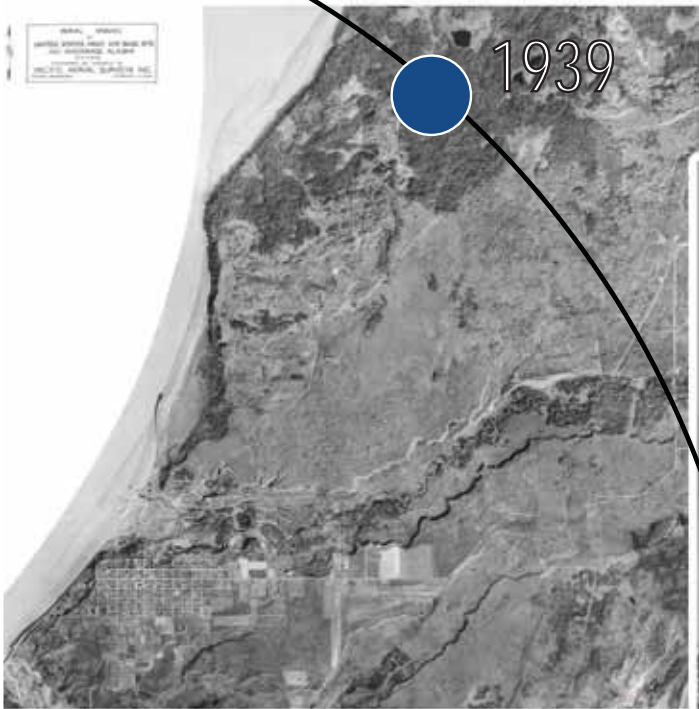


History of Alaska

Featuring Timeline Stories of the Anchorage Post of the Society of American Military Engineers

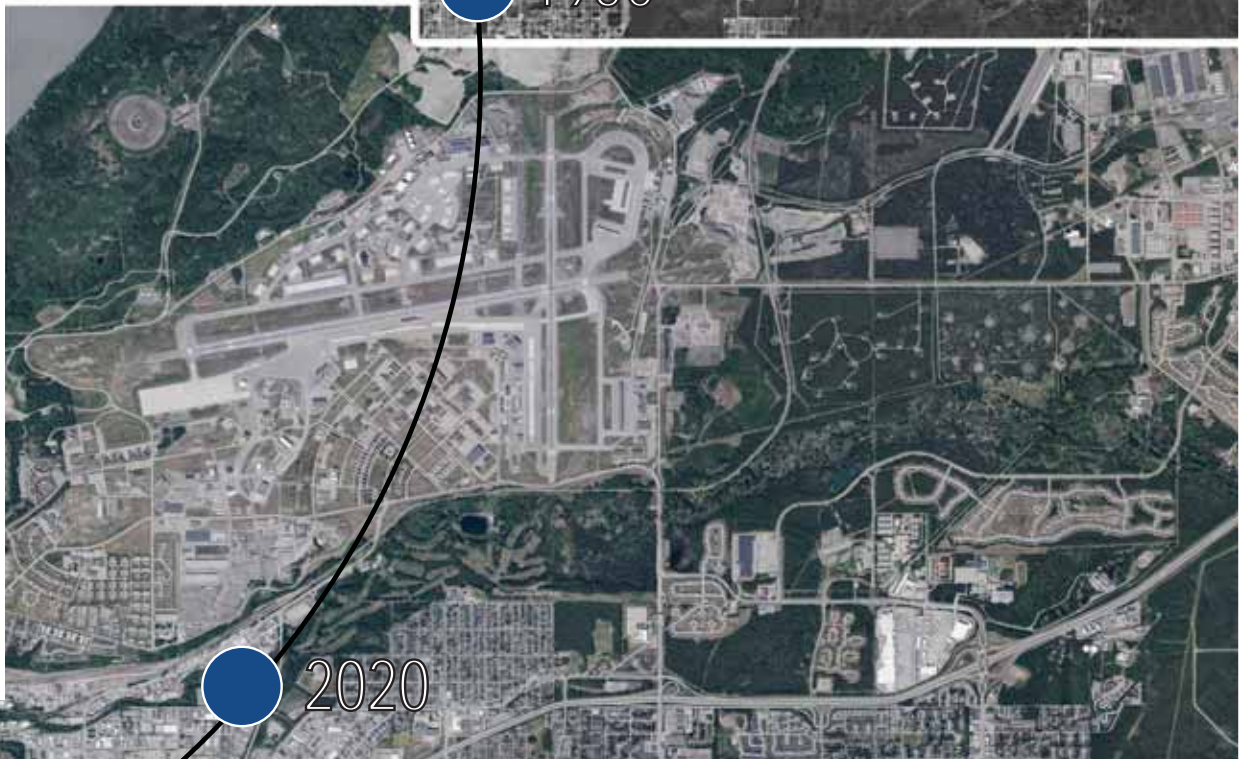


Society of
SAME
American Military Engineers
Anchorage Post

May 15, 2020



... The combined base
became known as
Joint Base
Elmendorf-Richardson
(JBER) ...



*Aerial imagery
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Celebrating the Centennial of the Society



Brig. Gen. (Ret.) Benjamin B. Talley (left) installs the 1994 officers of the Anchorage Post, S.A.M.E., at the annual meeting in the Elmendorf AFB Officers Club. At right is the 1994 president, John Magee. Looking on (center) is the outgoing president, Lt. Col. Patrick Coullahan, commander of the 3rd Engineering Squadron at Elmendorf. General Talley was charter president of the post in 1942!



May 15, 2020

HISTORY OF ALASKA

Featuring Timeline Stories of the Anchorage Post of the Society of American Military Engineers

Compiled by

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many of them proud SAME Anchorage Post members, past and present

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DEDICATION

The Society of American Military Engineers is celebrating its Centennial in 2020, and the Anchorage Post of the Society dedicates this compilation of significant events in Alaska to the past and future military engineers of Alaska. Many forged the future by breaking new ground in the past. They rose to the challenges of discovery, exploration, and opening this Great Land we know as Alaska. They addressed the terrible times of World Wars, Cold Wars, and the War on Terror. They designed and built the infrastructure in the rugged land of Alaska to defend the United States from invaders and those who threaten our great Nation. They allowed for ways to project military power, improve energy production and minerals extraction, transportation, commerce, recover from disasters, enhance environmental stewardship, and mentor those coming behind them for new and even more daunting challenges. One is awestruck by the likes of Mitchell, Mears, Talley, Buckner, Steese, Richardson, Long, Anderson, Eareckson and others by their Alaskan accomplishments--many seem larger than life people, whom we can learn from and emulate. Colonel Mears was a Charter Member of SAME in 1920, one of four in Alaska to be there at the beginning. BG Talley initiated the SAME Anchorage Post in 1941. Read and learn more about them all.



In January 1994, Brigadier General Benjamin B. Talley performed his last ever official SAME activity at the Anchorage Post Annual Meeting at the Elmendorf Officers Club when he installed John K. Magee, PE, as the Anchorage Post President and recognized Lt. Colonel Patrick M. Coullahan, USAF, as outgoing Anchorage Post President. Brigadier General Talley was the Post's charter President in 1942 and made a huge and lasting impact on SAME and Alaska over the years, and his legacy has been a highlight of our post.

SOURCES OF INFORMATION

The following documents were used to compile this Anchorage Post historical timeline and recommended for further reading by Colonel Patrick M. Coullahan, USAF (ret), PE, F.SAME, F.ASCE, F.NSPE and John K. Magee, P.E., F.SAME, M.ASCE

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Historic Alaska Map: DepositPhotos.com.

Artist’s interpretation of ice age fauna: Image courtesy of Mauricio Antón.

Others noted when applicable.

Contributions by various members of the Anchorage Post.

List of Acronyms

AAC	Alaskan Air Command
AADC	Alaska Aerospace Development Corporation
AEC	Alaskan Engineering Commission
AC&W	Aircraft Control & Warning
ADC	Aerospace Defense Command
AIDEA	Alaska Industrial Development and Export Authority
AFB	Air Force Base
AFCEC	Air Force Civil Engineer Center
AFCEE	Air Force Center for Environmental Excellence
AFS	Air Force Station
ALCAN	Alaska Canada
AN/FPS	Army Navy Fixed Radar Search
ARC	Alaska Road Commission
BEEF	Base Engineer Emergency Force
BMEWS	Ballistic Missile Early Warning System
CANOL	Canadian Oil Project along Alcan (Norman Wells field)
CONUS	Continental United States
CR&NW	Copper River & Northwestern Railway
CRREL	Cold Regions Research and Engineering Laboratory
DMTS	Delong Mountain Transportation System
DoD	Department of Defense
GCI	Ground-Controlled Intercept
MAR	Minimally Attended Radar
NASA	National Aeronautics and Space Administration
NORAD	North American Aerospace Defense Command
OTH-B	Over the Horizon Backscatter Radar
PTRF	Permafrost Tunnel Research Facility
ROTHR	Relocatable Over-the-Horizon Radar
SAC	Strategic Air Command
SAME	Society of American Military Engineers
Seabees	US Navy Construction Battalions
UAR	Unattended Radar
WACS	White Alice Communications System
WAMCATS	Washington-Alaska Military Cable and Telegraph System
USA	United States Army
USAF	United States Air Force
USGS	United States Geographical Survey
USN	United States Navy
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USSR	Union of Soviet Socialist Republics
Y&S	Yakutat & Southern

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This compendium of historical incidents and activities is assembled by the Anchorage Post of the Society of American Military Engineers for purposes of providing a timeline of events to stimulate readers to inform themselves further about events by personal research and reading of source documents and material from declassified published historical records and documents, military and non-military and public records sources and personal notes and recollections.

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INTRODUCTION

Alaska is a great land, a place beautiful and immense, a land of alien winter landscapes that few save Jack London could put in words, a land of abundance rich in wildlife and natural resources, a land large enough to encompass the south arctic plateau, vast stretches of taiga and steppe, alpine glaciers and ice fields, the world's largest sea level glacier, three of the world's great mountain ranges, the largest temperate rainforest and with more, much more, to spare. A land that no two visitors would use the same words to describe, Alaska.

Our rough compilation of key events, people, geography, and interactions moves rapidly from the stone age to our Society of American Military Engineers centennial year. It highlights the arrival of our native peoples, the European voyages of discovery, the Russian interregnum, the arrival of the Americans; and at last reviews the more modern era, an age initiated by the gold rushes, exacerbated by World War II, enhanced by the discovery of north slope oil and continuing the saga as we work on telling our story today. Imagine the native engineers, who designed igloos to be built as temporary shelters while hunters pursued whales across the open reaches of an otherwise frozen and thoroughly hostile Beaufort Sea. Imagine intrepid peoples who went to sea in canoes of skins or hollowed out logs to hunt whales, walrus, and seals with full confidence in the skills of the designers and builders who launched them on the icy northern oceans. Or travel along with the probably less than enthusiastic US Army soldiers, who in groups of three and four, doggedly trekked across the width and breath of Alaska, in winter and summer, mapping and surveying and discovering new wonders, walking across a land that never seemed to end, of one



more great river, one more mountain range, each seemingly greater than the last. And then there were the visionaries and modern builders who created a city around Dawson, built steamships to conquer the mighty Yukon and Kuskokwim rivers and constructed a railroad over White Pass to Lake Bennett, YT, a railroad in operation today. Or consider those pioneers of Norton Sound who built a dozen or so railroads around Nome during the Gold Rush. The engineers who tossed up the vast Kennicott mines during a time when copper was king or the soldiers and civilians who said , “...sure we can build a winter truck road to Alaska, just give us nine months”.

This then is the place we live and work, and today it is possibly the most strategic military and trade location in the world. As such, from the military and most especially the military engineers Alaska was often a focal point of the Cold War. Today those tensions created by America's possession of the Great land appear to be once again a focus of international tensions. Other world politics aside, today's Alaskans face different challenges; climate change, long standing social issues and the tradeoffs of continued economic development or preservation are among the most pressing; but as we have in the past we will continue to master Alaska's climate, geology and diverseness to leverage her abundant natural resources. We do this look back at the sparsely populated frontier we call Alaska with an eye towards the future, and with a proud sense of military engineering accomplishments. Engineers across myriad disciplines, especially those associated with the military, may be particularly proud of the legacy of those who have come before. Hopefully, the readers of this brief history will their appetites whetted, find themselves encouraged to research and then amend, add to or simple polish this rough piece of Alaskan jade into a native Alaskan work of art. to research more and eventually add to this developing book of knowledge. Alaska's future—the next one hundred years of the Society of American Military Engineers. Alaska's history will continue from how far we have come since 1920 to what is now possible in 2020 and beyond. The military put Alaska on the map, and we are fortunate to reap the benefits from our predecessors in that regard. The Anchorage Post of the Society of American Military Engineers is proud to present the story of our land, our peoples and our military engineering accomplishments. We hope you enjoy our efforts.



Early Days

Every timeline has a beginning, this one starts in a setting long after the dinosaurs disappeared from Alaska, and North America began to emerge from the last great ice age. Thick ice still buried Canada and the northern United States, but amazingly spared the land that is now central Alaska leaving the area relatively ice-free. A large collection of grazing mammals, woolly mammoths, giant cave bears, steppe bison, American lions, muskox, caribou, sloths, horses, and more were part of the wildlife found in the sub-Arctic during the Pleistocene. The slow retreat of this ice age enabled migrations of peoples to take hold, and 15,000 to 40,000 or so years ago—maybe even longer based on research by anthropologists and archaeologists since 2000—the first wave of people during this great migration, either before or after they crossed the land bridge (which the researchers now call the founding population for all Native Americans) split again, into two populations. Scientists surmise that one group stayed put in and around Beringia and are called Ancient Beringians. The ice age was still on, but these people hunkered down and made the best



of what was there in this arid, frigid landscape and food such as Bison, horses, and mammoth; big grazers were quite common. The second group moved down into North America and eventually spread far and wide: up into Canada, the East and throughout Central and South America. Their descendants are believed to be the direct ancestors of current Native Americans. When they crossed the Bering land bridge from Siberia, their presence and its impacts changed the land forever. The first Alaskans—Tlingit, Haida, and Tsimshian tribe members—were the main travelers, trading coppers, blankets, and some slaves. The panhandle, now known as Southeast Alaska, enabled better survival because of very plentiful resources and more moderate weather and became their territorial home. Athabascans, Aleuts, Inupiat and Yup'ik peoples also found their parts of Alaska. Driven primarily by access to food sources, some of these various peoples settled along coastlines and inlets where fish, seals, whales, walrus, shellfish, and other marine resources were abundant. Others moved across the barren arctic plain and used the Beaufort Sea as their commissary. And even more peoples travelled up the great northern rivers and established communities in the game rich interior. Their new environment demanded new technologies, kayaks were redesigned for deep water whaling, winter or rainforest clothing was amended to take full advantage of the insulating properties of caribou hide, seal skin, and sea otter fur. Without question these long-range travelers brought with them north country parkas, trousers, boots, snow-goggles, spears, and knives. In each case the implements and essentials were modified to reflect the materials available and to meet the demands of their new homes. For millennia native Alaskans improved upon and profited from the abundance of Alaska. Yet no matter how much these improvements made life easier, safer, more comfortable, no matter how many potlatches were held, regardless of the constant improvements in communication, irrespective of increases in trade and general commerce Alaska remained a stone age world. Unfortunately for the Native Alaskans one morning a few of them awoke to people from the age of iron and these people who had so long prospered, in this bitter harsh environment, were now asked to skip the bronze age altogether and to adapt, literally overnight, to iron age life, technologies, science, engineering, and customs. And here is the start of “our” story, the age of a written history of Alaska; the age of the explorers.



EVENTS

- 1725** Peter the Great, Russian Czar authorized a northern expedition, launched from Siberia “to explore the northeastern coast of Siberia and to seek that place where it is joined to America”.
- 1728** Russian/Danish explorer Vitus Bering landed at St. Lawrence Island on 10 August and named the Island St. Lawrence as the landing took place on St. Lawrence Day. The island was called Sivuuqaq by the inhabitants. Bering most likely forgot to ask the native Yupiks who had lived on the island for some 2000 years for permission to rename their home.
- 1732** Russians arrived from Siberia as trappers and merchants to hunt along the coastlines.
- 1741** Vitus Bering, sails from Okhotsk towards North America. This was his second voyage of discovery and the first known sighting of the southern coast of Alaska. Later he landed on the coast west of Mount Saint Elias.
- 1774** Spaniards explore the Northwest coast from Olympia, Washington, to the head of the Lynn Canal. It is unknown what happened to their records, charts and readings.
- 1778** British explorer and navigator Captain James Cook explores and maps much of Alaska’s coast. He is searching for the Northwest Passage or the Great River of the West, a river that will provide a continental route to the Missouri or Mississippi or better yet, for the British sailor he was, Hudson’s Bay. On 2 May, Cook sights and names Mount Edgecumbe at the entrance to Sitka Sound. Cook continues to coast the shoreline of Alaska and eventually sails the Resolution 200 miles into a large estuary at 60 degrees north. This huge expanse of water has great prospects, but after exploring several large rivers, he determines that the waterway is indeed, only an inlet, ever after, Cook’s Inlet. In August, the Resolution sails through the Aleutian chain and coasts north toward the Bering straits. After passing the straits on August 9th, the crew saw continents on both sides and bright ice everywhere. On 18 August, with winter closing in and blocked by a wall of ice estimated at ten to twelve feet in height Cook retreats and moves southward to Icy Cape and on to the Sandwich Islands.
- 1794** While exploring the southern stretches of North America's longest fiord for England, George Vancouver named Lynn Canal for his hometown of King's Lynn. Under the



1Peter the Great, Czar of Russia



command of Joseph Whidby, several of his men traveled to the head of Lynn Canal, entering both the Chilkat and Chilkoot Inlets. Vancouver was soon followed by Russians, English, Spaniards, and Americans, all entering the brisk fur trade with the skillful Chilkat, Chilkoot, and Tlingit peoples. As it had served the Tlingits for uncounted ages, the continent's deepest inland waterway, Lynn Canal would ultimately serve future generations as an important juncture between marine and land routes to the north,



Russian America in 1860

1799 On 25 May Alexander Baranov arrived on Sitka Sound from Kodiak to establish a post for the newly organized Russian American Company of which he was chief manager.

1804 Sitka was established, and the Battle of Sitka took place. This was the last major armed conflict between Russians and Alaska Natives, and initiated in response to the destruction of a Russian trading post two years before. The primary combatant groups were the Kiks.ádi ("Ones of Kíks", Frog/Raven) Clan of Sheet'ká X'áat'i (Baranof Island) of the Tlingit Nation and agents of the Russian American Company assisted by the Imperial Russian Navy.

1811 Wrangell, established and, is one of the oldest non-Native settlements in Alaska. It began as a Russian fur trading post. Later the island itself was named for Ferdinand Von Wrangel, manager of the Russian-American Company around 1830. The brisk trade with the area Tlingits was lucrative but in 1840 the post was leased to the Hudson's Bay Co. who named the stockade Fort Stikine. The fort was

abandoned in 1849 but remained under the British flag until Alaska's purchase by the U.S. in 1867. Kotzli'na, a large S'kine Indian village was located 13 miles south of the fort. The Tlingits claimed their own ancient trade rights to the S'kine River and protested when the Hudson Bay Company began to use their trade routes. But two epidemics of smallpox, in 1836 and 1840, reduced the Tlingit population by half.

