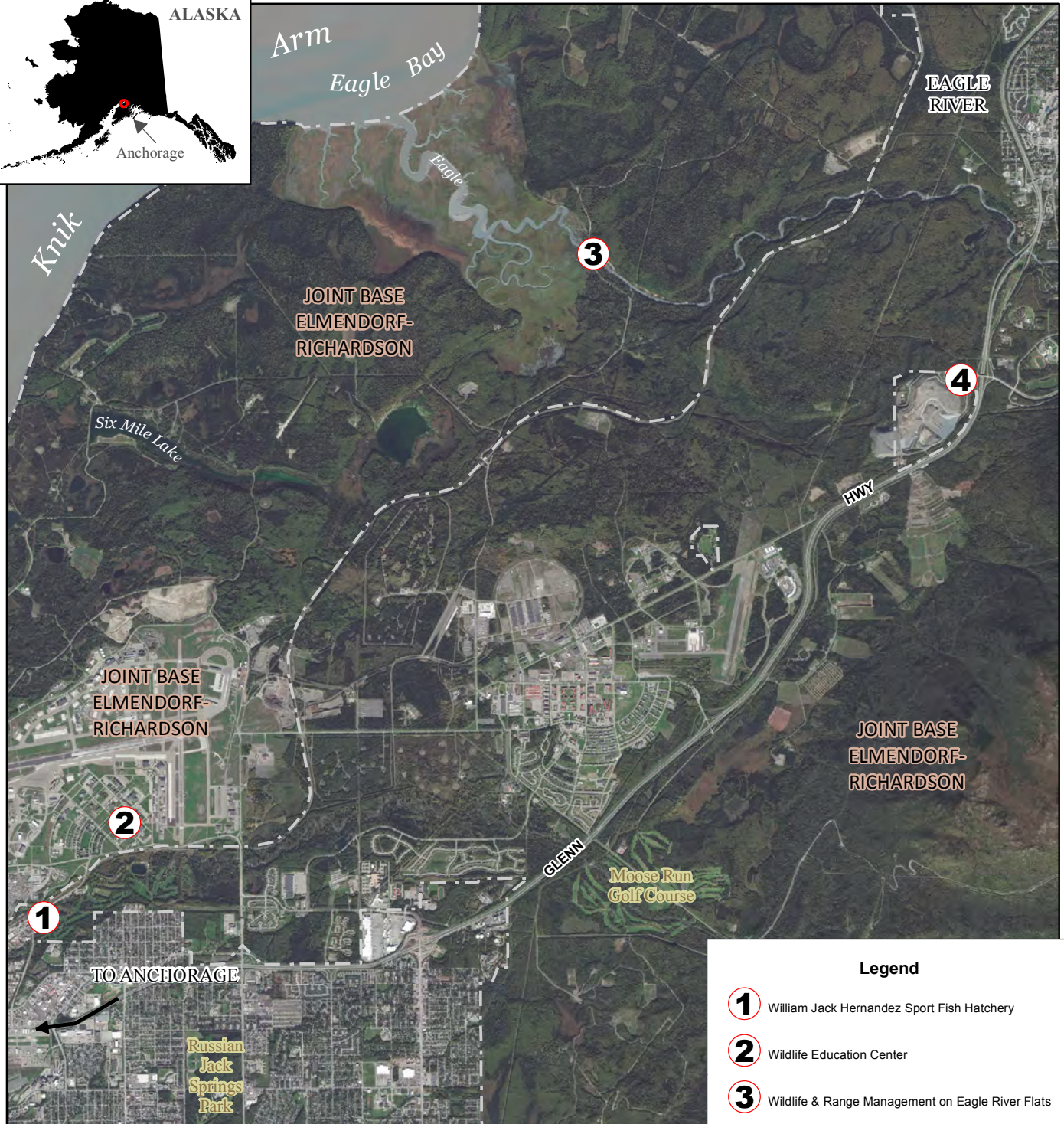
Wildlife Education Center

The JBER Wildlife Education Center (WEC) on Joint Base Elmendorf-Richardson houses over 200 wildlife specimens from around the state and gives participants an opportunity to see the diversity of wildlife that JBER's Natural Resources Management Program is responsible for protecting. The specimens include black and brown bears, moose, wolves, bald eagles, rainbow trout, and five species of Pacific Salmon, among others. During this stop, participants can also learn how JBER land is managed under multiple uses, through the permitted recreational hunting and fishing open to the public on base.



SITE MAP

Pacific Environmental Security Forum



Legend

- 1** William Jack Hernandez Sport Fish Hatchery
- 2** Wildlife Education Center
- 3** Wildlife & Range Management on Eagle River Flats
- 4** Anchorage Landfill and Methane Gas Power Plant
- Installation Boundary

Image Date: 30 June 2016
 Imagery Source: DigitalGlobe
 Map Date: 19 April 2017
 Map File: USA_PESF_site_visit_map.mxd



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 Kilometers

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PACIFIC
ENVIRONMENTAL
SECURITY FORUM