1840 Constructed in 1840, Fort Durham (Fort Taku) was one of three posts established in Russian America by the British Hudson's Bay Company. Fort Durham Site National Historic Landmark represents the British role in the great struggle between major maritime powers, England, the United States, and the Russian Empire. Each raced for control of the North Pacific fur trade. Built under the provisions of a lease negotiated between the Russian American Company and the Hudson's Bay Company, it gave the British firm control of a ten-mile-wide strip of Russian Alaska. The stockade post served as a trading post for Hudson's Bay



Company until 1843, when the fort was abandoned in favor of yearly visits by a company ship.

1865 On 22 June the Confederate raider Shenandoah fired the last shot of the Civil War in the western Bering Sea where she was raiding New England whalers.

1867 Russia sells Alaska to the United States for \$7.2 million. The sale was sponsored by US Secretary of State William Seward. Timing is everything in politics. Russia was involved in a European war between France and England and the Tsar's government desperately needed money. Equally important he wanted neither France nor England at his backdoor, especially England. With the trade in otters and fur seals



The US \$7.2 million check used to pay for Alaska (roughly \$132 million in 2019).

nearly ended, Alaska was both a valueless colony and costly to defend, Worse it might prove a dangerous liability in British hands. The Civil War was less than two years past and America was in no position to engage in extravagances. However, sale of the colony for approximately 2 cents an acre was cash in hand for the Tsar, a bit of security for his Russian Far East territories and at a price the United States could afford.

Purchase of Alaska, the rest of the story

This is the story of the Alaska Purchase that can be verified by the reading of Ambassador Stoeckl's diary which has been translated into English.

During the Civil War President Lincoln and Tsar Alexander II became strong allies and personal friends. Britain and France were at war with Russia and the Tsar feared that England and France could use their colonies in Canada as a staging area to capture Russian America (Alaska) and subsequently open up a military front in the Russia Far East. It was difficult for Russia to defend the Far East while also fighting a war in Europe. Russia also had a powerful naval presence in the Pacific with naval and trading ports in both Hawaii and California. Russia had savaged Alaska and the Russian America Company was a liability to the Tsar. He desperately wanted out of Alaska but needed a neutral country to own it as a blockade against English and French Western advancement. He also was desperate for funds to support the war efforts in Europe.

The Russians became a paid ally of the Union during the Civil War by providing blockade services to thwart others from trading with the Confederacy. After the war there was a combined congress of former Union and Confederate states that



was undeniably a house divided but trying awkwardly to put the country back together.

William Seward was Secretary of State and lived in a Washington DC rooming house shared with the Russian Ambassador to the United States Eduard Andreevich Stoeckl. They became good friends. The Ambassador had two primary agenda items. One was submitting the bill for \$7 million to the United States for Russia's services blockading the Confederacy and second was thwarting English and French Westward expansion that threatened Russian America and the Russian Far East. With a combined North and South congress getting the Southern states to help pay Union war debts was not going to happen. The Russian Ambassador had a brilliant mind, an in depth understanding of post war American politics (likely the best understanding of anyone in Washington), and an engaging personality. He came up with a brilliant plan to combine both Russian agenda items into one. His offer to Seward was that the United States purchase Alaska for \$7 million and Russia would forget about the war debt. Ambassador Stoeckl's engaging personality allowed him to lobby successfully for the Alaska Purchase.

1867 Alaska was referred to as "Seward's Folly", Horace Greely's and his *New York Tribune* opposed the purchase of a "colony" and editorialized that Alaska "was a 'sucked orange'". Alaska "contained nothing of value but furbearing animals, and these have been hunted until they were nearly extinct. Except for the Aleutian Islands and a narrow strip of land extending along the southern coast the country would be not worth taking as a gift...It was a frozen wilderness". While not every voice was so vitriolic, Greely's image of the Alaska Territory changes little until gold, gold, and more gold made the territory worth its weight in gold.

1867 The Americans renamed the Russian "Alyaksa" to the Aleut name "Alaska".

1867 On 18 October the Russian flag was lowered in front of the Governor's House and the American Flag raised to the sounds of cannon fire. For the next ten years, the United States Army led the occupation and administration of Alaska.

1868 U.S. Army forces establish Fort Wrangell. The surrounding area grew as a trade and commercial center and with the discovery of gold in the Klondike and Cassiar District of British Columbia as an outfitting center for prospectors between 1874-77. Commerce thrived once again with the discovery of additional gold fields in Nome. Riotous activity filled gambling halls, dance halls, and the streets. Thousands of miners traveled up the Stikine River into the Cassiar District of British Columbia during 1874, and again to the Klondike in 1897. Glacier Packing Company began operating in Wrangell in 1889. The Wilson & Sylvester Sawmill provided packing boxes for canneries, and lumber for construction. By 1916, fishing and forest products had become the primary industries - four canneries



and a cold storage plant were constructed by the late 1920s. In the 1930s, cold packing of crab and shrimp was established.

1869 Astronomer and explorer George Davidson made a scientific trip to the Chilkat Valley of Alaska. He told the Chilkat Indians that he was especially anxious to observe a total eclipse of the sun that was predicted to occur the following day, August 7. Davidson was joined by William Seward (the man responsible for the purchase of Alaska from the Russians). As he was not traveling in any official capacity, Seward could be considered the first tourist to visit the Haines area.

1869 FORT KENAY The Fort was originally intended to be built in the summer of 1868 when an Army battalion came up from the Puget Sound. Fort Kenay was intended to be built in the Homer area of KACHEMAK BAY. Unfortunately, Captain McGilvray insisted that Homer was no place for a fort because of all the permafrost, so instead the ship headed south where it foundered after running aground on a rock reef. If it weren't for this incident Fort Kenay would have been located on the Lower Kenai Peninsula rather than where it was built in Kenai after the crew had escaped from the wreck site and wintered in Fort Kodiak, the only US outpost at the time.



Constructed in 1869 by U.S. Army, Fort Kenay was in service for 17 months with 140 officers and men.

1869 US Army Captain Charles Raymond leads the first Government expedition into Alaska's interior, traveling on a 50-foot stern-wheel steamer that sailed up the Yukon River to the thrill of American traders and Native Alaskans.

1873 Sitka's population declines from 2500 to a few hundred.

1877 The US Army departs Alaska and the US Navy and US Revenue Service are charged with government administration until 1884. The decision was a best-case scenario since the new arrivals were concentrated on islands, coastal villages or large river valleys.

1878 Only when convinced there would be no interference with their fur trade monopoly, the Chilkats guided a party of miners through their territory to the interior. Journeying up and down the Yukon and Pelly Rivers from Fort Selkirk, the miners found indications of gold.



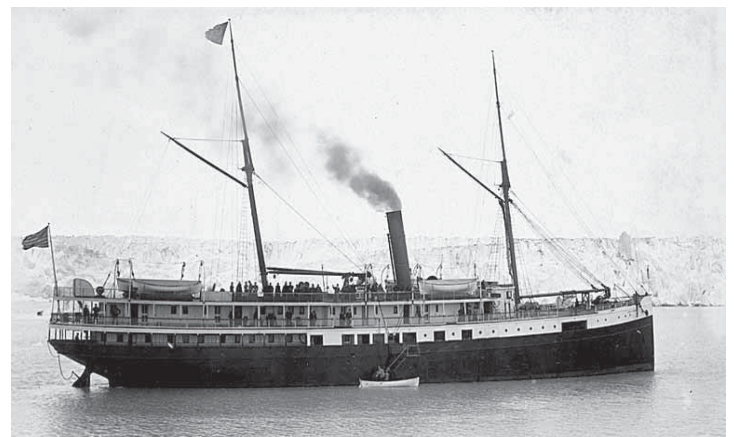
1879 Missionary S. Hall Young and his friend John Muir, in the company of Tlingits from Sitka, traveled to Yendustucky, five miles up the Chilkat River from present-day Haines. They were sent by Sheldon Jackson, in charge of Alaska's Presbyterian Missions, to discuss the location for a mission with Chilkat and Chilkoot Chiefs. As their canoe approached, villagers came to the riverbank and fired shots over their heads, alarming Young and Muir. The Sitka Tlingits told them not to worry they were being greeted, not fired at! Upon reaching shore, the canoe was hoisted -- men and all -- and carried to the clan house. There they were completely ignored for a short time; according to Tlingit custom, it was polite for travelers to be given time to collect their thoughts after a long journey. "...before Shathitch [also known as Kohklux] left, he and Donawok and Shundoo-oo, the chief and lht (shaman) of Chilkoot, walked with me across the neck of the peninsula to a harbour on the east side." S. Hall Young, Hall Young of Alaska. At Deishu ("end of the trail") they decided on the new mission site.

1880 A second party of miners was guided over the Tlingit trade route. George Dickinson opened a Northwest Trading Company post next to the site that had been chosen for the new Presbyterian mission. After arbitrating a disagreement between Chilkats and Chilkoots in August, the navy built a schoolhouse by the trading post and the Tlingits began building houses on each side.

1880 In 1880 a local inhabitant, Chief Kowee, revealed to prospectors Joe Juneau and Richard Harris the presence of gold in what is now named Gold Creek in Silver Bow Basin, Juneau.

1880s Pacific Coast Steamship Co. of San Francisco pioneered tourist cruise industry by launching monthly voyages to Alaska.

1881 Prospector Joe Juneau bought drinks at a miner's meeting held that year, gaining the support of his fellow miners to win an election for ultimately naming the town after him—hence "Juneau", now Alaska's capital was born.



City of Topeka alongside the Muir Glacier.

1881 July 18th, Dr. Sheldon Jackson arrived with Rev. Eugene Willard and his teacher-wife, The Willards soon realized that children had to come so far from various villages that, especially in winter, it would be more practical if there were a



boarding school. The log building for the purpose was by far the largest in the entire area. This was the place Sol Ripinsky came to teach in 1885. It was the beginning of the town of Haines, which took its name from Mrs. F.E. Haines, a member of the Board of National Missions. A larger boarding house was constructed ten years later after a fire destroyed the first one. That building served as a boarding school, then as a hospital, and still later as an orphanage known as Haines House. Eventually, it became a boarding place for students from communities with no schools and was active until 1960 when regulations imposed by the newly-formed State of Alaska were too expensive to comply with and the operation closed. The present Presbyterian Church was built on the foundation of Haines House; the Museum is on the northeast corner of the original Mission site.

1882 A climate observation station was established at Barrow during the First International Polar Year (1882- 1883).

1883 By now more than two hundred prospectors had crossed over the Chilkoot Pass to the interior. The Chilkats retained control of the route, charging a fee to carry goods across the pass. Honoring Mrs. F.E. Haines, Secretary of the Women's Executive Committee for Home Missions of the Presbyterian Church, the name of Chilkat Mission was changed to Haines Mission.

1884 Alaska's first civilian Governor, John Henry Kinkead, is appointed Governor of the Alaska District.

1885 US Army LT Henry Tureman Allen mapped Alaska. A West Point graduate, he led a small expedition to explore and map Alaska's formidable terrain. Where others had been thwarted, LT Allen's team did the unthinkable. In only 20 weeks, the soldiers covered 1,500 miles, mapping valleys, rivers, volcanic activity, mountains, geology, mineral wealth, and glaciers, as well as gaining an understanding of the climate and Native Alaskan culture. So much new knowledge came from of historic journey that it is sometimes referred to as "Alaska's Lewis and Clark Expedition."



US Army LT Henry Tureman Allen as major general.



1890 US Army MG Adolphus Greely leads Signal Corps expansion of Telegraph Networks from the “Lower 48” (CONUS) to Alaska. Greely was a tough and versatile leader, explored the Arctic and garnered an understanding of what extreme weather was really like and how to cope with it. As a result, he enabled the expansion of weather systems and telegraph networks, establishing a foundation of knowledge for future engineers to leverage in their efforts to build in the Far North.



US Army MG Adolphus Greely 1895

1894 Jack Dalton, who had been employed at Chilkat Cannery, began packing over the Chilkat trade route and built trading posts at Dalton Cache (present US/Canada Border), Dalton Post (100 miles northwest of Haines), and Champagne (on the Alaska Highway near Whitehorse). Today's Haines Highway follows closely the Chilkat Pass Route which was once known as the Dalton Trail.

1897 During the Klondike Gold Rush as many as 100,000 people rushed north. While some stampedeurs travelled to the Klondike via the more expensive Yukon River route most went over one of the four Gold Rush trails near the head of Lynn Canal. The trails began in Alaska, crossed into Canada high in the mountains, and proceeded to Lake Bennett which provided access to the Yukon River. With the Klondike Gold Rush came crime. Most consisted of property crimes; embezzlement, and con games or “sin crimes” such as gambling, prostitution and illegal manufacture and sale of alcohol. Troops/police were needed at both terminus, in the Skagway area of Alaska and at the huge winter camps erected on the shores of Lake Bennett in the Yukon Territory. As virtually all the “prospectors” were oblivious to the harsh climate of the interior and most were incredibly ill-prepared to face the interior of the Yukon the Royal Canadian Mounted Police at Lake Bennett were forced to assume responsibility for and take care of what amounted to an unruly, headstrong, gold mad mob. They could not or would not understand there was no overland route to the Klondike, and that walking down the Yukon River in winter or along the banks in summer was inviting an early grave. To reach the Klondike, each man or group of men had to survive the winter, build a boat or raft to float the river after ice-out, and somehow arrive



Miners and packers climbing the Chilkoot Pass, September 1898, during the Klondike Gold Rush



at Dawson with sufficient food and supplies to survive for several months if needs be. An Army presence was quickly required to maintain order, provide infrastructure and maintain public health.

1897 Brig. Gen. Wilds P. Richardson arrives for the first of the three tours of duty in the rugged Alaska Territory between 1897 and 1917. Richardson, a native Texan and an 1884 West Point graduate, commanded troops along the Yukon River and supervised construction of Fort Egbert near Eagle and Fort William H. Seward (Chilkoot Barracks) near Haines. Between 1897 and 1917.



Wilds P. Richardson as president of the Alaska Road Commission (1905-1917)

1898 Fort Egbert was established on the outskirts of Eagle on the Yukon River.

1898 The Nome Mining District, also known as the Cape Nome Mining District, was created in 1898 when Erik Lindblom, Jafet Lindeberg, and John Brynteson—the "Three Lucky Swedes"—found placer gold deposits on Anvil Creek and on the Snake River, a few miles from the future site of Nome.

1898 In January, Haines, a hamlet at the head of Lynn Canal comprised the Presbyterian Mission building, a small store, and a few Indian huts on the beach. A post office opened there in May and operated until October of 1900. In October three partners discovered gold in Porcupine Creek and another rush was on. Porcupine, which had been an overnight stop along the Dalton Trail soon became a thriving gold-mining community in its own right and the town of Haines began to grow. The "northern frontier" had become accessible—though perhaps not ready—for settlement, business, and development.

1898 On 5 May Tom Lopp and Native reindeer herders returned to Wales after driving more than 400 reindeer 700 miles to Barrow. This feat was part of the "Overland Relief Expedition" to supply food to whalers unexpectedly trapped in the ice in the fall of 1897 off Barrow.

1898 Wagon trail built from Valdez to Eagle, and when gold discoveries lessened in Eagle, the trail was detoured to connect with Fairbanks, which was having its own gold boom at that time. Discounting dog sleds and horseback, this was the first known route for overland transportation by wheeled vehicles to the Interior of Alaska.



1898 Construction begins in May on the White Pass & Yukon Route Railroad (WP&YR) after an agreement is secured by Close Brothers of London to purchase Brackett's road for a right-of-way from Skagway to Lake Bennett. Skagway's unofficial city government forms and allows railroad tracks to be laid East from the terminal up the center of Broadway. Michael James Heney (known as the "Irish Prince") is the contractor.

1898 On 14 May an Act of Congress was approved granting a right of way for the White Pass & Yukon Route railroad from Skagway to the Canadian border.

1899 Railroad contractor Mike Heney's crews advance the line to the White Pass summit in February and Lake Bennett in July. Skagway's building boom continues with construction of prominent city structures like Arctic Brotherhood Hall, and McCabe College. The troops, most of them black Spanish American War vets, move to Skagway and are quartered in the former Royal Canadian Mounted Police barracks.

1899 Fort Egbert was established in 1899, during the Klondike Gold Rush, as U.S. Army headquarters in the District of Alaska. It was named by U.S. President William McKinley in honor of Colonel Harry C. Egbert, who died in battle on March 26, 1899 in Manila.



Fort Egbert's "Officers Row" depicted on a postcard

1899 Captain William R. Abercrombie designated a site for a military reservation at Port Valdez. Port Valdez was the trail head for the Valdez-Eagle Trail to Fort Egbert, near Eagle, Alaska. Abercrombie selected 650 acres on the south side of the bay near a point known as Ludington's Landing. The site was chosen for its deep anchorage, a nearby mountain stream providing a continuous supply of fresh water, and a location, in Abercrombie's words, "just far enough from the head of Port Valdez to be beyond the influences of the whisky element to be found in frontier towns." The head of Port Valdez was the original site of Valdez, Alaska, which, as the start of the "All-American Route" to the Klondike, attracted a steady stream of prospectors

1900 In May 1900, 100 soldiers arrived to establish the post and begin construction. The completed installation numbered 37 buildings, including two-story quarters for officers and civilians, a hospital, a stable, and a bakery. A U.S. War Department report described the facility as "well-constructed" and easily supplied, but lamented the "unfortunate" location, where northern exposure and shadows cast by the



overlooking mountains ensured that winter snow would not melt until June. On September 6, 1900, the post was named Fort Liscum in honor of Colonel Emerson H. Liscum, who had died July 13, 1900 in Tianjin, China leading the U.S. Army's 9th Infantry Regiment as part of the Eight-Nation Alliance to put down the Boxer Rebellion. The 9th Infantry Regiment was later stationed at the fort. The site of Fort Liscum is the present-day location of the Alyeska TAPS tank farm and terminal beginning in 1977

1900 As the sea ice receded in the spring, steamships from Seattle and San Francisco brought thousands into the remote Alaskan community of Nome in search of gold. It was estimated that there were as many as 20,000 people living in Nome during its heyday.

1900 On 26 May Congress passed a bill creating the Washington-Alaska Cable System. Over the cable Alaska would be connected to the worldwide telegraphic system. The communications lines were to serve both military and civilian needs in the territory of Alaska. By 1904, ACS comprised some 2,100 miles (3,400 km) of undersea cable, over 1,400 miles (2,300 km) of land lines, and a wireless segment across at least 107 miles (172 km).

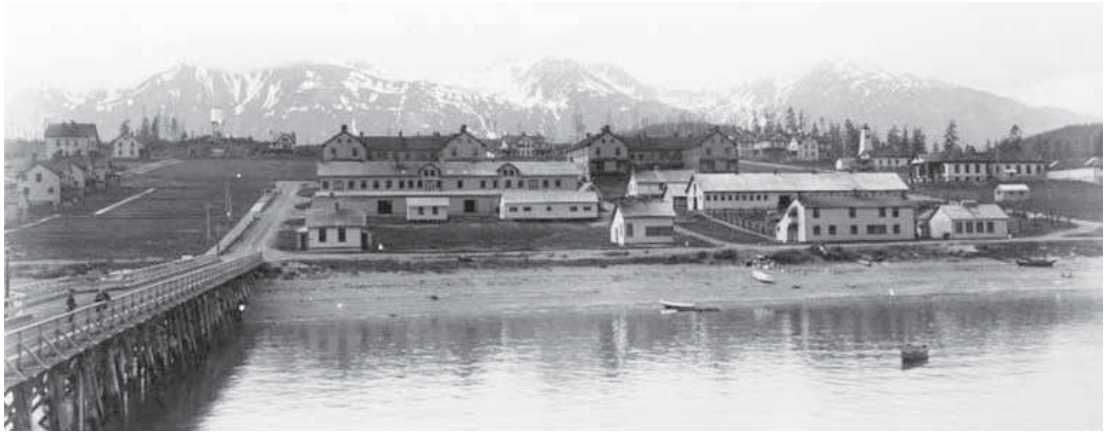


Telegraph repair at Fort Gibbon, Alaska. Photo courtesy U.S. Army Center of Military History

1901 Jack London, the great storyteller of the far north arrives in Alaska. The Call of the Wild would excite the imagination of countless adventurous Americans and place the idea of the Alaskan frontier front and center.

1902 18 January 1902, the *Daily Alaska Dispatch* told its readers that Mt. Redoubt, one of the beautiful cone volcanoes of Cook's Inlet had erupted and that ash covered the towns and villages on the east side of the Inlet.

1902 Fort William H. Seward - In July 1902, Haines was chosen as the site for a permanent fort in upper Lynn Canal. Located 17 miles "across the water" from Skagway the site made it possible to monitor traffic bound inland over the Dalton, Chilkoot, Chilkat, and White Pass trails. In this way the Army hoped to impose order on the unruly mob of gold seekers heading north while also providing a military presence in Alaska during boundary dispute with Canada. Completed in 1904, Fort William H. Seward was the last of twelve Gold Rush era military posts built in Alaska. Fort William H. Seward was



Dock and waterfront at Fort William H. Seward, Haines, ca. 1914

established on the Canadian side of the boundary claimed by Canada as a challenge to this claim, which was resolved in 1903 as the fort neared completion. From 1925 to 1940, Fort William H. Seward was the only active Army post in Alaska. During World War I the fort served as a training center for Alaska draftees, and during World War II the fort served as a recruitment station, rest stop, and training center for troops involved in the Aleutian Campaign and the war effort throughout the territory.

1903

In June 1903, Lt. William Mitchell completed construction of the first telegraph line to span the interior of Alaska. For the first time, military intelligence officials could transmit telegraphed messages strictly through American soil and international waters. Mitchell described his revolutionary accomplishment and wilderness expeditions in his book, *The Opening of Alaska*: "I have noticed in sub-Arctic and Arctic countries how little most of the residents really know about conditions in the winter time," Mitchell wrote. "This is because they 'hole up' for the entire winter and only go a short distance away from their houses. Although this was one of the coldest parts of the world, it seemed to me the thing to do was to work through the winter getting the material out: the wire, insulators, poles, food supplies, and forage; then to actually construct the lines in the summer, when we could dig holes in the ground and set the telegraph poles." Prior to Lt. Mitchell's innovation, the WAMCATS project had been hampered by harsh winters and unwilling workers. Mitchell did not bother employing uninspired laborers. If they grumbled about the elements, he simply hired new people. He efficiently shipped supplies by dogsled during the winter, and completed construction of the telegraph ahead of schedule, connecting the frontier of Alaska to the rest of America. Mitchell's future as a military pilot and



*Brigadier General William L. Mitchell,
United States Army Air Service*



advocate of air power earned him great honor and eventual dishonor. Although he reached the rank of colonel, a controversial court martial tarnished his record until his death in 1936. Still, he received the Medal of Honor posthumously in 1946. The telegraph line was completed on 29 June 1903. Only a decade earlier, it had taken nearly a year to send a message to the Interior from Washington, D.C., and receive a reply. The wire was an impressive project, but short-lived in usefulness. The Gold Rush died out, and wireless radio connections soon made the use of the telegraph nearly obsolete. In May 1936, WAMCATS became part of the Alaska Communications System (ACS).

1903 The Alaska boundary dispute was resolved by arbitration. It was a long-standing territorial dispute between the United States and the United Kingdom, which then controlled Canada's foreign relations. The dispute existed between the Russian Empire and Britain since 1821 and was inherited by the United States, as the consequence of the Alaska Purchase in 1867. One component of the final resolution favored the American position, as Canada did not get an all-Canadian outlet from the Yukon gold fields to the sea.

1903 Alaska Central Railway built Alaska's first railroad in South Central Alaska, starting in Seward, and extending 50 miles north.

1903 The Yakutat and Southern Railroad was completed, a unique railroad in the United States: its sole freight commodity was raw fish. Not only that, but its schedule also depended on both the tide each day, and the fishing season itself; thus, the railroad would lay dormant during the winter. The Y&S began operations in 1903, with the express purpose of hauling fresh-caught raw fish from the Situk River to the cannery wharf in Yakutat, 11 miles to the north. Fishermen would bring their salmon to Johnson Slough on the Situk River and load it onto a Y&S train. The train would then take the fish north to Yakutat, where they would be off-loaded at a canning facility, where they would be canned and shipped from 15 Monti Bay, a deep-water port within Yakutat. The cannery in Yakutat which was served by the Y&S filed for bankruptcy in 1971, thus ending the Y&S railroad, and over 60 years of hauling raw fish. Despite bankruptcy that ended the Y&S the cannery is still in operation today but is not served by any railroad. Various Y&S equipment can be found in a city park about a mile outside of Yakutat.



From John Cobb field notebook: Locomotive of the Yakutat and Southern Rwy Co., Yakutat, Alaska. Sept. 1, 1907



1904 On 30 July the USS Burnside, laying a telegraph cable from Seattle to Sitka, sent the first message over the cable.

1905 On 7 January The Alaska Road Commission was established by Act of Congress and was placed under the Army. The ARC was responsible for much of the pre – Statehood road building in Alaska. BG Richardson, as head of the War Department's Alaska Road Commission was responsible for much of the surveying and building of early railroads, roads, and bridges that helped Alaska's settlement and growth.

1905 The Alaska Territory had its first automobile—a hand-built model completed by a man who had purportedly never seen a car before. It was constructed by Robert "Bobby" Sheldon to "dazzle a young lady in Skagway, Alaska." Bobby Sheldon assembled buggy wheels, a marine engine, some tin sheets and two bar stools into a functional runabout that could travel 15 miles per hour.



The Sheldon: Alaska's first car



Eldred Rock Lighthouse

1906 Eldred Rock

Lighthouse, an isolated light station located on an island 24 miles south of Haines, was completed and is placed in service on 1 June.

1906 Michael James Heney (known as the "Irish Prince") secures the rail right-of-way up the Copper River from Cordova on Price William Sound to the copper rich Bonanza mining area in 1904. In 1906 construction on the rail line begins.

1907 Heney sells his interest to the Guggenheim-Morgan Alaska Syndicate. The railway, named the Copper River & Northwestern Railway (CR&NW), Construction continued under The Syndicate after Heney sold his interests. The Syndicate continued the 193-mile long rail road construction from Cordova to a midway point where the Nizina River merged with the Copper River then on to the Bonanza mine area at Kennecott, Engineering challenges included bridging the Kuskulana River canyon and the Copper River with the Million Dollar Bridge. "The completion of The Million Dollar Bridge occurred in the summer of 1910.



1907 The US Forestry Service began suppression of fires within the Chugach and Tongass National Forests. On 23 July President Theodore Roosevelt had issued a Proclamation establishing the Chugach National Forest.

1909 Nome census showed a population of only 2,600 people, down from the estimated 20,000 people present during the peak of the rush a decade earlier. Miners had slowly left the area in search of new gold strikes throughout Alaska and other parts of the United States.

1910 The Valdez to Fairbanks Trail was upgraded to wagon road under the direction of BG Richardson of the Alaska Roads Commission. It was later upgraded to automobile standards in 1920.

1910 Alaska Central Railway went bankrupt in 1907 and reorganized as the Alaska Northern Railway Company in 1910 to extend the Railroad to Kern Creek, 71 miles from Seward.

1911 Elizabeth Peratrovich, an Alaska Native of Tlingit heritage was born 4 July in Petersburg. She advocated non-discrimination laws for Natives and is honored with the establishment of "Elizabeth Peratrovich Day" after her death in 1958.



1911 The last spike in the construction of the Copper River & Northwestern Railway, a "copper spike", was driven on 29 March 1911, by Chief Engineer E. C. Hawkins and Superintendent Samuel Murchison at Kennecott.

1911 The shipment of the first load of Kennecott ore to Cordova occurred in early 1911. The ore was transported on flat cars in cloth sacks to facilitate loading and unloading the material in cold weather.

Elizabeth's testimony was instrumental in the passage of the Anti-Discrimination Act of 1945, which prohibited racial discrimination in Alaska.

1912 Alaska achieved status as a Territory through the passage of the Alaska Home Rule Bill. The population now exceeded 64,000.



1912 On the afternoon of 6 June, an ominous cloud rose into the sky above Mount Katmai on the Alaska Peninsula. The cloud quickly reached an altitude of 20 miles, and within 4 hours, ash from this huge volcanic eruption began to fall on Kodiak

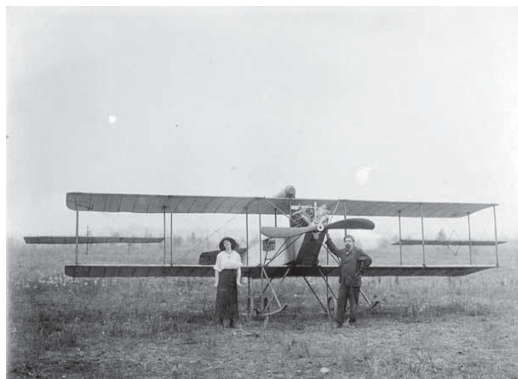


Novarupta's lava dome in July 1987

Island, approximately 100 miles to the southeast. By the end of the eruption on 9 June, three cubic miles of magma and ash were expelled, some thirty times the volume of the Mt. St. Helens eruption in 1980. By early evening the ash cloud, now thousands of miles across, shrouded southern Alaska and western Canada, and sulfurous ash was falling on Vancouver, British Columbia, and Seattle, Washington. The next day the cloud passed over the State of Virginia, and by 17 June, it reached Algeria. During the three days of the eruption, darkness and suffocating conditions caused by falling ash and sulfur dioxide gas

immobilized the population of Kodiak. Respiratory distress was rampant, and water became undrinkable. Radio communications were disrupted, and visibility near zero. Ships were unable to dock. Roofs in Kodiak collapsed under the weight of more than a foot of ash. Several buildings were destroyed by rushing avalanches of ash from nearby hill slopes, and fires erupted across the city.

1913 The first successful ascent of Denali (Mt McKinley) on 7 June after an arduous journey and climb that began in March 1913 - Walter Harper, an Alaska Native Son of Irish and Athabascan heritage, was first to reach the summit, followed by Harry Karstens, Archdeacon Hudson Stuck, and Robert Tatum.



Army Captain J. V. Martin's plane that made the first flight in Alaska.

1913 On 3 July the first airplane flight in Alaska occurred in Fairbanks. Piloted by Army Captain J. V. Martin who assembled a Gage-Martin Tractor biplane with assistance from some local Fairbanks mechanics. Despite fuel quality problems, Martin got his plane up to 45 MPH and some 200 feet in the air.

1913 On 2 August Robert "Bobby" E. Sheldon made history. His arrival in Valdez marked the day that the first automobile was driven by a civilian along the wagon trail from Fairbanks to Valdez. The wagon trail would later be up graded and become known as the Richardson Highway.



1913 Seven years before passage of the 19th Amendment to the United States Constitution, the newly formed Alaska Territorial Legislature passed its first bill which gave women the right to vote.

1914 The Anchorage US Army Outpost was settled to begin planning for construction of the fledgling Alaska Railroad. Colonel Frederick Mears was the chief engineer and member of the Alaskan Engineering Commission (AEC), the builder of the Alaska Railroad and the original operator, from 1914 to 1923. President Wilson appointed Mears to the AEC in April 1914. As he was a junior cavalry officer, it took a special joint resolution of Congress to confirm his position that had been set aside for the US Army Corps of Engineers (USACE).



*Col. Fredrick Mears
circa 1919*

1914 The newly formed Alaska Railroad Corporation began studies for construction of a possible spur line from Anchorage to Whittier, an all-season deep-water port in Prince William Sound on the other side of the Chugach Mountains.

1914 Major Richardson of Alaska Road Commission approves rough four-mile road up east side of Skagway river. Local crews led by Herman Olson and Charlie Nye get a quarter-mile further to the steep canyon "Rock Wall."

1914 On 12 March the U.S. Congress agrees to fund construction and operation of a railroad from Seward to Fairbanks. Estimated construction cost is estimated at \$35 million.

1915 Anchorage is created as a construction town along Ship Creek, and the railroad moved its headquarters from Seward to Anchorage.

1915 In July, the first public land sale, in what would become the city of Anchorage. For as little as \$25, and up to more than \$800 a wide assortment of people purchased lots from the federal government.



The tent city (called "The White City" in the handwritten caption) in Ship Creek, photographed by Alberta Pyatt on July 1, 1915.

1916 Anchorage's population swells to 3,332 and the Anchorage Hotel was constructed.



- 1917** The Alaska Territorial Legislature, in response to claims from the salmon industry and coastal fox farmers that eagle predation was competing with their livelihood, imposed a bounty on eagles. This bounty would continue for 36 years and result in the killing of well over 100,000 bald eagles.
- 1917** On 17 November a 40-man detachment of U.S. Infantry arrived to take station at Anchorage.
- 1917** Railroad construction crews peak at 4,500 workers. The Tanana Valley Railroad, a 45-mile narrow gauge line into Fairbanks from the Chatanika mining area to the northwest, was purchased by ARR, principally to obtain TVR's Fairbanks terminal facilities.
- 1917** April 1917, President Woodrow Wilson declares the United States is at war with Germany.
- 1918** During World War I, Junior Cavalry Officer Frederick Mears was promoted to major and then colonel to command the 31st Railway Engineers regiment, one of nine US Army regiments sent to operate military railroads in France. After World War I, Secretary of the Interior Lane requested that Colonel Mears be released from his military duties to again be a driving force in the construction of the Alaska Railroad. During the war, the work force had dwindled to less than 2,550 as men enlisted or took jobs in the Lower 48. Still work had continued. The other two AEC commissioners had left—William C. Edes to retirement and Thomas Riggs to become Governor of the Territory of Alaska. After demonstrating his administrative competence, Mears was promoted to be general manager of all the US Army's military trains in Alaska, territories and CONUS, a post he held until May 1919. In recognition of his services, Mears received the US Distinguished Service Medal and the Grand Cross of the French Legion of Honor.
- 1918** In late fall, the Spanish Flu arrived in Alaska when the SS Victoria, dropped anchor off Nome. Four days later, a hospital worker died. Days passed before town leaders quarantined all of Nome. People were ordered not to leave the city limits, but by then it made little difference. The same day the SS Victoria had arrived, crewmen had unloaded mail bundles. The mail was fumigated, but the crew had been in contact with the mail carriers as they packed their dogsleds., unwittingly delivering the flu to villages across western Alaska.



At Kanakuk Hospital in Dillingham, Alaska, Dr. Linus French surveys Inupiat children orphaned by the Spanish flu in 1919. The national museum of art, architecture, and design, Oslo



Nobody in Nome knew people were dying in the villages until it was too late. In the weeks and months that followed, what the Spanish Flu did to Nome and the Seward Peninsula was equivalent to what the Black Death did to 14-century Europe. It was estimated that 8 percent of the Alaska Native population died from the flu. Influenza slowly declined in Alaska during the late spring of 1919.

1918 On 11 November, the Germany Republic (the Kaiser having abdicated earlier in the month) and the Allied Powers sign an armistice marking the end of World War I.

1918 On 25 October the "Princess Sophia" foundered in the Lynn Canal with the loss of her entire company in what is regarded as the worst disaster in Alaska's maritime history. Among those lost was Walter Harper, an Alaska Native Son and the first man to stand atop Denali in 1913, and his bride of seven weeks.

1919 Frederick Mears was appointed as chairman of the AEC to replace William C. Edes, and its chief engineer. He was now fully in charge of constructing the Alaska Railroad. The original \$35 million had been spent; and an additional \$17 million was appropriated by Congress for construction through 1921, with the admonition to continue the work as economically as possible. During these last years of construction, Mears planned and had built four major bridges over the Susitna River, Tanana River, and Riley Creek, and the dramatic bridge over Hurricane Gulch. These were completed by the end of 1922. The last major task was to upgrade the Tanana Valley Railroad from a narrow gauge to a standard gauge track, which was completed in 1923.

1919 In 1919, Maj. Gen. William M. Black, USA, US Army Chief of Engineers, appointed a nine-officer board to consider the formation of an "association of engineers" that would preserve and expand upon connections formed in war and promote the advancement of engineering and its related professions across government and civil life.

1920 **The Society of American Military Engineers (SAME) is established.** The Society of American Military Engineers is formally established. Resolved to never be found wanting in a foreign conflict the Society was established with three core tenets:



- Promote solidarity and co-operation between engineers in civil and military life;
- Disseminate technical knowledge bearing upon progress in the art of war and the application of engineering science thereto; and
- Preserve and maintain the best standards and traditions of the profession.



The commitment to developing relationships between industry and government (and the technical collaboration it would bear) differentiated SAME from many other discipline-specific professional societies founded after the War and during the rapidly developing American industry-based economy.

1920 Early in 1920, the first SAME Posts were founded providing former colleagues and new associates with opportunities to connect face-to-face and establishing a network of relationships across the country in support of national security. SAME membership grew rapidly. By September 1920, the number of members had surpassed 3,500. Many notable national leaders were early SAME members, including Maj. Gen. Mason Patrick, Chief of American Expeditionary Force's Air Service in World War I; then-Superintendent of the US Military Academy, Douglas MacArthur; and Charles Dawes, who in 1928 would serve simultaneously in two defining leadership positions: President of SAME and Vice President of the United States of America. **Four Alaskans were known to be charter members of the Society in the 1920 rolls, they included Colonel Frederick Mears, USA; J. P. Truitt, Major W. H. Juneau; and Captain John P. Juneau.**

1920 Anchorage is incorporated as a town, with a population of 1,856 and the mayor is Leopold David. Overall, Alaska's population declined from over 66,000 to just over 55,000 by the end of 1920.