DAY 3

Sponsored by: U.S. Pacific Command

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AGENDA

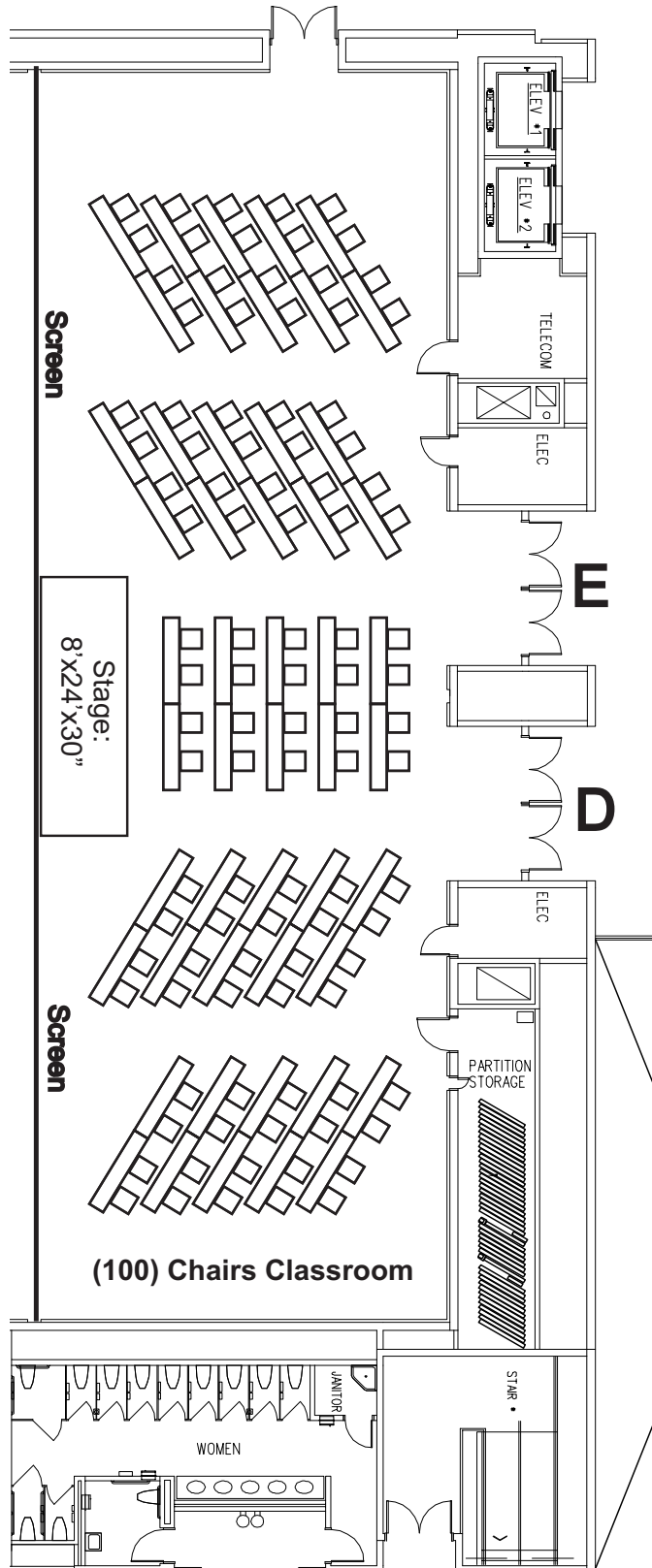
DAY 3 - THE MILITARY & BIODIVERSITY CONSERVATION



THURSDAY, 11 MAY 2017

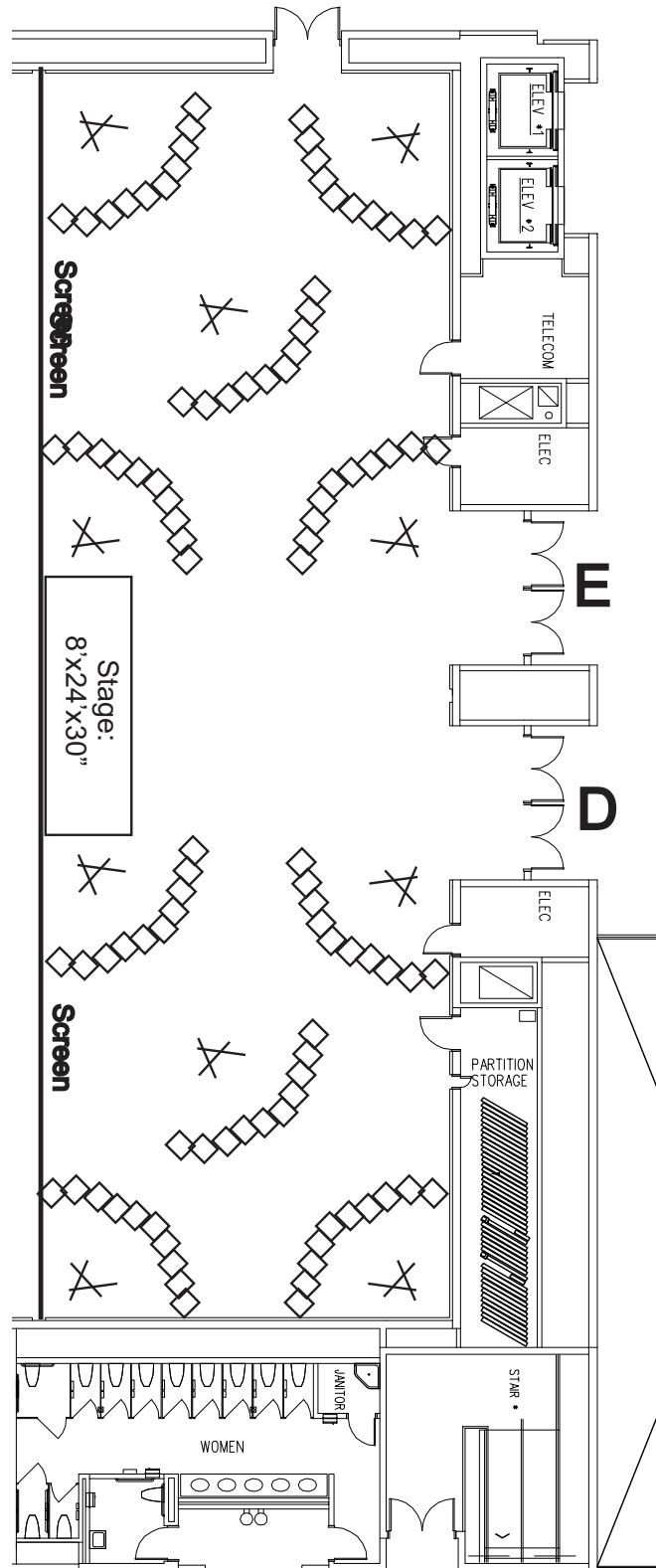
0 9 0 0 - 0 9 0 5	Administrative Remarks
0 9 0 5 - 0 9 1 5	Introduction to Natural Resources Management & Biodiversity Conservation Theme <i>Colonel Frank A. Flores, Commander, U.S. Pacific Air Force Regional Support Center</i>
0 9 1 5 - 0 9 3 5	China Customs Practice in Fighting against Wildlife Trafficking <i>Mr. Zhang Xiaohui, Director of International Enforcement Cooperation Division, Anti-Smuggling Bureau (ASB) of General Administration of China Customs (GACC), China</i>
0 9 3 5 - 0 9 5 5	Natural Resources Management on Military Lands in Australia <i>Brigadier Craig Dobson, Director General Support (J1/J4), Headquarters Joint Operations Command (DGSPT HQJOC), Australia</i>
0 9 5 5 - 1 0 1 5	The Role of Department of Wildlife and National Parks, Peninsular Malaysia in Preventing Wildlife Trafficking <i>Mr. Abdul Kadir bin Abu Hashim, Director General of Wildlife Department and National Parks of Peninsular Malaysia (DWNP)</i>
1 0 1 5 - 1 0 4 5	BREAK
1 0 4 5 - 1 1 0 5	Palau National Marine Sanctuary <i>Honorable F. Umiich Sengebau, Minister of Natural Resources, Environment and Tourism, Republic of Palau</i>
1 1 0 5 - 1 2 0 0	Natural Resources Management & Biodiversity Conservation Panel Session <i>Moderated by Col Frank A. Flores, Commander, U.S. Pacific Air Force Regional Support Center</i>
1 2 0 0 - 1 3 0 0	LUNCH <i>(Video 3: U.S. Department of Defense "Legacy" Natural Resource Management Program)</i>
1 3 0 0 - 1 3 1 5	Biodiversity Work Group Activity Introduction <i>Mr. Justin Pummell, Geographer, U.S. Army Corps of Engineers</i>
1 3 1 5 - 1 4 1 5	Biodiversity Activity
1 4 4 5 - 1 5 1 5	BREAK
1 5 1 5 - 1 6 1 5	Biodiversity Activity (Continued)
1 6 1 5 - 1 6 5 5	Biodiversity Activity Results
1 6 5 5 - 1 7 0 0	Administrative Remarks <i>CPT Amanda Plachek, State Partnership Program Coordinator, Alaska National Guard</i>