1920 Coast Guard Base Ketchikan is established to support the United States Lighthouse Service

1921 "The Roads of Alaska: Work of the Alaska Road Commission" authored by James Gordon Steese, A.M.; F.R.G.S.; Major, Corps of Engineers, President of the Commission, appeared in **The Military Engineer**, Vol. 13, No. 67 (January-February) issue. In it, he reported "The truth about Alaska is good enough". He concluded "If left to itself Alaska will continue its slow rate of development, and by building its own roads and creating industries sufficient to warrant private enterprise, it will, in half a century, become an empire in spite of all hindrance."



James Gordon Steese

1922 The Alaska Agricultural College and School of Mines opens in Fairbanks.

1923 The 1400-foot long Alaska Railroad Tanana River steel bridge was completed at Nenana and opened for rail traffic on 27 February.



1923 President Warren G. Harding visits Skagway in July 1923. He delivers an address at the Pullen House and is the final inductee into the Arctic Brotherhood. George Rapuzzi, a member of the Alpine Club, climbs the mountain opposite Skagway and flashes presidential party with mirrors from the summit. Peak hereafter is named Mt. Harding.



Harding aboard the presidential train in Alaska, July 1923, with secretaries Hoover, Wallace, Work, and Mrs. Harding

1923 On 15 July President Warren G. Harding, came north to officially open the Alaska Railroad. He marked completion of the Alaska Railroad by driving a ceremonial golden spike at Nenana, one of the territory's largest cities at the time. President Harding died of food poisoning on his return trip to San Francisco on 2 August.

1923 The idea of a bridge or causeway across Knik Arm was first envisioned by Alaska Railroad engineers looking for a more efficient route to Alaska's interior. The Knik River crossing and route near Palmer remains today.

1924-30 Skagway businessmen were promoting paying passengers for the White Pass and Yukon Territory Railroad WP&YR, which convinced visiting ships to stay at the dock for 36 hours so visitors could ride the train and take a Yukon lake steamer trip from Carcross to beautiful Ben-My-Chree.

1924 The Alaska Road Commission (ARC) constructs the Skagway Airfield from 13th Avenue to 22nd Avenue along Main Street.

1924 Captain Ben Eielson of the US Army Air corps flies the first airmail flights in Alaska, and Noel Wien makes the first flight from Anchorage to Fairbanks.

1924 On 16 May the Army's Round-the-World fliers left Attu Island for Paramashiru Island, the longest leg of the trip and most of it over water. They landed successfully.

1925 Construction of the 50-mile long Davidson Ditch began and was completed by F.E. Company in 1928. The project along the Steese Highway provided a necessary water supply to supply placer mining operations in the Fairbanks district with cold water for thawing of permafrost to support dredging for gold. The ditch operated until 1967.



Carl Ben Eielson



1925 The 1925 serum run to Nome, also known as the “Great Race of Mercy” and “The Serum Run” it involved the shipment of vitally needed diphtheria serum to the ice-bound community of Nome. The serum shipment was first delivered by the Alaskan Railroad to the terminal in Nenana on the 27th of January. From Nenana a relay of 20 Alaskans, many of them US Mail “mushers” driving some 150 dogs, began the 674-mile trek north to Nome. The run was completed in less than 6 days keeping the serum effective and saving the town of Nome and the surrounding communities from an incipient epidemic. The “Great Race of Mercy” went through rugged wilderness, over frozen water ways and treeless tundra. The mushers and their dogs were portrayed as heroes on radio, and in newspapers across the United States. Balto, the lead sled dog on the final stretch into Nome, became the most famous canine celebrity of the era; but Togo covered the longest stretch of the run, 260 miles. Balto covered 55 miles. The publicity also helped spur an inoculation campaign in the United States, significantly reducing the disease impact. The serum race helped spur the Kelly Act. In short, it allowed the Postmaster General to contract private companies to carry mail. The bill allowed private aviation companies to bid on mail delivery contracts. Technology improved and within a decade, air mail routes were established in Alaska. The last mail delivery by private dog sled under contract took place in 1938, but it wasn't until 1963 that the last U.S. Post Office dog sled route closed.



A view of Nome in 1916

1926 The dirigible Norge with Roald Amundsen flew over the North Pole from Norway and arrived in Teller, Alaska.

1927 The new Alaskan Flag designed by 13-year old Benny Benson was flown for the first time. Benny had looked to the sky for the symbols he included in his design in the contest for the flag. Choosing the familiar group of stars formations, he looked nightly before going to sleep at the orphanage, he submitted this description with it: “The blue field is for the Alaska sky and the forget-me-not, an Alaskan flower. The North Star is for the future state of Alaska, the most northerly in the union. The Dipper is for the Great Bear — symbolizing strength”. Alaskans had flown only the U.S. flag since the territory was purchased from Russia in 1867. The design would later be used when the Alaska Territory became the 49th State.

1927 “Some Early Problems in Alaska”, an article written by Major General Henry T. Allen, USA (ret) appeared in “The Military Engineer” July-August edition. The



writer proposed a method of reaching and exploring this unknown region in a to which end his services were offered and accepted. In general, his small party traveled about 2,800 miles in 1885 "in the interior of the territory, particularly in the basins of the Copper, Tanana and Koyukuk Rivers, 1,500 miles of which were wholly unknown to white man". Without going into details of this exploration, which was declared "one of the most remarkable in the annals of Alaskan explorations," the following from Albert H. Brooks, the Alaskan expert, is cited: "No man through his own explorations has added more to a geographical knowledge of interior Alaska than Lieutenant Allen."

1928 Construction begins on the Old Eklutna Power Plant Eklutna River North of Anchorage, Alaska. It was completed in 1929. It provided electrical power to the growing city and served as its primary power source until 1956. The facilities include two dams, a tunnel and penstock, and a powerhouse.

1929 The Coast and Geodetic Survey teamed up with the US Navy using open cockpit Loenig OL-8 aircraft for an extensive aerial survey of coastal South Eastern Alaska.

1930 The population of Alaska was 59,278 in the latest 1930 US Census. With a combined population of 5,400 people in Seward, Anchorage and Fairbanks .

1930 On 12 October Alaskan pioneering Bush Pilot Ralph Wien and two Catholic priests were killed in a plane crash at Kotzebue.

1931 On 14 February the Federal and Territorial Building, now the State Capitol at Juneau, was formally dedicated.

1931 On 8 August Col. and Mrs. Charles A. Lindbergh landed at Barrow, Alaska en-route to the Orient.

1932 Allen Carpé, a research engineer with Bell Laboratories in New York who was also an accomplished mountaineer, received a grant to collaborate with Nobel Prize-winning physicist Arthur Compton on investigating cosmic rays in Alaska. Ultimately, the expedition resulted in six successful landings on Mount McKinley, proving that the aircraft's time in mountaineering had arrived.



Charles and Anne Morrow Lindbergh

1933 Slim Williams, a musher, trapper, mail carrier, and adventurer who came to Alaska during the Klondike Gold Rush, made a well-



publicized mushing trip from Fairbanks, Alaska to Washington D.C. to prove the feasibility of a road linking Alaska to the contiguous United States. Williams was a musher, trapper, mail carrier, and adventurer who came to Alaska during the Klondike Gold Rush. The road was later built during WWII as the Alcan Highway.

1934 Lieutenant Colonel Hap Arnold made aerial news when he led ten Martin B-10s, the country's first all-metal monoplane bombers, from Washington, DC, to Alaska and back. In Fairbanks, Arnold had an odd visitor—a man claiming to be a defecting German spy warned him that Germany had better planes than the B-10. Arnold dismissed the fellow as “a damned liar,” but reported the encounter to War Department intelligence officers and recommended an inquiry into what turned out to foreshadow Charles Lindbergh's warnings.

1935 US Army BG Billy Mitchell proclaimed, “Alaska is the most strategic place in the world”. This foretold much of the importance of Alaska's future.

1935 On 15 August, famous aviator Wiley Post and popular humorist Will Rogers were flying in a Lockheed hybrid airplane to Point Barrow on the northern Beaufort Sea. Both luminaries died when they crashed attempting to land 15 miles outside of town.

1935 The Wilcox Bill, proposing the construction of six Army Air Corps bases is introduced in the US Congress. The legislation is strongly supported by Anthony Dimond, the Alaska Territory's non-voting delegate who did not have a vote. Dimond championed the bill as the territory was one of the proposed airfield sites. Ignoring the testimony of numerous senior military officials, when the Wilcox Bill passed, Congress had deleted the funds for Alaska basing.

1936 Anchorage City Hall construction is completed.

1937 President Franklin D. Roosevelt withdraws six-square miles of Department of Interior public land for construction of a military installation outside of Fairbanks.

1937 On 8 July Radio telephone service was inaugurated between Juneau and Seattle. The cost for 3 minutes is \$9 during the day and \$6 for evenings and weekends.



President Franklin D. Roosevelt (second from right) fishing for trout on Buskin Lake, Kodiak Island, Alaska, August 7, 1944.



- 1938** 1938 The last train left Kennecott on November 10, 1938, leaving it a ghost town. The cost of mining ore in the frigid Alaska interior, not to mention the costs of transportation from the mines to Seattle and other ports finally became too steep for the mines to remain profitable and the mines were shuttered four days earlier.
- 1938** On 14 November The Copper River and Northwestern Railroad, with track from Cordova to the vastly rich Kennecott mines discontinued operation.
- 1938** Under the management of Colonel Otto F. Ohlson, the Alaska Railroad records its first profitable year.
- 1939** Surveyors and engineers start work on Army Air Corps field outside of Fairbanks. With war rapidly approaching in Europe, and a reality in China, Washington focuses increasing attention on her strategically located territory.
- 1939** The Territory of Alaska started inaugurates its first fire control agency, the Alaska Fire Control Service. Given responsibility of a vast, remote, and largely inaccessible territory where wildfires burned millions of acres every year, the Service faced a daunting future.
- 1939** The USACE Seattle District Engineer appointed Lieutenant Alvin Welling as the Area Engineer for Alaska supervising Flood Control projects, and rivers and harbors activities.
- 1939** In the spring, the US Army Air Corps Commander Major General Henry H. "Hap" Arnold visits Alaska, and notes Alaska is utterly unprepared for war with Japan or



Naval Air Station Kodiak in 1949.



the USSR. His tour led to a congressional appropriation of \$4 million to construct an Army post and airfield near Anchorage, as well as a cold-weather test facility near Fairbanks.

1939 Construction begins on Naval Air Station Kodiak in September 1939 as the main forward operating base for the defense of Alaska, and was commissioned on 15 June 1941. The facilities during WWII included an airfield with several hangars, a seaplane base for a fleet of Consolidated PBY Catalinas, and a submarine base. NAS Kodiak was defended during the war by Army bases Fort Greely and Fort Abercrombie.

1940 On 27 June Fort Richardson and Elmendorf Field were formally activated near on the outskirts of Anchorage. Construction begins on Elmendorf Field and the arrival of the first US Army soldiers in Anchorage.

1940 In December the newly completed airfield outside Fairbanks was named for Major Arthur Ladd, a US Army pilot who perished in South Carolina.

1940 The Civilian Aeronautics Administration (CAA) began building a network of landing fields across Alaska. Austere, with short runways and limited facilities these sites filled a pressing military need by recognizing the importance of air travel across the great expanses of Alaska and the Yukon.

1941 In its January-February issue **The Military Engineer** featured an article written by Anthony J. Dimond Titled "The Strategic Value of Alaska" Dimond stated "In truth, Alaska is a priceless asset, and if it were located in any other part of the earth it might, long before this, have been the cause of more than one war. Italy has spent hundreds of millions of dollars to acquire Ethiopia, yet that land, not yet entirely conquered, purportedly is not one fourth as valuable as Alaska. From the standpoint of plain self-interest, failure on our part to establish adequate defensive works in Alaska would be folly - folly because Alaska alone is worth many times the cost of any such works necessary for its defense, and the greater folly because the possession and adequate defense of Alaska are vital to the defense of the United States."



Anthony Dimond, Delegate to the U.S. House of Representatives from Alaska Territory's at-large district

1941 The Kennecott Corporation donated the CR&NW railroad right-of-way from Cordova to Kennecott to the United States "for use as a public highway".



1941 Shipments of US planes to the Soviet Union through Alaska began using Nome, Galena, Tanacross, Northway, and Big Delta.

1941 A B-19 bomber landed on 6 May, becoming the first plane to use the still unpaved Yakutat Airfield.

1941 The War Department puts all Alaska military construction under the US Army Corps of Engineers and assigned Major B.B. Talley as USACE commander. Major Talley had previously been the Resident Engineer at Yakutat as a Captain. During Talley's command Army Engineers constructed a complex of airfields and bases throughout the Alaska Territory.

1941 In September Ladd Field had 520 men assigned.



Major B.B. Talley as USACE Commander (left)



Ladd Army Airfield, Alaska, testing facilities, ca. 1942. Photo: United States Army Air Force, Eielson AFB History Office



1941 On 7 December, the Empire of Japan attacked Pearl Harbor and the United States and the following day President Franklin Roosevelt declared that a "...State of War.." existed between the United States of America and the Empire of Japan.

1941 Also on 7 December, the Anchorage Post founders submitted an application to SAME Headquarters for a SAME Post to be chartered in Anchorage. Among the founders were Major Benjamin B. Talley, C.E. as President; LtCol George J. Nold, C.E. as First Vice President; Leon D. Curtis as Secretary/Treasurer; and 22 other members.

1941 After declaring war on the Axis powers, CAA locations at Galena, Nome, Naknek, Juneau, McGrath, Tanacross, Bethel, Gulkana, Cordova, Big Delta, and Northway were taken by War Department for use and the Alaska District extended the runways and made other improvements for the military roles.

1941 Before the U.S. officially entered the war after the attack on Pearl Harbor in Hawaii, Congress passed the Lend Lease Act of 1941. The law allowed the U.S. to supply allies with military aircraft, ships and other equipment needed to fight Nazi Germany. From Great Falls shipments of US planes to the Soviet Union through Alaska began using Nome, Galena, Tanacross, Northway, and Big Delta. Great Falls was the hub for the route to Siberia, which supplied the Soviet Union with nearly 8,000 planes. The Alaska-Siberia Air Route operated from 1942-45 and planes were delivered to Great Falls, largely by Women's Airforce Service Pilots, or WASPs. Male pilots of the 7th Ferrying Group and male military pilots ferried the planes to Ladd Field in Fairbanks, where Soviet pilots met them and delivered the planes to the battlefield. The journey was 6,000 miles over rough terrain. During the 1940s, pilots used what is known as the four-course range navigation. If they were too far on one side of the flight path, they'd hear Morse code for A, if they were on the other side of the line, they'd hear Morse code for N, and if they were on course, they'd hear an even tone. Mostly, the pilots used visual navigation and dealt with treacherous terrain and rapidly changing weather conditions. During the winter, pilots had limited daylight hours to make their trip, and, if they had to stop, the airplanes would sit overnight in sub-zero temperatures.



World War II Women Airforce Service Pilots aviators.

AIRCRAFT FLOWN TO SIBERIA AS PART OF THE PROGRAM

- 2,618: Bell P-39 Airacobra
- 2,397: Bell P-63 Kingcobra



- 1,363: Douglas A-20 Boston-Havoc
- 732: North American B-25 Mitchell
- 710: Douglas C-47 Skytrain
- 54: North American AT-6 Texan
- 48: Curtiss P-40 Warhawk
- 3: Republic P-47 Thunderbolt
- 1: Curtiss C-46 Commando

BY THE NUMBERS

- 6,000** Number of miles for route that runs from Great Falls through Canada, Alaska and across the Bering Sea to Krasnoyarsk in south-central Russia
- 1,070** Number of WASPs, or Women’s Air Service Pilots, who flew the planes from manufacturers to Great Falls.
- 38** Number of WASP casualties.
- 177** The number of fatal crashes among the ferrying pilots.

1941 The US Army begins construction of a railroad spur from Whitter to Portage. Originally conceived in 1914 as a shorter, faster alternative to an ice-free deep-water port Whitter was to emerge as a major military logistics center during WWII. Anton Anderson of the USACE led the construction. The tunnel now bears his name.

1941 10 September 1941. the US Army honored Col Frederick Mears’ long years of service in Alaska by dedicating Fort Mears in the Aleutian Islands in his memory.

1941 Fort Glenn, an AAC fighter/pursuit airfield and combination of both fort and field was the first Alaska base commissioned after the outbreak of war with Japan in 1941. It



11th Fighter Squadron P-40 Warhawks at Fort Glenn AAB, June 1942



was built to provide air defense for the Naval Operating Base and Fort Mears at Dutch Harbor located 65 miles to the east. Original plans for Fort Glenn's airfield called for construction of three runways measuring 5000 feet by 175 feet, support facilities, and quarters for 121 officers and 2,491 enlisted men. Within a year troop capacity for the air base, garrison, and harbor facilities was increased to 11,982 persons, peaking at approximately 13,000 in April 1943.

1942 June 3 and 4, 1942, U.S. Army pursuit planes take off from Fort Glenn and surprise and fight Japanese bombers returning from their attack on Dutch Harbor.

1942 On 4 June, the Japanese bomb Dutch Harbor and invade the Aleutian Island of Kiska. During the bombing, many of the buildings at Fort Mears and the adjoining Dutch Harbor Naval Operating Base were damaged or destroyed.

1942 On 6 June, a 500-man Japanese landing force came ashore at Kiska. The next day they marched around the island and assaulted the US Aerological Detail of 10-personnel stationed at the harbor. Eventually, all Americans were captured with some wounded and one taking fifty days to be caught by the invaders.

1942 In July and August 1942, after the Japanese invasion of Kiska and Attu Islands, U.S. bombers were routinely flown from Fort Glenn to launch on bombing missions over Kiska and Attu. Fort Glenn served as a proving ground of airstrip construction on unstable Aleutian tundra. It is one of eight historic landmarks that commemorate World War II in Alaska.

1942 In the January issue of "**The Military Engineer**" magazine, an article appeared by Lieutenant Colonel John R. Hardin, Corps of Engineers titled "Engineers Rush Alaskan Defenses".