Tikahtnu D/E - AM Set
Thursday, May 10, 2017

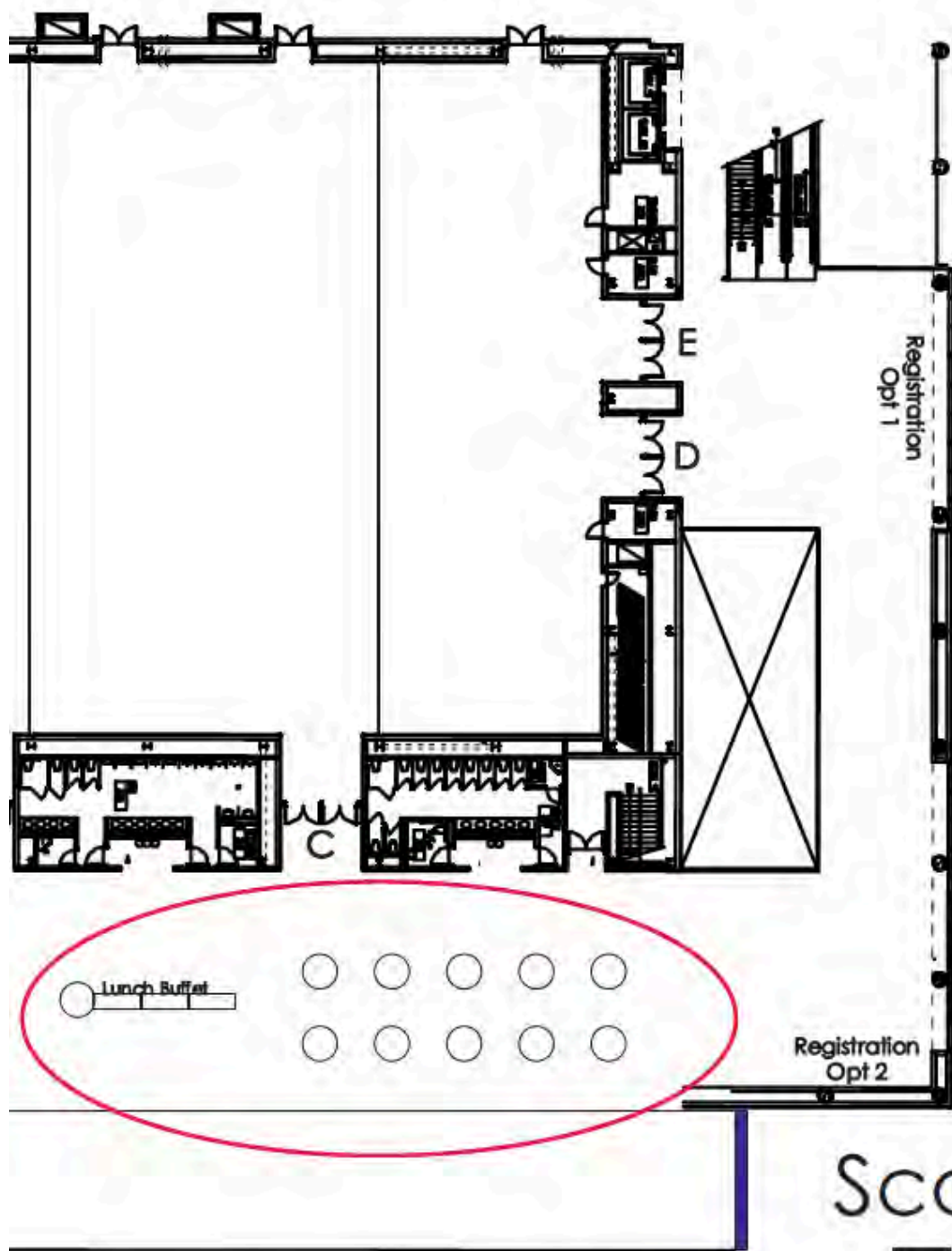


Dena'ina Tikahtnu Banquet Hall
3rd Floor

Tikahtnu D/E - PM Set
Thursday, May 10, 2017



Dena'ina Tikahtnu Banquet Hall
3rd Floor



Tikahtnu Foyer & Terrace
Lunch Set
3rd Floor



Speaker Bios and Abstracts

THEME LEADER

Colonel Frank A. Flores, Commander, U.S. Pacific Air Force Regional Support Center



Colonel Frank A. Flores is the Commander, Pacific Air Forces Regional Support Center, Joint Base Elmendorf-Richardson, Alaska. He is responsible for 43 remote sites across Alaska and the Pacific Theater with a total asset value of \$7.1 billion, providing first-line radar, airfield operations, air operations weapon system, communications, engineering, environmental, and logistics support for Eleventh Air Force, Alaskan NORAD Region, and Pacific Air Forces. He is the installation commander for 1 air station, 2 forward operating locations, and 18 remote radar sites supporting air sovereignty, war readiness missions, and homeland defense. He implements government-to-government consultation with Alaska native

tribes and works directly with more than 50 communities across the great state of Alaska.

Colonel Flores is a native of Guam and graduated from the United States Air Force Academy in 1992. He is a career logistics readiness officer and his assignments include base level, Major Command, Joint, Air Staff and Office of the Secretary of Defense logistics readiness positions.

He commanded the 724th Air Mobility Squadron from 2003 to 2005 and the 3rd Aerial Port Squadron from 2008 to 2010. In 2010, he was selected to be the Deputy Commander, 43d Airlift Group, Pope Air Force Base, N.C.

Colonel Flores' operational assignments include 3 tours in Pacific Air Forces and 3 tours in Air Mobility Command. His staff duty assignments include joint duty assignments in the Office of the Secretary of Defense and Headquarters U.S. European Command, Headquarters Air Force, Headquarters Air Education and Training Command, and the Air Force Personnel Center.

Colonel Flores deployed to Bagram Airfield, Afghanistan, in 2009 where he stood up the first Expeditionary Aerial Port Squadron. He also deployed to Cape Verde and Rwanda in support of NATO and African Union Mission in Sudan operations in 2006.



Pacific Environmental Security Forum Biographies & Presentation Abstracts

DAY
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PRESENTER 1

Mr. Zhang Xiaohui, Director of International Enforcement Cooperation Division, Anti-Smuggling Bureau (ASB) of General Administration of China Customs (GACC), China

BIO



Mr. ZHANG Xiaohui, born on February 10, 1975, is currently the Director of International Enforcement Cooperation Division, Anti-Smuggling Bureau (ASB) of General Administration of China Customs (GACC). He obtained a Bachelor Degree of Mathematics and a Master Degree of Economic Law in Peking University, China and joined ASB in 1999. He served as a customs attaché for six years in Brussels where he was responsible for enforcement cooperation with customs administrations of EU members and World Customs Organization.

ABSTRACT

China Customs Practice in Fighting against Wildlife Trafficking

The presentation will be in three parts. Part one will demonstrate the statistics and achievements China Customs had in recent years combating wildlife trafficking. Part two focuses on the effective methodology adopted and problems we identified. Part three will call for closer international cooperation in fighting against wildlife trafficking.



Pacific Environmental Security Forum Biographies & Presentation Abstracts

DAY
3

PRESENTER 2

Brigadier Craig Dobson, Director General Support (J1/J4), Headquarters Joint Operations Command (DGSPT HQJOC), Australia

BIO



Brigadier Craig Dobson, AM, CSC was born in Shepparton, Victoria in 1970 and completed a Bachelor of Commerce at Deakin University before entering RMC Duntroon in January 1991. Brigadier Dobson was commissioned into the Royal Australian Army Ordnance Corps in June 1992.

Brigadier Dobson's career has been characterized by command and staff appointments in logistics and career management roles. His formative experiences included postings to 2nd Field Supply Battalion, 3rd Brigade Administrative Support Battalion and Army Logistic Training Centre. These experiences were further developed through posting to the 1st Battalion, The Royal Australian Regiment as the Second-in-Command of Administration Company, Aide-de-Camp to the Support Commander-Army and culminated in promotion to Major

and appointment initially as the Battalion Operations Officer, and then Officer Commanding, 2nd Field Supply Company, 10th Force Support Battalion (10 FSB).

Brigadier Dobson attended Australian Command and Staff College in 2005 and was subsequently posted to the Directorate of Officer Career Management-Army (DOCM-A) as Career Advisor Ordnance. This posting marked a transition to more advanced command and staff appointments including the Senior Officer Manager – Army (2007-08) within DOCM-A, Commanding Officer 10 FSB (2009-10) and as the SO1 Domestic Commitments (2011) and Chief of Staff (2012) both within Military Strategic Commitments (MSC) Branch. Prior to attending the Defence and Strategic Studies Course in 2016, he was the Director of Officer Career Management – Army (November 2012 to October 2015). Brigadier Dobson was promoted to his current appointment as Director General Support (J1/4), HQ Joint Operations Command in December 2016.

While Commanding Officer 10 FSB, Brigadier Dobson deployed to Op SLIPPER to command Force Support Unit – 2 (July 2009 to April 2010) and when a sub-unit commander, he deployed to Op ANODE as the Officer Commanding of the Force Support Squadron (November 2004 to March 05). Brigadier Dobson has also served as a Military Observer and Operations Officer within the Observer Group Golan - Damascus element of the United Nations Truce Supervision Organisation (June 2001 until July 2002).



Pacific Environmental Security Forum Biographies & Presentation Abstracts

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Brigadier Dobson holds post-graduate qualifications in Management (Defence Studies) from the University of Canberra and in Engineering (Integrated Logistics Management) from the Royal Melbourne Institute of Technology. In the Queen's Birthday honours list of 2016, Brigadier Dobson was appointed a Member of the Order of Australia and in 2012 he was awarded a Conspicuous Service Cross. He has also been awarded a Chief of Army Commendation and a Commander Australian Theatre Commendation. He is married to Lisa and his leisure interests include travel, reading, snow skiing and bush-walking/trekking.

ABSTRACT

Natural Resources Management on Military Lands in Australia in the Age of Consequences

"Higher temperatures, increased frequency and intensity of extreme weather events will influence all operational activities and contingency arrangements." (Chief of Joint Operations)

The Australian Defence Force (ADF) needs different training areas to exercise the full suite of ADF warfighting capabilities. Defence manages approximately 100 training areas located in all states and territories. There are vast distances between them and at the same time limited infrastructure. The training area estate is extensive, covering a land area of over 30,000 km². They are also a significant national asset, comprising important environmental values, ecological systems and heritage assets. As the custodian of the environment upon which it operates, Defence is committed to responsibly managing its natural assets and meeting its environmental obligations.

Defence will need to make changes to training on, and management of the Defence estate to continue to generate force options and adapt to a changing climate. Adaptation will be key to meeting the challenges of climate change. Adaptation will require the ADF to change how, where and when training objectives are met.