1942 First proposed in the 1920s as an overland route between the United States and its Alaskan territory the idea of the trans-Canada highway languished for lack of support by either the Canadian or US government. In 1929 the provincial government of British Columbia resurfaced the possibility of a highway as a source of tourism and economic activity for British Columbia. President Hoover commissioned a Board of Americans and Canadians to review the BC proposal. The Board reported out that the highway would be beneficial, could be constructed and recommended the US provide \$2.0M to BC and that BC contribute the remaining \$12.0M for the project. Black Tuesday, October 1929 put such lavish expenditures of public resources on hold for an indefinite period. By 1936, anticipating US involvement in a Pacific Ocean war, President Roosevelt resurfaced the idea of the trans-Canada highway; however, Canada feared being drawn into a project which would question her neutrality and refused to enter negotiations. December 7, 1941 substantially changed everything. Both nations recognized the vital, and immediate, need for a military highway across



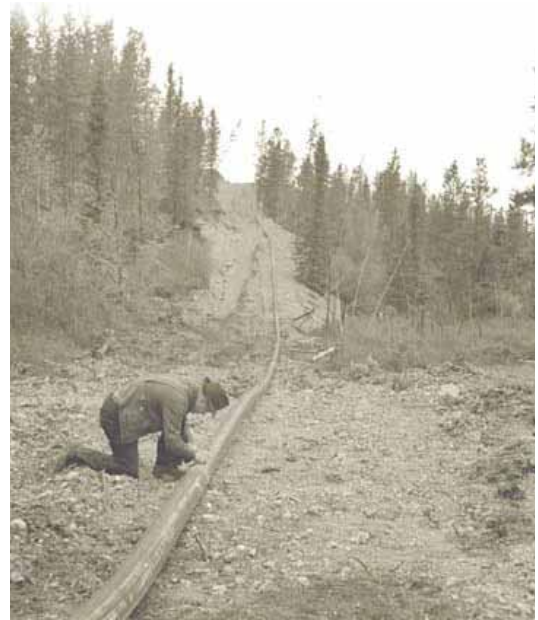
Canada. By February 1942, the US had agreed to fund the entire cost of the project and agreed that the highway would revert to the Canadian government at the end of the war. Reviewed and recommended by the Corps of Engineers on 6 February, and on 11 February, the Alaskan Military Highway is ordered to be built by President Franklin D. Roosevelt.



Soldiers of the U.S. Army Corps of Engineers meeting in the middle after completing construction of the Alaska Highway

1942

CANOL project: To counteract the initial threat posed by Japan's attack on Pearl Harbor and their incursion to the western Aleutians, the first joint effort of the U.S. and Canada was to start construction of the Alaska Highway - often called the was never pursued). One of the logistical problems involved ensuring a supply of oil for the thousands of pieces of equipment that would be used. Tanker traffic from California was now subject to attack by enemy forces, threatening the oil supply to both the highway project and the airfields along the Northwest Staging Route from Montana to Alaska. Those airfields were rest and refueling points for aircraft bound for Alaska, and for the Lend-Lease P-39s bound for Russia, to aid their fight against the Nazis. At the time, the safest potential oil supply appeared to be at Norman Wells, on the Mackenzie River. Oil had been reported at this spot as early as 1789, but the oil seeps were not staked until 1915. Five years later, the first drilling was undertaken, and in August, oil was struck. A small refinery was built, and by 1939 an 840-barrel-per-day refinery was producing enough oil for local needs. It was therefore decided to expand the Norman Wells field, and build a pipeline from there to a new refinery to be built at Whitehorse; this pipeline would be 600 miles long, passing through a virtually unknown land containing everything from swampy valleys to high mountains and raging rivers. From Whitehorse, a smaller pipeline would be built alongside the new highway, to Ladd Field, the Army Air Corps base at Fairbanks. On paper in Washington, the project, certainly one of the most massive ever attempted, appeared relatively straight-forward. In the summer of 1942, U.S. engineering troops




Inspecting the Canol pipeline.



and pipe were dispatched to the end of rails in Alberta, 285 miles north of Edmonton; from there, they were barged almost 1,100 miles to the riverbank opposite the Norman Wells refinery. At that point, a new camp - Camp Canol (for "Canadian Oil"), would be set up to house the thousands of workers who would be needed.

1942 A Recruiting Notice was posted on 15 June in Edmonton Alberta for personnel to construct the CANOL pipeline from Norman Wells YT to Whitehorse YT. A difficult project at best and the poster warned of the conditions to be expected on the job. It exclaimed "THIS IS NO PICNIC". It went on to describe the working and living conditions on this job as difficult as those encountered on any construction job ever done in the United States or foreign territory. Men hired for this job will be required to work and live under the most extreme conditions imaginable. Temperature will range from 90 degrees above zero to 70 degrees below zero. Men will have to fight swamps, rivers, ice and cold. Mosquitos, flies, and gnats will not only be annoying but will cause bodily harm." If you are not prepared to work under these and similar conditions--Do Not Apply--Bechtel-Price-Callahan'.

1942  **The Anchorage SAME Post is established with then Major Benjamin B. Talley as first Anchorage Post President along with 32 charter members.**

1942 Fort Greely is established as an US Army Air Corps field. Part of the Lend-Lease system Ft Greely served as a staging area for aircraft being ferried to Russia.

1942-44 Skagway is literally invaded by U.S. Army troops, who take over the Y&WP railroad for a major supply route to build the Alcan Highway. As many as 20 trains a day climb the pass. Over the next three years as many as 3,000 troops are stationed here. Near Skagway an oil pipeline is constructed along the railway for fuel shipments.

1942 In April, flying from the aircraft carrier, USS Hornet, Colonel James Doolittle, who grew up in Nome, leads a raid on Tokyo and other Japanese cities.

1942 The 4TH BATTALION Seabees was commissioned in Camp Bradford, Va., in May 1942 and shipped out of Bremerton, Wash. in June for Dutch Harbor, Alaska to provide, among other things, construction support, runway and dock construction and maintenance, and public works support to the Army, Air Corps and Naval units. The battalion was then divided into three groups: 200 men were sent to Eider Point, 350 to Unalaska village and the remainder stationed at Fort Mears



area, Amaknak Island. In August 1942, a detachment of 200 men was sent to Adak and Amchitka, in the Aleutians and remained there five months.

1942 In August, Ladd Field prepares to deliver the first airplanes to the Russians and advance Russian crews arrived. At its peak, up to 300 Russians were stationed in Fairbanks.

1942 In the November issue of "**The Military Engineer**" an article was published titled "The Strategic Route to Alaska" by Major Shelby A. McMillion, Corps of Engineers. In it the following was written "The Alcan Highway is a war project in every respect and the route was selected solely on the basis of military considerations. Differing widely from the routes that had been proposed before the war, the announcement of the route aroused a storm of protest. The author said, "Despite all the dire predictions of critics, the Alcan Highway will be completed in a total working time of nine months, the fastest roadbuilding job in history".

1942 The Alaskan Military Highway officially opens with a formal ceremony at Soldier's Summit, Mile Post 1061 near the south end of Kluane Lake. On 20 November 1,000 trucks were dispatched north from the Lower 48 to Alaska on the new highway.

1942 When the Japanese bombed Unalaska Island and invaded Attu and Kiska islands in June 1942, American defenses in the Aleutians consisted of an army and naval base at Unalaska and an army airfield on nearby Umnak Island, both 700 miles east of Kiska.



Adak Army Airfield, 11 September 1942

Although bombers could reach Kiska, they could not be escorted by shorter-range fighters. The need for an Aleutian advance base further west became urgent. Establishing a base on Adak, about 250 miles from Kiska, allowed U.S. forces to mount a successful offensive against the two Japanese-held islands. Construction began on September 1, 1942 and was completed by the end of 1943 with the first bombers carrying out missions from the base on September 14, 1942. As the most westerly American base Adak allowed for intensified bombing (with fighter plane protection) of the Japanese garrisons. As the most westerly naval operations base from the fall of 1942 to the end of the campaign, it provided support to the ships and submarines of the North Pacific Force in their fight against the enemy in



northern waters. Its excellent harbor provided shelter for the assembly of a large task force for the assault on Kiska. And its rugged tundra-covered terrain and fierce weather provided ideal conditions for training the Allied invasion force in amphibious warfare in the Aleutians. Had a northern invasion of Japan's Home Islands occurred, as was once proposed, Adak's Reserve Depot would have provided the essential materiel for such an undertaking. Attu, Kiska, and much of Adak are part of the Alaska Maritime National Wildlife Refuge, managed by the U.S. Fish and Wildlife Service since 1913.

1942 On 3 June Japanese planes from two carriers bombed Fort Mears at Dutch Harbor and fighter planes strafed the fort, the Navy station, and Unalaska village. Twenty-five soldiers and sailors were killed. The Japanese made a second attack the following day. In all, 44 were killed and 71 were wounded in the two attacks.

1942 On 3 October the Whittier Army Post was activated with one officer and 15 enlisted men.

1942 On 19 November Driving of the Portage to Whittier railroad tunnel was started. It was holed through a year later. This tunnel provided access from Cook Inlet to Prince William Sound and effectively provided an ice-free port to support Fort Richardson and Elmendorf.



Buildings burning after Japanese air attacks on Dutch Harbor, circa 3 June 1942.

1942 The SEABEE's 51ST BATTALION After formation at Davisville, R. I., Dec. 2, 1942, the 51st NCB trekked across country to Hueneme and then to Seattle, sailing for Alaska early in February and arriving on the 17th at Dutch Harbor. SEABEE's 45TH BATTALION Activated In the fall of 1942, the 45th NCB moved from Norfolk to Hueneme 28 December and sailed for Alaska on 21 January 1943. The Battalion reached Kodiak on 12 February, stayed seven months, and then divided into three parts before moving to Sitka, Adak, and Tanaga in September. SEABEE's 43RD BATTALION Organized at Davisville, R. I., in Nov. 1942 the 43rd NCB reached Hueneme Dec. 17 and sailed Jan. 2, 1943. The Battalion arrived at Kodiak, Alaska Jan. 10. Co. D transferred to Sand Point until July, when it returned to Kodiak. Another detachment of four officers and 96 men were assigned to Sand Point during August for 30 days duty. SEABEE's 38TH BATTALION Forming at Norfolk, Va., in November 1942, the 38th went to Seattle, by way of Hueneme. They shipped out Jan. 9. 1943, arriving at Kodiak, Alaska, five days later. After six months of duty at Kodiak, the Battalion divided into three sections, one going to Kiska, the other two to Adak. The Battalion regrouped at Adak on 5 December.



SEABEE's 32ND BATTALION: One tour of duty in the Alaskan sector was the history of the 32nd NCB before it was inactivated. The outfit arrived at Dutch Harbor on 22 December, and then moved to Adak in three echelons. The Battalion switched operations to Andrew Lagoon on 1 Aug. 1943. SEABEE's 21ST BATTALION formed at Norfolk, the 21st Battalion reached Hueneme on 22 September, and embarked for Alaska on 10 October. The Battalion operated from Dutch Harbor for 14 months, with detachments on Atka, Adak and Ogilaga. SEABEE's 22ND BATTALION Organized in late summer, 1942, the 22nd NCB left for the Alaskan Theater on 19 November. Both sections had reached Sitka by 7 December. The Battalion moved from Sitka to Attu on 6 July of the

next year. The SEABEE's 13TH BATTALION was commissioned at Camp Allen, Norfolk, Virginia on 13 July and soon thereafter transferred to Port Hueneme. The outfit left Hueneme on 15 August and embarked at Bremerton, Washington on 18 August, arriving at Dutch Harbor, Alaska on 26 August. The following Spring two detachments were sent to Akutan, Alaska, and returned to the Battalion in June and July. The SEABEE's 4TH BATTALION was commissioned in Camp Bradford, Virginia in May 1942 and shipped out of Bremerton, Washington in June for Dutch Harbor, Alaska. The battalion was then divided into three groups: 200 men were sent to Eider Point, 350 to Unalaska village and the remainder stationed at Fort Mears area, Amaknak Island. In August 1942, a detachment of 200 men was sent to Adak and Amchitka, in the Aleutians and remained there five months. In June 1943.

1943

SEABEE's 5TH SPECIAL BATTALION was formed at Camp Peary on 30 January and moved to Port Hueneme in March and to Seattle in April. Embarking at Seattle on 10 April the Battalion arrived at Dutch Harbor on 18 April and Section One disembarked. Section Two continued to Adak and landed on 21 April. On 10 May 10, a detachment of Section Two was assigned to duty at Sand Bay. Late in July Section One left Dutch Harbor in three detachments to join Section Two at Adak. On 16 September, the Sand Bay detachment rejoined the outfit at Adak. The first section sailed from Adak, bound for home on 6 February 1944, and arrived at Camp Parks on 22 February of that year. The second section returned to the States the following month and arrived at Camp Parks on 13 March. On 22 June 1944, Detachment One left Camp Parks for Seattle to join the petroleum exploring expedition to Pt. Barrow. On 11 July 1944 Detachment Two followed suit.



1943 Haines cutoff Highway was constructed to connect with the Alcan at Haines Junction.

1943 Colonel B. B. Talley participated in reconnaissance and construction oversight throughout Alaska including spending much time on the Aleutian chain, learning firsthand of the difficulty of working, engineering, building, logistics, and travel throughout the expanses of Alaska, and often in harrowing wartime circumstances and horrid weather. He became close with Colonel William Eareckson, who he deemed to be a tremendous leader with World War I infantry experience and a tremendous reputation of flying anything under any circumstances.



Benjamin B. Talley (right) receiving the Distinguished Service Medal from Major-General Simon Bolivar Buckner Jr. (left)

1943 The USACE worked closely with Alaskan Natives to ascertain critical firsthand knowledge of weather and terrain issues. They also assisted in the procurement of food supplies and construction materials as well as supporting logistics.

1943 Fort Randall Army Air Corps Base was one of two secret airbases in the Aleutian Islands formed after the Japanese bombed Dutch Harbor in June 1942. Born from



Cold Bay sometime in the late 20th century. Cold Bay Airport's runways are visible.



the tundra, the airstrip in Cold Bay was a key launching site for allied operations in the Aleutians. In the following years, the airstrip served military operations during World War II.

- 1943** Naknek Air Force Base was established near King Salmon for service as an Air Transport Command Northwest staging site. In the 50s the base was renamed King Salmon Air Force Station.
- 1943** On 23 April, workers completed the Portage to Whittier railroad spur, which comprised a 2-½ mile tunnel through Maynard Mountain and a 1-mile tunnel through another mountain later named Begich Mountain. Infrastructure, including a power plant, oil storage, and living and administrative facilities, was constructed in Whittier over the next couple of years.
- 1943** On 25 April Colonel Talley received a radio message from General Buckner ordering him to make a reconnaissance of Voluble—the code name for Shemya, a small, flat, island located just east of Attu. "You have pioneered and constructed the airfields that have made the defense of Alaska possible," Buckner informed Talley, and "it is now my desire that you personally select the site for the field that will form the spearhead of our attack against Japan."
- 1943** CANOL Project: - In the spring of 1943, the first women arrived at Camp Canol, and a distinct change in the social nature of the camp occurred - variety shows were held, choral groups started, and a regular newsletter was produced. Morale on the project hit the highest highs, and the lowest lows, judging by comments of the day. The project was regularly under fire from many directions, for reasons ranging from cost over-runs to a rumored lack of enough producing wells to ever fill the pipeline. For the black regiments, being assigned to the hardest labor work of the project was compounded by a critical shortage of Arctic-weight clothing, so that they were forced to burn lumber and bridge timbers to keep warm. Despite all the weather, geographic, logistical, and political problems, though, the pipeline did reach the new Whitehorse refinery - the final weld was laid on 16 February 1944. With more pipeline having been built to Fairbanks, Watson Lake, Skagway, and Haines, 25,000 men (and about 150 women) had built 1,800 miles of pipeline and 2,000 miles of road in only 20 months. The final price tag for construction was about \$130,000,000. It was a short-lived success, however; on 1 April 1945, the Whitehorse refinery was shut down. Leaks and spills were common along the pipeline, and maintenance costs were extremely high. The Whitehorse refinery was sold and dismantled in 1947, then moved to Edmonton to process crude oil from the recently discovered Leduc oilfields. The pipeline from Skagway to Fairbanks continued to be used in a limited capacity until 1958, delivering fuel to Whitehorse, Fairbanks, and other points along the Alaska Highway.



1943 On 11 May 12,500 US soldiers landed at Attu at Austin Cove, Leyte, and Massacre Bay to face what they thought to be 500 Japanese defenders on the occupied island. However, the Japanese had five times that number of troops. The Japanese were desperate but fiercely loyal to their cause—withdrawing into the earth, highland nests, and shoreline bases. For over two weeks, battles raged over the tiny island between the US and Japanese occupying forces.

1943 On 29 May the U.S. Army activated the Shemya post with 236 officers, seven of them women, and 4,565 enlisted men.



First landing on Shemya AAF, 24 June 1943

1943 On 30 May only 28 of the roughly 1,400 Japanese who had been in the valley the day before survived the intense battle. The rest were killed in battle or committed suicide by holding hand grenades to their chests. When the Americans came across the Japanese hospital tents, they found all the wounded had died, killed by their Japanese doctors. The Americans buried more than 2,300 Japanese in mass graves on Attu. The battles on

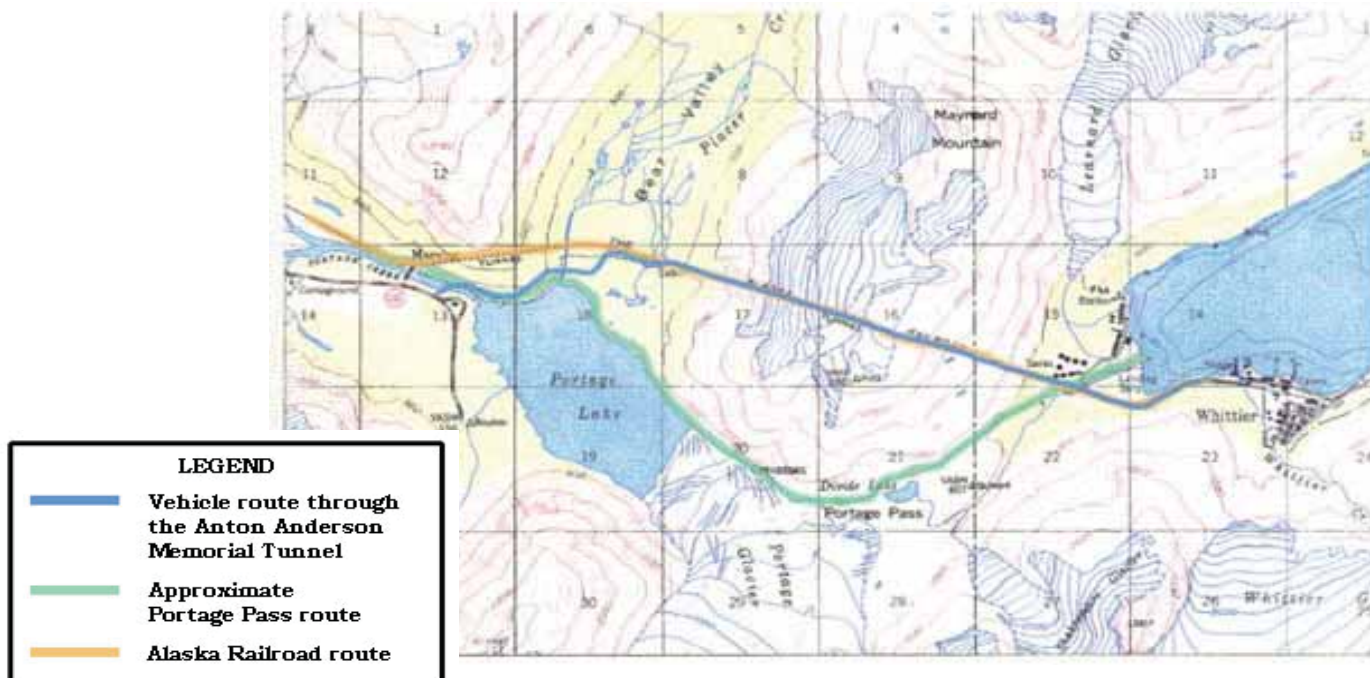


Soldiers unloading landing craft on the beach at Massacre Bay, Attu, on 12 May 1943.



Attu, culminated with the one at Engineer Hill, ranked second in casualties (behind Iwo Jima), compared to numbers of troops engaged. A small number of noncombatant units were stationed on top of Engineer Hill. Under the command of General Archibald V. Arnold, they quickly organized a defense made up of medics, engineers, and service personnel who began hurling hand grenades at the Japanese. Unfazed, the Japanese continued to advance, and desperate hand-to-hand combat erupted as the defenders fought for their lives.

- 1943** On 8 June Naval Air Facility Attu, Aleutian Islands is established.
- 1943** On 29 June, Naval Auxiliary Air Facility, Shemya, Aleutian Islands is established.
- 1943** On 19 July the Alaskan Military Highway is renamed the "Alaska Highway".
- 1943** On 28 July, 5,000 Japanese invaders left Kiska under the cover of fog, after unbearable daily Allied bombardments. For the Americans, this victory came as a surprise because they were convinced the Japanese Suicide Attack on Attu would be in the mindset of the Japanese warriors to not abandon Kiska without a fight. The Japanese claimed their departure from Kiska as a victory, but that was deemed ridiculous at the time as the Japanese had quit the field.
- 1943** Fort Richardson National Cemetery opened. The site had been set aside to bury soldiers of any nationality that had died in Alaska during WWII.
- 1943** On 18 September SEABEE's arrived at Adak, in the Aleutians. On 2 December, a complement of 68 enlisted men from the 66th Battalion was added to CBD 1022, and 172 more from Draft 2144 were received a month later.
- 1943** In October, Ladd Field is transferred to Air Transport Command.
- 1943** Two tunnels are built through the Chugach Mountains to allow rail access to Whittier, a military port and fuel depot, to support the war effort. A new Anchorage passenger depot is completed in December.
- 1944** Whittier opens a second railroad port. Diesel locomotives began to replace steam engines, a process completed in 1966 when the last steam engine was sold.



1944 Fort Richardson was used briefly as a holding center for several family members of Alaska Japanese/Americans arrested after Pearl Harbor. Fifteen Japanese/Americans and two German/Americans were temporarily interned at Fort Richardson before being transferred to other camps.

1944 SEABEE's CBD 1058 Organized at Quoddy Village, Me., CBD 1058 was transferred to Seattle, Wash., on 13 June. On 20 July, the outfit embarked at Tacoma, Wash., and arrived at Point Barrow, Alaska, on Aug. 9 to explore Petroleum Reserve No. Four. In September 1945, the unit was still located at Point Barrow. SEABEE's CBD 1052 Commissioned in March at Peary--this unit reached Hueneme in April and left for Adak, Alaska, on 14 September. The outfit was still in Adak a month after the Japanese Military had quit.

1944 In the midst of World War II, the Aleutians became a hub for US military forces, with more than 40,000 troops stationed in the region after the Japanese occupied the islands of Attu and Kiska. A small group of soldiers from the 11th Army Air Force were stationed on Chuginadak Island, where Mount Cleveland is located, when it erupted, killing one soldier.

1944 CANOL Project: Dedication ceremonies for the Canol refinery in Whitehorse, April 1944. Oil flowed until March 1945. Three agencies were responsible for delivering the crude oil to a refinery in Whitehorse: the U.S. ARMY ENGINEERS; Bechtel-Price-Callahan, a consortium of American contractors; and Imperial Oil Limited.



IMPERIAL OIL drilled additional wells at Norman Wells; the U.S. Army built the Canol Road; and Bechtel-Price-Callahan constructed the pipelines, installed storage facilities, and developed a refinery at Whitehorse. The plan was to have oil flowing by the fall of 1942, but the logistics of moving equipment and supplies to NORMAN WELLS and the remote Canol route proved even more difficult than the construction of the Alaska Highway. Eventually, sixteen hundred miles of pipeline and telephone lines were completed by 16 February 1944 at a total cost of \$134,000,000 – five times the estimated cost. As for the operation of Canol, oil flowed through the pipeline from April 1944 until it was shut down the following March. It was estimated that 1,858,000 BARRELS of crude reached the Canol refinery in Whitehorse. This figure has been disputed - many sources feel that the amount was less than half that. Canada did not exercise its option to buy the facilities and the refinery was dismantled and shipped to Alberta in 1948. Most of the pipe was torn up and sold for scrap. This was the first oil pipeline to be built in the north and there was no knowledge or consideration of possible environmental damage. The pipeline was destructive to the environment in that it had disturbed permafrost, causing flooding and erosion. There were oil spills resulting from cracked pipe and repeated breaks from fast-tracked welding. A storage tank on the banks of the Mackenzie River also burst while two-thirds full, sending its contents into the water. FOREST FIRES, set accidentally or deliberately for smudge purposes, burned out of control during the summer of 1943. The project was conceived in haste with the prospect of imminent enemy invasion along the coast. The original Canol project grew to include 6 SEPARATE PROJECTS (although CANOL 5 was never approved or completed):

CANOL 1 – Norman Wells to Johnson’s Crossing then along the Alaska Highway to Whitehorse: road, pipeline, and telephone lines

CANOL 2 – Skagway to Whitehorse: pipeline (for oil shipped to Skagway port)

CANOL 3 – Whitehorse to Fairbanks: pipeline

CANOL 4 – Whitehorse to Watson Lake: pipeline

CANOL 5 – Fairbanks to Nenana: pipeline

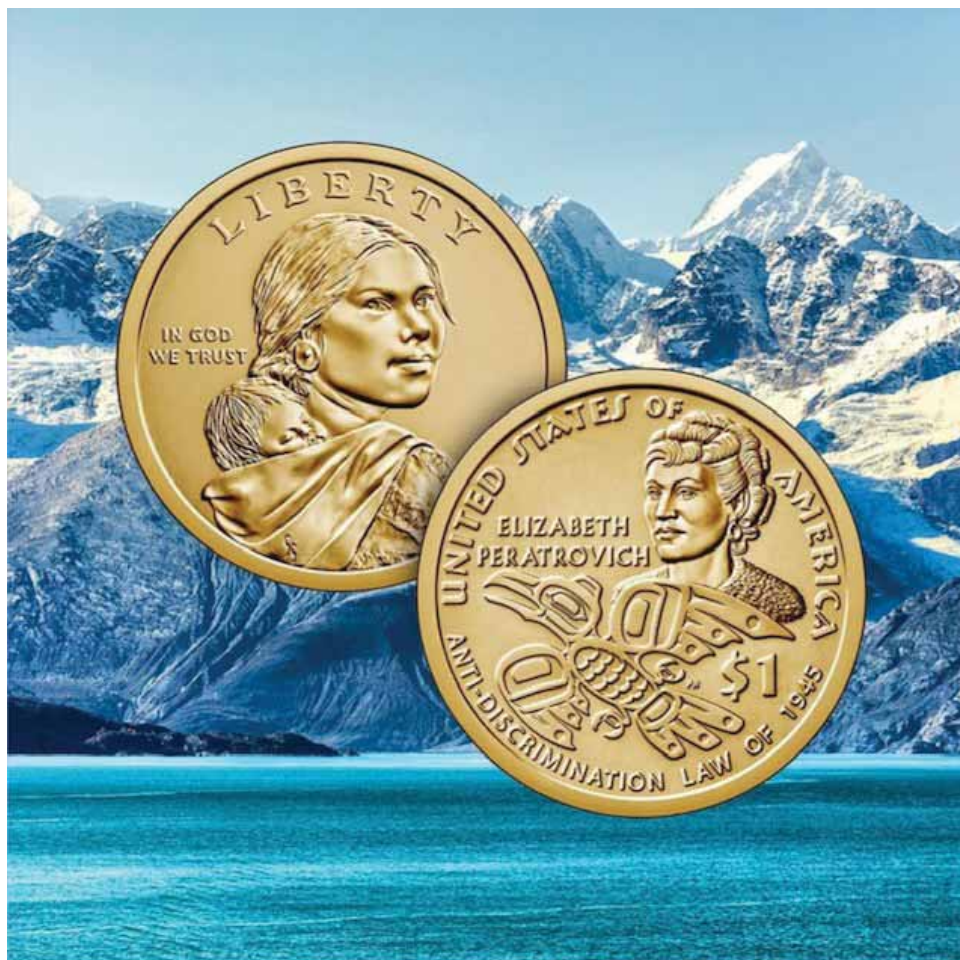
CANOL 6 – Peace River to Norman Wells: winter trail to transport supplies and equipment necessary for Canol 1

1944 Vice President Henry A. Wallace returning from China and Siberia stopped at Ladd Field.

1945 Fort Greely near Delta Junction was deactivated.



1945



The

Alaska Anti-Discrimination Act of 1945 is one of the best-known pieces of legislation in Alaska history. Elizabeth Peratrovich was the last to testify before the territorial Senate that voted on the bill in 1945, and her impassioned testimony was considered decisive. In 2020 a \$1 coin was issued commemorating Elizabeth and this landmark legislation.

1945

USMC ground assault on Iwo Jima begins after several months of naval gunfire and aerial bombing of targets on the island. The ground battle for Iwo Jima, which got under way on 19 February 1945, represented a battle of attrition in the truest sense, with losses in men and materiel far out of proportion to the size of the objective. Aside from its tactical value, Iwo Jima assumed strategic importance in signaling the Japanese government and people



The island of Iwo Jima with Suribachi



that the United States was determined to bring the war in the Pacific to a victorious conclusion.

1945 On 18 June General Simon Bolivar Buckner, who had commanded all troops in Alaska during the early years of the war, was killed at Okinawa.

1945 On 18 December, the end of World War II, the Alaskan Air Command (AAC) is established. The ACC assumed jurisdiction of former Eleventh Air Force assets and headquartered at Davis Army Airfield on Adak. The initial mission of AAC was the consolidation of wartime US Army Air Forces in Alaska and training of those forces remaining after demobilization. Shortly after the Japanese capitulation, most airfields in the Aleutians were placed in standby status.



2B-26C 44-35844 at Davis AFB, 1948

1945 After troops leave Skagway, U.S. Health Service opens a 90-patient tuberculosis sanitarium in the army hospital across the river. Nurses come from Sisters of St. Ann in Victoria, B.C. It closes in 1947.

1946 In February, US military leaders perceived North America as "Wide Open on Top," and US Army Air Force Chief of Staff, General Carl Spaatz, enunciated what became known as the polar concept, which placed air defense priority with the "polar approaches, namely the North Atlantic and Alaska."

1946 The Cold War between the US and USSR begins and lasts until 1991. Alaska became essential to counter Soviet 4-engine, long-range nuclear weapon bombers from Soviet Arctic bases near Alaska. Bombers were forward based at Eielson Air Force Base (AFB) and the runway extended to 14,500 feet. Bombers were base rotationally at Elmendorf when Eielson was deemed too cold for operations. The military mission in Alaska centered on maintaining a deterrence against Soviet aggression and providing a training environment for Arctic and cold region warfare.



Alaskan Air Command Headquarters Building, Elmendorf Air Force Base, 1960s



- 1946** Major General William Hoge, Deputy Commander of the U.S. Army Engineers, came to Alaska in 1946 to study the existing air defense system and suggest new radar defense requirements. The Hoge Board recommended 36 Aircraft Control and Warning (AC&W) radar sites in Alaska. An Alaska Air Command study recommended 58 radar sites. An air defense study team headed by Lt. Col. H.J. Crumley devised a third, selected downsized scenario in 1947. This plan called for 13 strategically located Alaskan AC&W sites to supplement those established at Elmendorf, Ladd, King Salmon, Nome, and St. Lawrence Island.
- 1946** On 1 October, the Alaskan Air Command (AAC) Headquarters was re-established at Elmendorf Field.
- 1946** US military spending increased, markedly so for Alaska, and new weapons systems were developed and planned for fielding to counter the new and onerous Soviet nuclear threat.
- 1946** Only a year after the nuclear bomb was dropped on Hiroshima, the Atomic Energy Act created the Atomic Energy Commission (AEC). AEC's mandate was to pursue peaceful uses for atomic fission. Alaska was viewed as a potential platform for such uses.
- 1946-50** WP&YR takes back operation of railroad and takes over fuel operation. Tracks are removed from Broadway in 1947. A fire almost destroys the Mission School. Dyea Road constructed by Alaska Road Commission. Tourism pioneers Itjen and Pullen pass on. Pullen House eventually closes, but Rapuzzi keeps Itjen's dream alive at Soapy's.
- 1947** The Arctic Research Laboratory at Barrow was established in 1947 and has supported a vast number of atmospheric, biological, oceanic, and terrestrial research activities.
- 1947** Following the National Security Act of 1947, the United States Air Force assumed control of the original Army Fort Richardson and Elmendorf Field, gaining full ownership of its facilities in 1951.
- 1947** The Alaskan Command was established on 1 January and was headquartered at Elmendorf. It became a unified command under the Joint Chiefs of Staff, drawing from lessons learned during World War II when a lack of coordinated effort initially hampered operations to drive the Japanese from the western Aleutian Islands of Attu and Kiska.



- 1947** In January, the Soviet Union created the "Ice Curtain" ending an agreement allowing Eskimos to move freely between Alaska and Siberia. This affected the two Diomedede Islands (located 2 miles apart) as well as other villages that had families and friends located in Siberia.
- 1947** Elmendorf Field officially became an Air Force Base on 28 March for service as a combat airfield.
- 1947** Fort Greely reactivated as an Army Post for US Army troops.



Historic photo from Fort Greely's historical files.

- 1947** On 17 April the Coast Guard Air Station was commissioned as an Air Detachment at the navy base with 1 PBY Catalina aircraft, 7 pilots, and 30 crewmen.
- 1947** President Eisenhower, in his capacity as US Army Chief of Staff, visited Alaska in August. He believed the western and northwestern part of the Alaska territory should be set aside for military defense.
- 1947** Saw the military becoming the biggest employer in Alaska.



1947 AAC interceptor squadrons were initially equipped with the very long-range P-51H Mustang, which were replaced with the P-61 Black Widow airframes later that year.

1947 AAC interceptor squadrons were initially equipped with the very long-range P-51H Mustang, which were replaced with the P-61 Black Widow airframes later that year.

1947-1955 In the mid-1940s, Anchorage 's next major power source sailed into the port. The Sacketts Harbor was a 10,000-ton T2 tanker (see photo) that had broken up in the Aleutian Islands. The ship's drive was electric, so Anchorage purchased it to generate electricity. From 1947 to 1955, Sacketts Harbor furnished 54 percent of the city's power requirements.



The stern of the SS Sackett's Harbor anchored on the shore of Cook Inlet provided power to supplement that of the original Eklutna power plant from 1947-1955. Image: <https://www.echoak.com/2018/10/eklutna-dam-stirs-memories/>

1948 Congress approved \$13 million to fund the establishment of international airports at Fairbanks and Anchorage.

1948 Strategic Air Command established a significant presence in Alaska by this year, initially due to its strategic reconnaissance mission. The first efforts were in photo reconnaissance and mapping, with very long-range B-29 Superfortress reconnaissance aircraft based at Ladd AFB. With growing tensions in US-Soviet relations, SAC explored the possibility of attacking Soviet targets via great circle routes over the North Pole as part of "Project Nanook". However, Ladd AFB, due to the geography of being near Chena River, was unsuitable for SAC's postwar B-36 Peacemaker bomber as well as the new jet B-47 Stratojet. SAC chose to expand Ladd's former World War II Air Transport Command satellite field, known as "Mile 26", due to its distance from Fairbanks. Mile 26, which became Eielson AFB, had its runway lengthened to 14,500 feet and a major construction project to expand and build new support facilities at the base was undertaken in the late 1940s. The new runway at Eielson was the longest runway in North America at the time. Its planned usage was to support SAC deployments of its intercontinental bombers closer to the Soviet Union for possible attacks over the Arctic. SAC units followed and Eielson hosted B-29, B-36, B-47, and B-50 wings, which were placed on alert and ready to strike on a moment's notice. These deployments lasted until 1963. Eielson also hosted deployed KC-97s, and later the KC-135s tanker aircraft.



1948 On 29 March a news release informed the public as to the Cold War role of Eielson Field. The base described as "hitherto highly-secret" That year the largest hangar in Alaska was erected at Eielson, the installation being one of only four in the United States capable of launching B-36 flights (the other three were Wright Field in Ohio; Eglin in Florida; and Fort Worth in Texas). The B-36 was announced to carry an atomic bomb to any inhabited region and return home without refueling with a range of 10,000 miles, and the US Air Force (USAF) had 100 of them on order.

1948 On 18 September Eielson Air Force Base was formally dedicated.

1948 In November atomic bomb capable USAF B-50As were rotated to Eielson AFB. One of the five B-50As sent to Alaska crashed, while the other four were grounded until faulty equipment was replaced.

1948 Steve Homer, one of the veterans who purchased property of the surpluses of Fort William H. Seward, started the first Haines-Skagway-Juneau ferry system with the landing-craft "Chilkoot".



*M/V Chilkat taken in Ketchikan, Alaska.
Photo from 2 August, 1985 by Jim Thorne, Wett Coast on Flickr.*

1949 The US Army established a Cold Regions Testing Center at Fort Greely to test all types of Army equipment and personnel for performance in extremely cold regions.

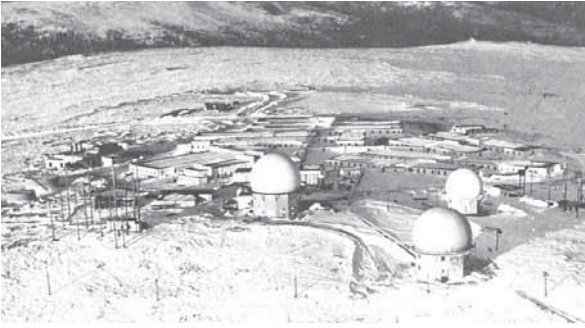
1950 The 1950s were dubbed the "Feverish 50s" by the USACE Alaska District at the time which was responsible for a huge territory-wide construction program in some very formidable locations. Fort Richardson and Eielson Air Force Base were built as new bases for the Defense of the United States. Forward Operating Bases were built at Galena, King Salmon, and Shemya Island. Radar Stations were built around Alaska. Contracts were awarded during the spring of 1950, and work was started shortly afterwards on constructing a line of coastal surveillance, interior ground control and intercept and control center radar sites known as the Aircraft Control and Warning (AC&W) system. The Korean War provided more funding, and AAC decided to build two additional ground-controlled intercept sites to cover radar gaps in the interior. Since the two sites selected, Sparrevohn and Indian Mountain, were accessible only by air, and contract costs were potentially high,



AAC elected to use military construction units. Work was begun on the two sites during the summer of 1951.