Climate changes including cyclone (hurricane) intensity/frequency and distribution, heat impacts in northern Australia as well as hotter/drier conditions in the southern states and increased frequency of wildfire and ocean warming will drive adaptation. Inundation of coastal areas and storm action will disrupt training and redirect ADF assets to Defence assistance to the civil community more frequently.



Pacific Environmental Security Forum Biographies & Presentation Abstracts

DAY
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PRESENTER 3

Mr. Abdul Kadir bin Abu Hashim, Director General of Wildlife Department and National Parks of Peninsular Malaysia (DWNP)

BIO



Abdul Kadir is a keen hands-on man in the field of wildlife conservation, with extensive experience working in the tropics. Abdul Kadir has etched a career at the Department of Wildlife and National Parks (DWNP or PERHILITAN) since 1992 as a research officer working on Sumatran Rhino field research. Born and raised in the historical town of Taiping in Perak, Malaysia, Abdul Kadir received his BSc in Forestry Management from Universiti Putra Malaysia and MSc. in Biodiversity and Conservation from the University of Leeds, United Kingdom.

Abdul Kadir has been blessed with opportunities to travel to many parts of the world for trainings, meetings and seminars related to wildlife conservation, research and enforcement. A leader who gets along well with all his work mates, Abdul Kadir has served as Superintendent of Taman Negara National Park, Director of PERHILITAN for the state of Perak as well as Director of Enforcement Division before taking on the responsibility of Deputy Director General and now Director General since August 2016. Abdul Kadir is very passionate about enforcing wildlife laws and combating wildlife crime and has been instrumental in raising the profile of PERHILITAN through various successful attempts to foil international smuggling and wildlife crimes in Malaysia. He is also known to be a man of high integrity who encourages working together with stakeholders to achieve better outcomes and welcomes non-conventional approaches to wildlife conservation. Being a field man, he is an advocate of healthy lifestyle and engages in sports such as badminton, volleyball and exercise in gym to keep fit.



ABSTRACT

The Role of Department of Wildlife and National Parks, Peninsular Malaysia in Preventing Wildlife Trafficking

Wildlife trafficking is driven by high profit margins and in many cases, the high prices paid for rare species. Nowadays, wildlife crime is a big business and run by international networks. The Department of Wildlife and National Parks (DWNP), Peninsular Malaysia has undertaken several measures to sustain wildlife management by enforcing the Wildlife Conservation Act 2010 [Act 716]. In order to address sustainable wildlife management, various enforcement efforts undertaken by the department i.e. enhancement of the Wildlife Crime Unit (WCU) for additional regional enforcement activities to further strengthen enforcement activities. A new Intelligence Unit is formed to enhance networking and intelligence gathering in curbing crimes related to wildlife. At the same time, the International Trade in Endangered Species Act 2008 [Act 686] has been enforced to deter the international illegal trade and smuggling of wildlife species.

To capitalize on the utilization of forensic technology, the DWNP has established the Wildlife Genetic Resource Bank (WGRB) under the Wildlife DNA Forensic Unit in 2007 to provide forensic evidence for court cases involving wildlife. Measures and strategies were taken to enhance the enforcement activities such as improving existing legislative and regulations, enhancement of law and enforcement activities, cooperation among enforcement agencies and NGOs, building capacity and trained staff in enforcement related activities, promote public awareness and education.



Pacific Environmental Security Forum Biographies & Presentation Abstracts

DAY
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PRESENTER 4

Honorable F. Umiich Sengebau, Minister of Natural Resources, Environment and Tourism, Republic of Palau

BIO



Since February 2013, Umiich Sengebau serves as Minister for the Ministry of Natural Resources, Environment and Tourism for the Republic of Palau. Prior to joining President Remengesau's administration, Mr. Sengebau served as the Deputy Director of Conservation for The Nature Conservancy- Micronesia Program. He lead the implementation of The Conservancy's conservation programs within Micronesia Region including Republic of Palau, the US territories of Guam and CNMI, Federated States of Micronesia, and Republic of Marshall Islands. Mr. Sengebau holds a Master of Science degree in Environmental Science from University of Guam and received his Bachelor of Arts degree in Anthropology from University of Hawaii at Manoa.

His knowledge and practical experiences are in the areas of biodiversity conservation, environmental monitoring, impact assessments, and environmental planning and policy. Mr. Sengebau also worked as an environmental specialist for Dueñas & Associates, Inc firm preparing and conducting environmental impact assessment reports, biological baseline surveys and environmental monitoring for development projects in the U.S. territory of Guam from 2001-2002. Mr. Sengebau currently serves on the Palau Conservation Society Board. He also served on Palau Environmental Quality Protection Board (EQPB) from 2003 to 2009.

ABSTRACT

Palau National Marine Sanctuary

On October 28, 2015, President Remengesau signed a historic legislation protecting nearly 500,000 square km of Palau's waters and in the process making it the sixth largest fully protected area. The Palau National Marine Sanctuary designates 20 percent of the remaining Palau's waters as domestic fishing zone reserved for local fishermen and small-scale commercial fisheries with limited export. This transformation of Palau's exclusive economic zone (EEZ) will take place over a five-year period, during which the number of licenses sold to foreign commercial vessels will be decreased annually. The marine sanctuary strengthens Palau's efforts to prevent illegal fishing by significantly tightening rules for vessels passing through Palau's waters. It requires



Pacific Environmental Security Forum Biographies & Presentation Abstracts

**DAY
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expeditious passage of non-licensed fishing boats through the EEZ, requiring vessel monitoring systems (VMS) on all ships, stowage of fishing gears and stronger reporting requirements. The law makes it easier to identify and stop poaching because the restriction on commercial fishing simplifies detection. Furthermore, the initiative by the Government of Palau presents a comprehensive vision for Palau's future development, and the management of its marine resources. It brings important global recognition and strong branding opportunities for Palau's eco-tourism industry, and more broadly for the eco-label 'Pasifikal' that belongs to the Pacific Island States who are Parties to the Nauru Agreement (PNA). It sets an important global benchmark for conservation and responsible management, and provides a critical contribution to global biodiversity and conservation targets.

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PACIFIC
ENVIRONMENTAL
SECURITY FORUM

DAY 4

Sponsored by: U.S. Pacific Command

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AGENDA

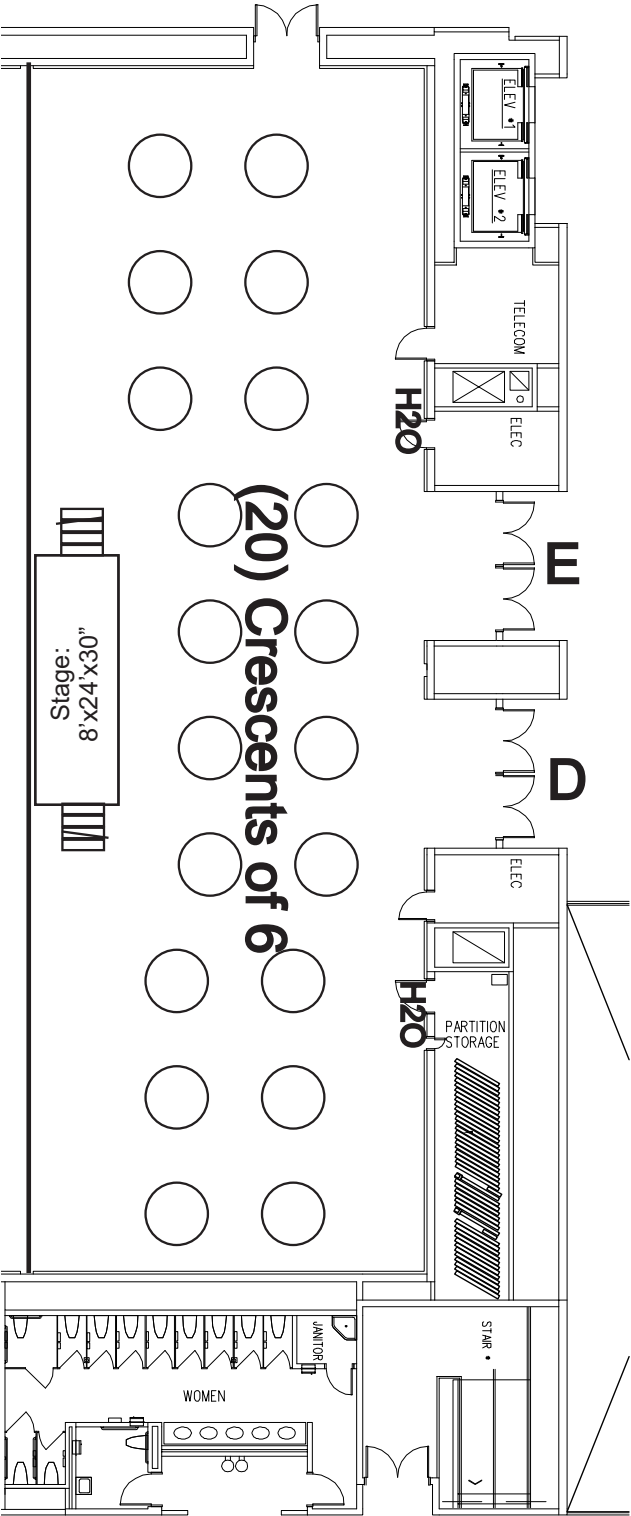
DAY 4 - REGIONAL PROJECT COLLABORATION



FRIDAY, 12 MAY 2017

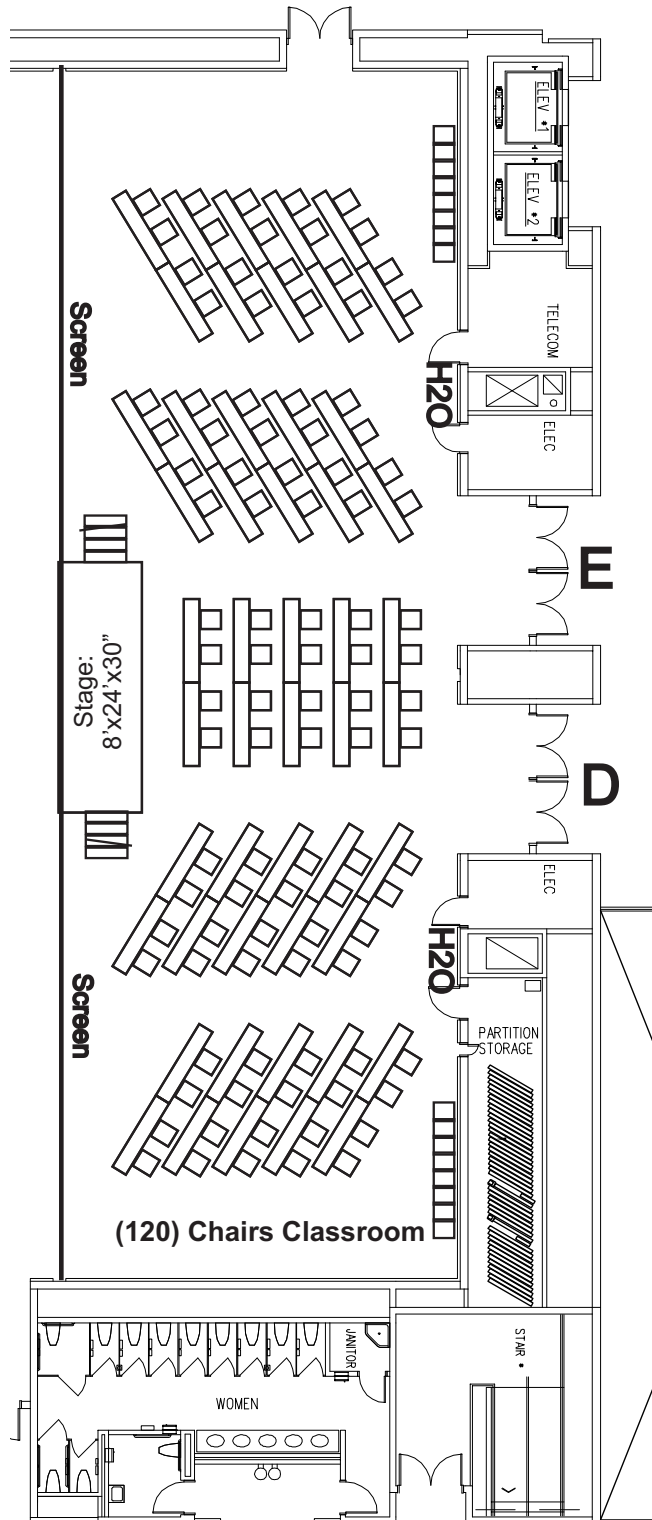
0 9 0 0 - 0 9 0 5	Administrative Remarks
0 9 0 5 - 0 9 2 0	Project Collaboration Introduction and Process Overview <i>Mr. Christopher Sholes, Environmental Program Manager, US Pacific Command</i>
0 9 2 0 - 1 0 2 0	Project Collaboration Session 1: Brainstorming
1 0 0 0 - 1 0 4 0	Project Collaboration Session 2: Idea Prioritization & Detailing
1 0 4 0 - 1 1 1 0	BREAK
1 1 1 0 - 1 2 0 0	Project Collaboration Outbrief
1 2 0 0 - 1 3 0 0	LUNCH (Video 4: Attu Environmental Cleanup)
1 3 0 0 - 1 4 1 5	Environmental Security Forum After-Action Review by Country <i>Moderated by Col Mike Matheis, Civil Engineer, US Pacific Command, United States of America</i>
1 4 1 5 - 1 4 3 0	Participant Evaluation Forms
1 4 3 0 - 1 5 0 0	BREAK
1 5 0 0 - 1 5 1 5	Closing Ceremony Comments by: <i>Ambassador Bulgaa Altangerel, Mongolian Ambassador to the United States of America</i> and <i>Lieutenant Governor Byron Mallott, State of Alaska, USA</i>
1 5 1 5 - 1 5 4 5	Certificate and Photo Distribution