- 1950** Work on the AC&W System began in March to replace the temporary radars used in World War II. The first ten stations came on-line in September 1951, and the system later expanded to 18 seven years later. It consisted of coastal surveillance stations that provided early warning and the interior AC&W stations that guided forward deployed fighter interceptors to bomber targets. The widely scattered and isolated radar sites required reliable communications for passing data and voice information. High Frequency communications had proven unreliable and tests of other means were unsatisfactory. Construction of the White Alice Communications System consisting of state-of-the-art tropospheric scatter, distinguished by their large billboard antennas, and a system of microwave sites began July 1955. The system of 33 communication sites had taken three years and \$150 million to build. Some 3,500 people had worked on it. On 26 March 1958, the USAF accepted the system.
- 1950** The Anchorage population hits 35,000; the Territory of Alaska's population was 128,000.
- 1950** On 12 April a contract was awarded to construct a Radar site at the King Salmon Air Force Station (formerly known as Naknek) for continental defense. The radar site would provide the USAF added early warning of an attack by the Soviet Union on Alaska. Construction began shortly afterward and was completed the next year at a cost of approximately \$3.7 million.
- 1951** The Territory of Alaska purchased the "Chilkoot" from Steve Homer - he ran it for them the first year. This was the beginnings of the Alaska Marine Highway System (although it was not officially established until 1963) that now services all of Southeast Alaska, the Gulf of Alaska, into Prince William Sound, the Aleutians and makes regular runs to Bellingham, Washington.
- 1951** In November, King Salmon became operational as a ground-controlled intercept (GCI) site. Initially the station also functioned as a GCI and warning station. As a GCI station, the squadron's role was to guide interceptor aircraft toward unidentified intruders picked up on the unit's radar scopes.
- 1951** White Pass becomes a pioneer in the shipping industry with containerized cargo: from the docks in Vancouver, loaded on the ship Clifford J. Rogers (first container ship in the world) for the journey to Skagway, then onto trains bound for its destination in Whitehorse.



- 1951** Murphy Dome and Fire Island became operational in September as control center sites. They were followed by King Salmon (control center), November; Tatalina and Campion (ground control and intercept), April 1952; Cape Lisburne, February 1953; Cape Romanzof, Tin City (where one can often see Russia at Cape Prince of Wales, the Westernmost Point of the mainland Americas), and Northeast Cape (all surveillance sites), April 1953; Indian Mountain, November 1953; Sparrevohn, March 1954; and Cape Newenham (surveillance), April 1954. Additional surveillance sites were later added. Kotzebue and Ohlson Mountain (near Homer) became operational in February 1958, Middleton Island in May 1958, Unalakleet in April 1958, and Bethel in July 1958. Fort Yukon became operational as a ground control intercept site in April 1958. The surveillance sites at Bethel, Middleton Island, and Ohlson Mountain were closed on 15 May 1963, leaving a void in the radar coverage to the south. AAC Headquarters, and, to some extent the Alaskan Command, provided command and control until the reactivation of an AC&W control group in 1977.
- 
- Murphy Dome AFS, Near Fairbanks in winter*
- 1951** The F-94s in use in Alaska were afterburner-equipped for higher interceptor speeds, replaced most of the Twin Mustangs of the 449th FIS at Ladd; however, about a dozen F-82s (of various types) were retained due to their longer flight endurance and their ground support capability that the F-94 lacked.
- 1951** The USAF and US Army trained together as Army ground units in Alaska were very constrained in their movements due to the challenging geography of the land. Most movements were up and down roads and paths, and railroad rights-of-way. The F-82s would fly low along the terrain then pop up and initiate simulated strafing runs against them, causing the troops to take cover by hitting the muddy tundra. On occasions, the Twin Mustangs would also drop tear gas canisters, simulating gas attacks on the units. About 100 F-94A and B models arrived at Ladd, enough to equip all three interceptor squadrons. Of the ten remaining Twin Mustangs, only one or two were operational at any one time. Another useful use of the Twin Mustangs was their ability to perform reconnaissance along the Siberian border and monitor Soviet use of former Lend-Lease auxiliary airfields near the coast.
- 1951** On 13 February, then Senator Lyndon B. Johnson transmitted to the Senate Committee on Armed Services a study of Alaska, carried out the previous year to



determine Alaska's defense needs. Senator Johnson wrote, "At the outset we agreed that no outpost of America's defenses was of greater strategic importance than Alaska." Johnson also said, "A strong Alaska is essential to our security. Our continental defenses can be no stronger than our Alaskan defenses. The security of every American home begins in the snows of Alaska."

1951 The Anchorage Airport was built. Initially it had only a 5,000-foot north/south runway and an 8,400-foot east/west runway.

1951 Construction on the 125-mile long Seward Highway was completed from Anchorage to the coastal community of Seward. The first stretch from Seward to Kenai Lake was 18 miles long and completed in 1923. By 1928 another section running between Moose Pass and Hope was completed. The mile 18 bridge finally was done by 1946, ending the major highway construction completion delay.

1951 The Department of Defense (DoD) began a coordinated effort to resupply the remote Alaskan air defense sites, including the AC&W sites, the Distant Early Warning (DEW) line sites, the White Alice communication sites and the Forward Operating Bases at the Galena and King Salmon airports. The remoteness of these sites, and the economics and difficulties of Alaskan logistics dictated a resupply level of cargo greater than a year out.



Map of the Distant Early Warning (DEW) Line

1952 On 22 November a Douglas C-124 Globemaster II departed McChord Air Base in Washington State on the way to Elmendorf AFB near Anchorage, with a crew of 11 and 41 Army and Air Force passengers. The flight was recorded as passing Middleton Island in the Gulf of Alaska. Around 4 pm, a distress call was received by the pilot of a Northwest Orient Airlines passenger aircraft. The reception was extremely poor, but the Northwest captain made out the sentence, "As long as we have to land, we might as well land here." Weather near Elmendorf at the time was unbelievably bad with heavy clouds. Nearly a week later, on 28 November 1952, aircraft wreckage was found on the south side of Mount Gannett by the Fairbanks Civil Air Patrol, and the 10th Air Rescue Squadron spotted the tail section of the C-124 sticking out of the snow at an elevation of about 8,100 feet, close to the summit of Mount Gannett. Aircraft wreckage and human remains



were not recovered due to drifting snow up to hundreds of feet deep and avalanches and although they tried, efforts were suspended after a week.

- 1952** The construction of the first terminal for the Anchorage International Airport was started.
- 1953** The Department of Defense (DoD) named the grand logistics program to resupply remote Alaskan sites, "Mona Lisa". It relied on the US Army, Navy, and Air Force working in coordination. Beginning in Seattle, the USAF procured supplies and oversaw loading onto US Navy barges. The US Navy carried the cargoes to the sites and the US Army loaded them onto smaller barges for transport to the beach. Onsite USAF personnel unloaded the cargoes and transported them to storage areas.
- 1953** The F-86H Sabre-equipped 720th Fighter-Bomber Squadron was activated in December to evaluate the use of the Sabre as an interceptor. However, the mission was best performed by rotating existing Tactical Air Command squadrons from CONUS to Alaska instead.
- 1953** The Alaska District began a multiyear project to construct a coal-fired power plant at Elmendorf AFB to address the needs of the growing mission and population.
- 1953** The first Terminal at the Anchorage International Airport officially opened.
- 1953** The bounty on Bald Eagles that had been established in 1917 was removed. Though claims that resulted in the bounty being imposed in 1917 were later largely discredited, the bounty system lasted for 36 years and led to the killing of a confirmed 120,195 eagles. Undoubtedly countless more were taken for which no bounty was paid.
- 1953** The article "Transportation in Alaska" written by Colonel John R. Noyes, Corps of Engineers was published in "**The Military Engineer**" in the March-April edition. In it he said "The Geographical position of Alaska, at the extreme Northwest corner of the Continent, and its rugged physical aspect present special problems to the engineer and the administrator. Although continentally connected to the United



States, Alaska has, until recently, been almost as isolated by geographic factors as if it were an island."

- 1954** In October the Alaskan Command started planning and installing the Nike Ajax missiles, and through several requirement changes and missile iterations, the Nike Hercules was eventually the missile defense system fielded by 1959 with systems around Anchorage and Fairbanks.



MIM-14 Nike-Hercules

- 1955** The White Alice Communications System (WACS) was constructed. WACS was a USAF telecommunication network with 80 radio stations that used tropospheric scatter for over-the-horizon links and microwave relay for shorter line-of-sight links. Sites were characterized by large parabolic, tropospheric scatter antennas as well as smaller microwave dishes for point-to-point links. They connected the AC&W and DEW Line sites, and the Ballistic Missile Early Warning System to Command and Control Facilities. The USACE, Alaska District surveyed and selected each one of the original sites and constructed many original sites. These original sites were selected by survey teams testing the propagation path by setting up communication towers at each remote site during winter months. The testing process was made more strenuous because most of the sites evaluated were far from civilization on remote mountain peaks.
- 1955** The U.S. Bureau of Reclamation completed construction of a new larger plant on the Eklutna River and the city contracted for 16,000 kilowatts of generating capacity from that plant. At the same time, "Little" Eklutna was transferred to the federal government.
- 1955** A group of Anchorage businessmen studied building a crossing of the Knik Arm, estimating it would cost \$25 million.
- 1955** In the September-October issue of "**The Military Engineer**", Brigadier General John R. Noyes, Alaska National Guard Adjutant General of Alaska, wrote an article titled "The Alaska Highway Today". In it he said "This road, originally the Alcan Highway pioneered by Army engineers during World War II, was built as an emergency overland route to Alaska. Cut through rugged, uninhabited, and partly unexplored territory, the road was to be used as a supply route if the enemy were



successful in blocking the shipping lanes in the Pacific from American west coast ports to Alaska. That such a situation did not develop is fortunate because supply over this road would have been a poor substitute for the well-established sea transportation. As a result of this war effort, however, a rich and beautiful section of North America has been opened for development, utilization, and enjoyment. With maintenance and improvement by civilian highway agencies, this road may become the center of a road network throughout the northwest area, bringing settlers and travelers to the region in growing numbers and leading to its future prosperity and security."

- 1955** In November, an F-84 Fighter jet crashed into base housing at Eielson AFB killing 12 in addition to the pilot.
- 1955** The Fairbanks-Eielson Pipeline was constructed in 1953-1954 and became operational. The pipeline transported various fuels from Haines to Fairbanks, including jet fuel to Eielson AFB. The pipeline was taken out-of-service in 1956 between Fort Wainwright and the North Pole MAPCO refinery in 1992 and removed.
- 1955** The Haines Fuel Terminal Alaska: Early Army Corps of Engineers military construction programs in Alaska included building military forts and air bases in preparation for World War II. When the Alaska District was created in 1946, it received Alaska military construction authority from the War Department. Three years later civil works responsibility came from the Seattle District. The District constructed two military fuel pipelines, one from Haines to Fairbanks in 1955 and another one from Whittier to Anchorage in 1967. The Haines tank farm was built to supply fuel to Eielson AFB (nearly 800 miles away) in 1954. Former USACE Alaska District Engineer Col Sheldon Jahn was born in Haines as his father was in command of the fuel depot.
- 1955** In "The Military Engineer" November-December Issue, an article authored by Warren George appeared titled "The Alaska Pipeline". In it the article describes the terrain, weather, and logistics challenges in planning the pipeline route and eventually building it and putting it into operation. The article concluded "As a result, the pipeline represents a slack chain length of 626 miles. It follows in general the Haines Cutoff Road from Haines to Haines Junction on the Alaska Highway and then up the general route of the Alaska Highway to Ladd-Eielson Air Force Bases, making a connection to the Fort Greely Army Installation en route."



1955-1989 The Haines to Fairbanks Military Pipeline and the Tank Farm- Under military

supervision, civil service employees operated the Haines to Fairbanks military pipeline from 1955-1971. The prime mission of the system was low cost delivery of vast quantities of JP-4 fuel to Eielson AFB for use by the Strategic Air Command (SAC) B-47 and B-52 bombers. The pipeline was part of the American policy of deterrence during the Cold War and played an important social and economic role in the Haines area. Prior to 1955, fuel for military bases throughout the interior of Alaska was supplied primarily by the Alaska Railroad at an approximate cost of \$.10/gallon from Anchorage to Fairbanks. Large quantities and a secure supply of jet fuel were needed at low cost. An 8" diameter pipeline presented a smaller military target than a railroad and at approximately \$.01/gallon Haines to Fairbanks, it provided cheaper shipping costs. A decision was made to construct a pipeline with



*Haines to Fairbanks Pipeline. Photo
DEC.Alaska.Gov.*

dock and storage facilities for the operation of a multi-product fuel system. The route from Haines to Fairbanks was selected for three reasons:

1. The Haines Highway provided a ready-made corridor
2. Haines, the southern terminus of the pipeline, was a deep-water, ice-free port capable of handling fuel tankers with a 250,000-barrel capacity
3. Haines already had a dock able to handle traffic generated by the construction of a six-hundred-mile pipeline.

Shipments of pipe, construction materials and equipment began arriving in 1954 and were trucked to staging areas throughout Alaska, the Yukon, and British Columbia. By early summer of 1955, the line was finished. Hydrostatic tests completed on the integrity of the pipeline itself determined that the pipe could withstand the high pressures needed to move fuel rapidly and without mixing. The first tanker arrived at the Haines Petroleum Oils and Lubricants (POL) dock in June 1955. The Scottish made pipe ran from tidewater at Haines, up the Chilkat River valley and generally paralleled the Haines Highway to Haines Junction, Yukon Territory. The booster pump station at mile 48 on the highway lifted the fuel over the highest point on the entire line, the 3600' Chilkat Pass. At Haines Junction, the line turned northward along the Alaska Highway to reach its destination, Eielson AFB. The fuel was boosted over another summit and past Kluane Lake by a pump station ten miles north of Haines Junction. South of the Donjek River, another pump station pushed the fuel to Beaver Creek and finally into the terminal at Tok, Alaska. Tok terminal, seven miles west of town, provided a staging area. Here the fuel passed through a filtration system and was then routed into storage tanks to



await delivery to Eielson AFB. Haines and Tok terminals each had storage facilities for 281,000 barrels or 11,802,000 U.S. gallons. Booster stations stored enough fuel to sustain pumping operations. The pipe itself carried approximately 208,460 gallons. Fuels delivered by the line were JP-4 (Jet fuel), Aviation Gasoline (two grades), DF-A (Arctic grade diesel fuel) and Automotive Gasoline. In addition to bulk fuels, a wide variety of packaged POL products (lube oils, anti-freeze, Stoddard solvent, benzene, acetone etc.) were handled at the terminals. A mainline pump house at Haines utilized three diesel fueled Chicago Pneumatic engines powering three positive displacement pumps. Fuel was pumped from the tankers to a manifold building in the Haines tank farm then routed to tanks where it was normally allowed to settle for 36 to 48 hours before the quantity delivered



The dotted line represents the pipeline. Image DEC.Alaska.Gov

was measured. After the fully equipped POL testing laboratory, located in the industrial area of the Haines terminal, determined that fuel quality was to standard, the product was available for use. Although the pipeline could move up to 28,000 barrels of fuel per day, its normal flow rate was 18,000 barrels per day. The flow and pressure were monitored constantly in the mainline pump houses and reported hourly to the dispatch office. Pressure drops indicated the possibility of a ruptured line. Gradual pressure losses were normally the result of cooling atmospheric conditions. The loss of one degree on ambient temperature could drop the line pressure by up to fifty pounds per square inch. Pressure was maintained on the line to prevent slippage or inter-mingling of the different fuels. One fuel pushed another through the line. Each fuel was injected into the line with a spin ("turbulent flow") to minimize the size of the inter-face. Quality control standards were extremely high, and the integrity of the product was always maintained. Quality of the fuel was monitored hourly by measuring the American



Institute of Petroleum (API) gravity. A sample was also withdrawn from the line and subjected to tests for gravity, color, and appearance. Well-trained professionals operated the system. Haines and Tok terminals had housing for sixteen families. Powerhouses and steam plants provided heat and electricity for apartments and shops. The US Army began Haines terminal operations with approximately 104 employees including a Lt. Colonel, the military chief, and a civilian superintendent. A chief dispatcher oversaw the operations division. A maintenance foreman supervised a crew of welders, machinists, mechanics, carpenters, plumbers, and laborers. Also working were a supply specialist, a fire chief and crew, an electrician, powerhouse operators, a crew of pump house operators and inspection pilots. Vessel traffic and fuel distribution were the province of the wharfman-gaugers. Laboratory testing was performed by US Army lab technicians. From 1950-55, the population of the Chilkat Valley increased from approximately 625 to 750 residents. Many of these people found full-time employment at the Haines terminal (tank farm), helping to stabilize the local economy. By the early 1970s, solid-fuel Minuteman missiles began replacing B-52 bombers, greatly reducing the need for fuel. The pipeline, mothballed in late 1971, was left with the capability of being operational in thirty days. The 370,000 gallons of stored fuel was pumped to Tok. As the tanks were emptied, they were cleaned and filled with fresh water which followed the fuel through the lines to clean the pipe. One five-thousand-barrel tank was filled with methanol alcohol then pumped into the line behind the water. A device known as "pig" was launched into the line behind the alcohol and pushed through by compressed air. This process dropped the relative humidity inside the pipe to below 25% preventing rust formation. The Haines to Fairbanks pipeline was economical and safe. The cost of the original line, dock, stations, and equipment, of \$54,000,000 in 1954-55, was exceeded in savings in slightly over 5 years. During sixteen years of operation and delivery of millions of barrels of fuel to the Air Force, not one plane was lost due to bad fuel. The Haines terminal was used for fuel storage until 1989 then abandoned and put up for sale. The pipeline and pump stations were abandoned in 1971. The Haines terminal was used for fuel storage until 1989 then abandoned and put up for sale. The pipe was salvaged in 1991 and the tanks in 2003.

1955 On 12 December, President Dwight D. Eisenhower wrote Lenox R. Lohr, General Chairman of the Society of American Military Engineers Military-Industrial Conference, that it was "an ideal forum for the development of a sound program for maintaining our technological superiority as a means of preventing war". He further said that "It is also an ideal forum for the development of sound plans for the harnessing of Atomic Energy for the benefits of all mankind".

1956 On 24 April the voters of Alaska approved the constitution adopted at Fairbanks in February by a vote of 17,447 to 7,180 and adopted a "Tennessee plan" to send



an unofficial three-member delegation to Congress. Ernest Gruening and William Egan were named delegates to the Senate, Ralph J. Rivers to the House.

1956 In July, SAC activated its provisional 4157th Combat Support Group (later Strategic Wing) at Eielson AFB to support additional B-47 Wing deployments to Alaska. In addition, on 1 July 1960 the 4158th Strategic Wing began supporting RC-135 electronic intelligence (ELINT) operations from Elmendorf AFB. The 4158th Strategic Wing provided host station support functions for SAC wing and support elements deployed to Elmendorf during deployments from United States bases, primarily weather reconnaissance flights used for long-range detection of Soviet atomic explosions with RC-135 operations. The 4158th Strategic Wing was inactivated in 1966 when SAC moved out of Elmendorf.



1957 In January, Anchorage received the title “All American City” awarded by the National Civic League. Since then Anchorage has garnered that title three more times.