Tikahtnu D/E AM Set
Friday, May 12, 2017

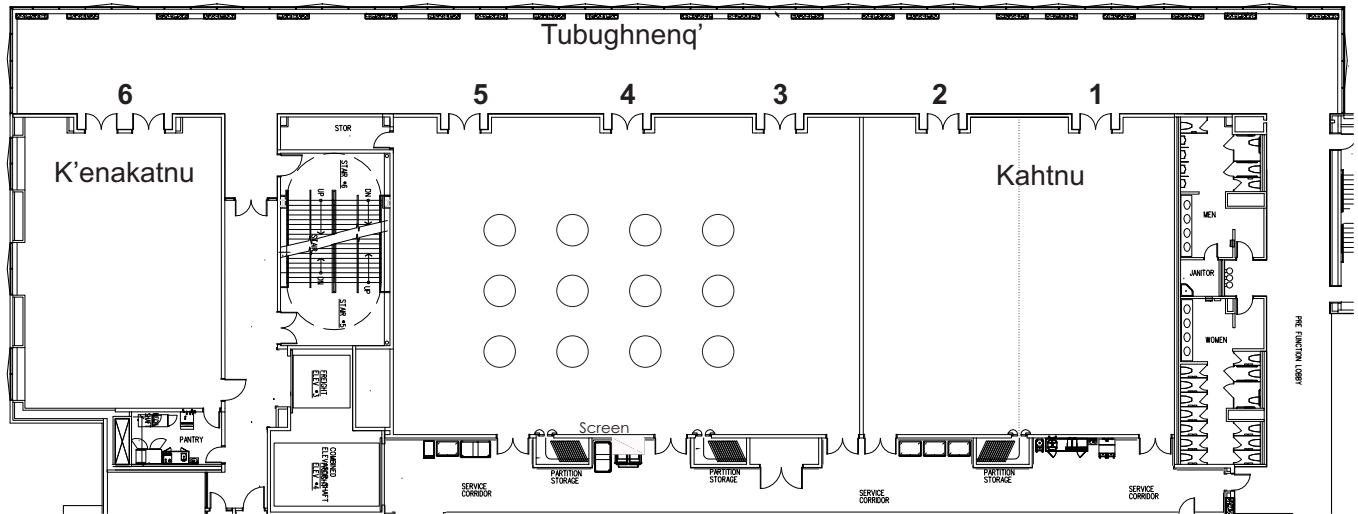


Dena'ina Tikahtnu Banquet Hall
3rd Floor

Tikahtnu D/E - PM Set
Friday, May 12, 2017



Dena'ina Tikahtnu Banquet Hall
3rd Floor



Meeting Room Level

Lunch Set

2nd Floor

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Pacific Environmental Security Forum Moderator Biographies

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Speaker Bios and Abstracts

Project Collaboration Introduction and Process Overview

Mr. Christopher Sholes, Environmental Program Manager, US Pacific Command, United States of America

BIO



Chris Sholes is the Environmental Security Program Manager within the USPACOM Engineering Division. His duties include overseeing environmental compliance for bilateral exercises (e.g. Talisman Saber), and planning the Pacific Environmental Security Conferences and international environmental workshops. He also monitors environmental Impact assessments developed by the service components and coordinates projects with State of Hawaii offices and others on environmental matters. His previous experience includes project management of various environmental remediation projects throughout Hawaii and the Pacific including soil and water remediation and UXO clearance in Saipan, Guam, Japan and Korea, Palmyra and other remote islands. He has five degrees

including two from the London School of Economics in International Relations and Economics and an MS in Systems Engineering from the Naval Postgraduate School. He is a certified contracts manager (CPCM) and certified project manager (PMP) from the respective US national certifying organizations.

Since its inception in 2010 he has developed the Environmental Security Program as a means for the U.S. Army Corps of Engineers, IWR, 130th Prime Power and other DoD components to engage internationally and innovatively, furthering the USPACOM engagement strategy to enhance partner nation resilience, capacity building, facilitate interoperability, and build trust and access for occasions of mutual benefit.

The goal of the USPACOM ENSEC Engagement Program, incorporating the Commander USPACOM's lines of operation, is to strengthen relationships and partner-nation capacity development. This program, as part of the Defense Environmental International Cooperation (DEIC) program, is an effective and cost-efficient way to also support the SECDEF's Security Cooperation Guidance goals of: (i) Build defense relationships that promote specific U.S. security interests, (ii) Develop allied and friendly military capabilities and willingness for coalition operations with the U.S. military, and (iii) Improve force interoperability.

From the Pacific Environmental Security Conference series, USPACOM has spun-off oil spill response workshops in South and Southeast Asia, is planning an SVP approach to



Pacific Environmental Security Forum Moderator Biographies

**DAY
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waste management solutions, has funded alternative energy solutions to remote location, and established environmental stewardship practices with Australia and other partner nations.



Pacific Environmental Security Forum Moderator Biographies

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Environmental Security Forum After-Action Review by Country

Moderated by Col Mike Matheis, Civil Engineer, US Pacific Command, United States of America

BIO



Colonel Michael T. Matheis is the United States Pacific Command Environmental Security Engineer at Camp Smith, Hawaii. Colonel Matheis entered active duty in 1990 as a distinguished graduate of the Air Force ROTC program. He first served as a contract programmer and Chief of Readiness, which included preparing Edwards AFB for earthquakes and Space Shuttle landings. He was then assigned to the 554th RED HORSE Squadron, executing contingency projects and planning throughout the Pacific theater. Next he led the bed down of the E-8C Joint STARS aircraft at Robins AFB and the development of Eagle Flag at the USAF Expeditionary Center.

As a Reservist, he was the 514th Civil Engineer Squadron Commander and then on staff at the pentagon, Air Mobility Command, Air Force Space Command and the Air Force Installation and Mission Support Center prior to his current assignment. He has two deployments in support of Operation ENDURING FREEDOM to Seeb AB, Oman and Kabul, Afghanistan.

As a civilian, Colonel Matheis was a construction manager based in Philadelphia. His projects included the Philadelphia airport international terminal, a 45-story high-rise condominium, and several interior renovations. In 2009 he became a federal civilian at Joint Base McGuire-Dix- Lakehurst working as a Project Manager, then Chief of Programming and later as Chief of Operations Engineering. He is currently the Deputy Director of the 787th Civil Engineer Squadron.



Pacific Environmental Security Forum Moderator Biographies

DAY
4

CLOSING CEREMONY

Ambassador Bulgaa Altangerel, Mongolian Ambassador to the United States of America

BIO



Ambassador Bulgaa Altangerel was appointed as ambassador of Mongolia to the United States in December 2012.

Born October 25, 1955, in Khovd Province, Mongolia, Altangerel earned a Master's degree in International Law at the Moscow Institute of International Relations in 1979, a Master's degree in Political Science at the Moscow Institute of Political Science in 1990, and a PhD in International Law at Ukraine's Kiev National Taras Shevchenko University in 2003.

Upon joining the Mongolian Ministry of Foreign Affairs in 1979, Altangerel had two years of desk work before taking a four-year stint at the Mongolian embassy in

Kabul, Afghanistan, from 1981 to 1985, which were some of the worst years of fighting between the Soviet-backed government of Babrak Karmal and the U.S.-backed rebels who eventually won and established the Taliban regime.

Altangerel served the next twelve years based in Ulan Bator, first at the Foreign Ministry as a member of the Inter-Governmental Commission on the inspection of state boundaries between Mongolia and the USSR from 1985 to 1988, then as foreign policy advisor to the Parliament of Mongolia, known as the State Great Hural, from 1990 to 1991, and finally as director of the Foreign Relations Division (later Department) of the Great Hural from 1991 to 1997, when he was also the responsible Secretary of the Mongolian Inter-Parliamentary Group. During Mongolia's transition from Soviet-style rule, Altangerel was involved in re-establishing the country's foreign policy apparatus for the new regime.

In 1997, Altangerel was assigned to his first ambassadorship, to serve as the first-ever Mongolian ambassador to Turkey, resident in Ankara and concurrently accredited to Bulgaria, Lebanon, Romania and Uzbekistan, from 1997 to 2003.

He spent five years (2007-2012) as a member of the board of directors of the Trust Fund for Victims of the International Criminal Court. From May 2008 to late 2012, Altangerel was ambassador to the United Kingdom, resident in London and concurrently accredited to South Africa, Ireland and Iceland.

Altangerel speaks Russian, English and Spanish. An enthusiastic equestrian, He and his wife, Erdenee Chuluuntsetseg, have three daughters.



Pacific Environmental Security Forum Moderator Biographies

DAY
4

Lieutenant Governor Byron Mallott, State of Alaska, USA

BIO



Governor Bill Walker and Lt. Governor Byron Mallott took office in December of 2014 as the first non-partisan administration in Alaska history. They are also the first Alaska-born Governor and Lt. Governor to serve together.

Byron Mallott was born in Yakutat, the ancestral home of his mother's Tlingit clan. Yakutat remains the voting residence of the Lt. Governor and his wife Toni, who was born and raised in the Athabascan village of Rampart on the Yukon River. Together they have raised their blended family of five children. Their eight grandchildren and one great-grandchild live close by – a true blessing.

Mallott entered public life as mayor of Yakutat at age 22 and has since held many positions of responsibility in the public, private and non-profit sectors. He has served as the state's first commissioner of community and regional affairs under Governor Bill Egan; president of the Alaska Federation of Natives; founding president of the First Alaskans Institute; trustee, chair and executive director of the Alaska Permanent Fund Corporation; and chair of the Nature Conservancy of Alaska.

In the private sector, Mallott has served as chair, president and CEO of Sealaska Corporation; served on the board of Alaska Air Group, and Bank of America subsidiary boards in Washington and Alaska; and as a director of the U.S. Federal Reserve Bank in San Francisco. Mallott has also been a small business owner and commercial fisherman. Mallott says his proudest service is as clan leader of the Tlingit Raven Kwaash Kee Kwaan Clan of Yakutat. The Mallott's spend as much time as possible with their children and grandchildren. They enjoy birding, hiking, fishing and boating in Alaska's incredible outdoors, and traveling to visit friends and discover new places.

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WALKING MAP

Pacific Environmental Security Forum

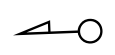
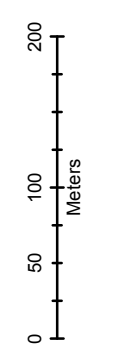
DISCLAIMER

Walking Time: 15-20 minutes

Distance: 895 meters (0.6 miles)



Image Date: 18 April 2017
Imagery Source: DigitalGlobe
Map Date: 21 April 2017
Map File: USA_PESF_walk_map.mxd



- Legend**
- 1** Inlet Towers
 - 2** Denaina Convention Center
 - 3** New Sagaya City Market
 - - - Walking Route