1957 On 30 September, AAC had more than 200 fighter interceptors assigned to six Air Defense squadrons in addition to SAC elements operating through and around Alaska. AAC maintained 15 major Air Force bases, eighteen aircraft control and warning sites and 12 DEW Line locations providing early warning and fighter direction. AAC's assigned strength was, at its peak, over 20,000.

1957 Project “Mona Lisa” became very dependent on contracting and contractors, as portions initially handled entirely by the military—many aspects of the resupply mission—were executed by commercial entities from that point forward.



Project Mona Lisa, Tin City Air Force Station, Alaska

1957 Alaska's overall military population went to 48,000.

1957 In August, F-102 Convair Delta Dagger interceptors began arriving in Alaska, the first operational supersonic interceptor and Delta wing fighter.



- 1957** On 4 October, the Soviet Union successfully launched the satellite “Sputnik”, causing a reevaluation of Alaskan bomber forces as we were then faced with addressing the Soviet Intercontinental Ballistic Missile threat.
- 1957** The aircraft in use as interceptors, the venerable F-89s, were an improvement of the Starfires and functioned well in the extreme arctic conditions of central Alaska. They were maintained on constant alert at the two main bases at Ladd and Elmendorf, and the two forward operating airfields at King Salmon and Galena. Directed by the AC&W Control Centers at Fire Island AFS and Murphy Dome AFS, along with the regional control center at Elmendorf, the interceptors were ready to intercept any unknown aircraft penetrating Alaskan airspace. AAC planners had pushed the USAF and Air Defense Command (ADC) for the assignment of the Convair F-102 Delta Dagger to Alaska as a replacement for the F-89. The guided missile-equipped Delta Dart interceptor was far superior to the machine-gun-equipped Scorpion, along with increased speed and range and having a higher operational ceiling.
- 1957** The USACE Alaska District began work on “Operation Stretchout,” an extension of the DEW line. It led to the construction of six additional radar stations located at Cape Sarichef, Cold Bay, Driftwood Bay, Nikoliski, Port Heiden, and Port Moller—relying on nearly identical plans for each installation.
- 1957** “The Strategic Story of Alaska” by William C. Hall, Colonel, Corps of Engineers was published in the November-December edition of “**The Military Engineer**” magazine. In it he stated “The strategic importance of Alaska will continue to increase. As important as it was as a land bridge to Siberia; as an amphibious route to Japan and Asia; and as an outpost against airborne attacks, Alaska will have a bigger role in the era of guided missiles. Alaska is part of the United States; hence there are no problems of international agreements, expiring leases, or unfriendly political parties. Yet the proximity of Alaska to Asia and Europe is unique. It has tremendous unpopulated areas available for the installation of dispersed and concealed missile launchers and control sites and offers few vital or concentrated targets. There is an extensive and growing transportation and communications network. The wide use of airlift is a distinguishing characteristic of Alaska and numerous small airfields are available. Construction experience has improved the quality of construction without increasing costs materially. Work can be carried on in many areas without observation by outsiders. Supply and maintenance problems may be solved in a variety of ways. The facilities in existence today at base complexes would be of great utility in establishing and supporting missile sites.”



1957 In December, just after the Soviets launched Sputnik, Secretary of Defense Neil McElroy directed the USAF to further the research on Early Warning Radar Systems. The USAF soon submitted a call for a practical Ballistic Missile Early Warning System (BMEWS) to provide radar coverage for North America.

1958 On 9 July, a tsunami of a record run up height of 1,720-feet hit Lituya Bay following an earthquake of the Fairweather Fault.



Oblique aerial photograph of Lituya Bay in the summer of 1958. Damage from the 1958 megatsunami appears as the lighter-colored areas on the shores where trees have been stripped away.

1958 Work began on three BMEWS radar stations at Clear; and in Greenland and England to enable early warning of a Soviet missile attack and time for a counter launch and, hopefully, for those in the target areas time to seek shelter. The Clear Missile Early Warning Station construction began in August with 700 workers, housed in a "construction" camp erected in September.

1958 The White Alice Communications System was completed and came online at a cost of over \$300 million. Typically, each site required 20 people to operate and maintain with the power requirement of 180 KW, more than 7 times the original estimate.

1958 "Operation Stretchout" for assisting building the DEW line extension was completed on 1 December, total cost was \$300 Million to build 31 White Alice sites with airfields, fuel systems, generators for power, and accommodations and shops for 20 maintenance personnel.

1958 Project Chariot emerged as the Atomic Energy Commission plan to create an instant harbor with a nuclear detonation. This was a demonstration project in a larger program, the Plowshare Program, for peaceful use of nuclear detonation. The plan was sited at the Ogotoruk Creek Valley near Point Hope. Four 100-kiloton and 1-megaton detonations (equivalent to the power of 160 Hiroshima bombs) would open the valley to the sea, creating a harbor. Project Chariot was never realized, blocked by strong local and national opposition. A later issue developed in subsequent years to ensure the nuclear debris from early research on this project was removed to Hanford Nuclear site in Washington State and disposed.



1959 Alaska becomes the 49th State of the Union and Section 4 of the Alaska Statehood Act provided any existing Alaska Native Land Claims would be unaffected by statehood and held in status quo. On 3 January President Dwight D. Eisenhower proclaimed Alaska the 49th state of the Union.



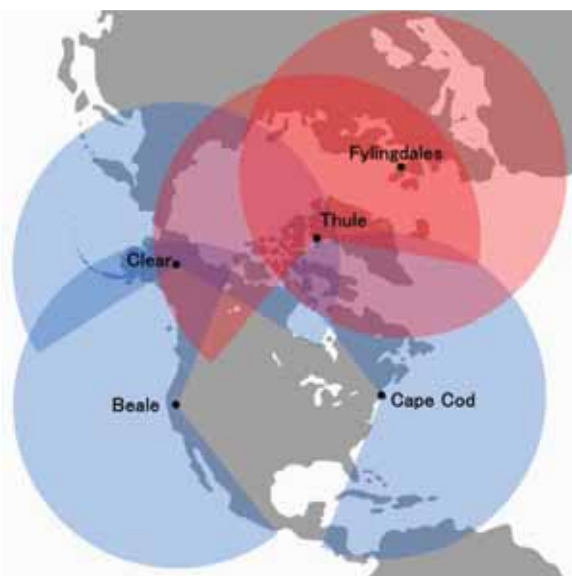
Signing of the Alaska Statehood Act

1959 With Alaska statehood, Bald Eagles in Alaska came under the Federal Bald Eagle Protection Act of 1940. The act made it illegal to kill or possess an eagle, alive or dead, or to possess any part of an eagle, including feathers.

1959 On 15 January, the Chugach Electric Association announced plans to build a nuclear reactor on Knik Arm near Anchorage. It was never built.

1959 In March, USAF planners received the first nasty surprise when radar operators along Alaska's western coast spotted on their screens a Soviet reconnaissance aircraft flying close to the Alaskan coast, but in international airspace.

1959 At Clear, groundbreaking for radar structures was held in May. To be built were a transmitter and computer building; a heat dissipation system; a radar transmitter building; wells and pumphouses; a fire station; and utilities. The AN/FPS-50 pedestals were complete by 2 June. After the original White Alice Communications System (WACS) contract, the next segment of WACS was a series of TD-2 microwave installations to support the two routes linking the Ballistic Missile Early Warning Site (BMEWS) at Clear AFB, one going down the southeast coast (the A route) to the Ketchikan-Seattle submarine cable, and the other, going east to the Canada-US border (B Route) through Canada, down to the lower 48. Three GE AN/FPS-50 Radar Sets were installed with antenna reflectors 165 by 400 feet (50 m × 122 m) that each weigh 910 tons. The "Building



PAVE PAWS and BMEWS coverage



Two" middle transmitter building had the radar control room and room with the Sylvania AN/FSQ-28 Missile Impact Predictor Set

- 1959** In May the DoD and Congress quickly approved BMEWS fielding, AAC's General C.F. "Nick" Necrason announced the imminent operational status of the BMEWS Site II at Clear. Ideally situated 75 miles south of Fairbanks, BMEWS was designed to detect transpolar missile firings and bomber flights.
- 1960-70** USPHS Remote Village Sanitation Projects: The Indian Health Service began construction of many improvements to sanitation systems serving remote Alaska Native villages located throughout Alaska. The Commissioned Corps of the US Public Health Service provided Engineers who designed and built many of these projects. These systems were unique since they were small systems that provided running water in locations in extreme arctic conditions. A circulating water system was completed in Unalakleet located on Norton Sound south of Nome. It served an Eskimo village of 400 population. A second project was started in the early 1960's in Kotzebue located 30 miles north of the Arctic Circle on the Alaskan Coast. This project involved the construction of a permafrost core dam for water supply, a two mile heated transmission line to a one and half million gallon heated water storage tank with a multi-loop circulation water system that served the community of 1500 population at the time. Waste disposal was provided by a facultative sewage lagoon that has served the community for the nearly 50 years.
- 1960** Alaska's population was reported as 226,167, many of them with ties to the military who served in Alaska and stayed or later returned when they retired.
- 1960** Anchorage becomes known as "The Air Crossroads of the World" and is used for regular stop over routes between the eastern United States, Asia, and Europe. The original Anchorage Airport east/west runway is lengthened to 10,600-feet.
- 1960** On 3 August, the SAME Anchorage Post hosted Maj Gen A. M. Minton, National President of SAME. He warned, "That if we as engineers don't strive to identify engineering as a profession, within 10 years the work as an engineer could be considered nothing more than a trade".
- 1961** The ballistic missile age threat beyond the capabilities of DEW and AC&W stations is met by yet another unit at Clear, Alaska, BMEWS (Ballistic Missile Early Warning Station). This electronic detection system consists of three antennas of 165- by 400-feet larger than a football field. Information from BMEWS goes up on a display screen at NORAD Headquarters, SAC Headquarters at Omaha, Nebraska, and the DoD in the Pentagon simultaneously. Complemented with microwave and cable



communications equipment, the \$360 million BMEWS could give at least a 15-minute warning to SAC bombers in America's heartland. The complex at Clear had three main areas: Tech Site, Composite Site, and Camp Site. The Tech Site consisted of the BMEWS radar and related buildings. The Composite Site consisted of support facilities such as dormitories, recreation facilities and warehouse and was connected to the Tech Site by an enclosed utility corridor. Base operation facilities not directly associated with BMEWS composed the Camp Site. A large Radome facility that housed the 25-meter parabolic tracking radar and three 400- by 165-foot static radar assemblies dominated the site. Each billboard reflector stood on 40 concrete piers. Each pier was 20 feet tall, contained 45 cubic yards of concrete and steel, and rested on a foundation of 5,400 cubic yards of concrete and reinforced steel bars. The antennas were built to withstand M 7.0 earthquakes and winds of 180 miles per hour. The site complex was built by 1,500 workers. A million yards of gravel as well as a mile of underground passageways were excavated to protect BMEWS personnel from atomic attack and the attendant radiation. Anti-radiation measures built into the passageways included nearly 700,000 square feet of copper screening and 25-½ tons of solder to seal it in place. There was room for 600 people in one of BMEWS' two composite buildings. There were two types of radar at Clear. The AN/FPS-92 tracking radar where the main reception and transmission element to this radar was the 82-foot diameter parabolic reflector mounted on a conical pedestal. It rotated to track or search continuously to detect targets and was protected by a 141-foot diameter Radome made up of 1,646 hexagonal and pentagonal blocks. The second radar was AN/FPS 50 was a large static radar that used three tall parabolic reflectors fed by organ-pipe scanners. From the three radar billboard antennas, two electronic beams fanned the atmosphere at differing angles. The radar pulse from objects passing through the beam closest to the horizon was fed to computers to determine position and velocity. Data from the second beam determined speed, trajectory, point and time of impact, and launch point. Data from Clear was then fed to NORAD's Semi-Automatic Ground Environment/Back-Up Interceptor Control (SAGE/BUIC) computer system, then to the NORAD Colorado Springs complex.



Original BMEWS missile detection radar antenna at Clear Air Force Station, Alaska. Photo: AFSPC.AF

1961

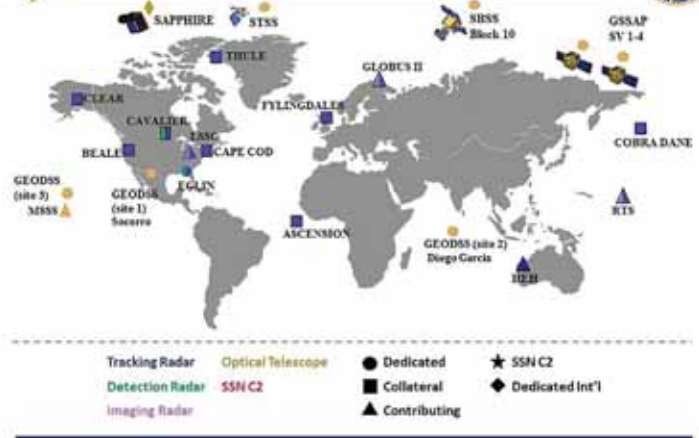
The USAF space track system, part of the space defense system operated specialized radar equipment at Shemya Air Force Station on the Aleutian Islands was declared operational by USAF Vice Chief of Staff General Curtis E. LeMay.



1961 The Alaska Rescue Coordination Center began operation at Elmendorf AFB. Over the years thousands in trouble have been rescued with the assistance of the Alaska Rescue Coordination Center.



Space Surveillance Network



Space Surveillance Network

1961 On 5 December, two F-102s, dispatched from Alert at the Galena Forward Operating Base (FOB), intercepted two Tupolev Tu-16 "Badger" jet bombers just at the edge of their effective range. This is the first known intercept of Soviet aircraft in the Alaskan Theater of Operations. It was also found that the F-102 task of intercepting Soviet reconnaissance aircraft was hampered due to their limited range.

1962 Mr. Erwin Long, Chief of Soils Design, USACE, Alaska District spoke to the Anchorage Post on the "Design of Foundations in Permafrost".

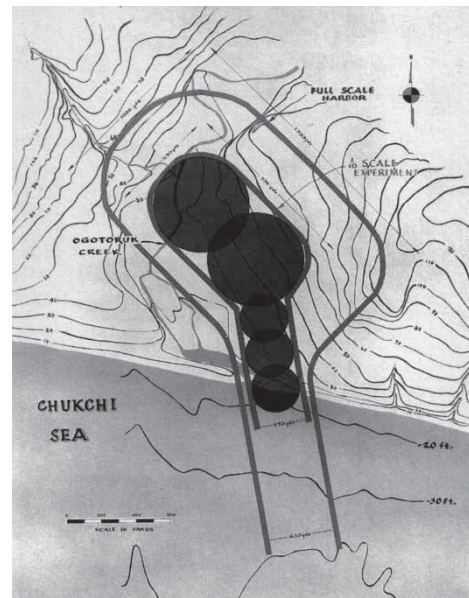
1962 On 13 March the nuclear power plant at Fort Greely, also known as SM-1A, "went critical." In the control room, at 12:38 am, a "clicking" sound accelerated to a continuous buzz, indicating that a nuclear reaction had occurred. The nuclear power plant at Fort Greely enjoyed a special status as the first such plant to be completed by a construction contractor using the Corps' plans and specifications. Previous nuclear plants had been built by the firms that designed them.

1962 In May the first car-barge service is established at Whittier, followed by train-ship service in June 1964. This enables railcars from any rail point in the Lower 48 to ship to any point along the Alaska Railroad.

1962 On 28 November MAJ Cecil Wise, Post Engineer, Fort Greely discussed the Nuclear Power Plant the US Army developed and installed at Fort Greely.



1962 AEC cancelled Project Chariot. During the planning and research phase, AEC established a camp and airstrip at Cape Thompson and, radioactive waste was buried at the site to measure its migration in arctic conditions. Scientists from the US Geologic Survey brought about 15 pounds of radioactive waste from Nevada to Cape Thompson for this experiment. Edward Teller had toured Alaska promoting this huge engineering project, seen by some as a demonstration of Alaska bigness and greatness, just the right project to usher in statehood, but opposition grew because of environmental concerns, including protests by the residents of Point Hope, which was 30 miles from ground zero. AEC then moved its first cratering test to Nevada, while extremely limited research and studies continued at Cape Thompson until 1962.



One of the Chariot schemes involved chaining five thermonuclear devices to create the artificial harbor.

1963 On 14 March a Soviet reconnaissance bomber overflew Nunivak Island and the west coast of Alaska—30 miles into American airspace. Two F-102s were on alert and scrambled from King Salmon but the pilots had to be recalled because of low fuel when they were within 20 miles of the Soviet aircraft. This led to a serious debate about AAC's capabilities and the decision to replace the F-102s with the Convair F-106 Delta Dart from Air Defense Command. At the time, Alaska Governor William Egan declared the defense of Alaska to be "totally inadequate to meet the Communist threat".



Dot Marks Location Nunivak Island

1963 In July the first eight F-106s, Convair Delta Darts designed as the "Ultimate Interceptor", temporarily deployed from the Air Defense Command (ADC) arrived at King Salmon and Galena airports.

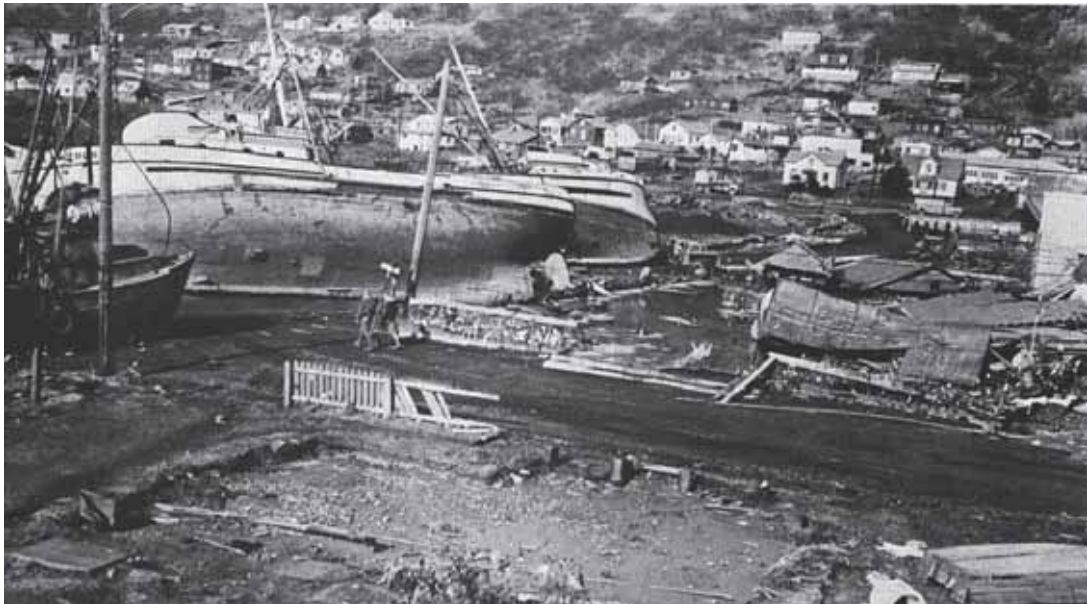
1963 On 10 August Major General Curtin, USAF Civil Engineer, addressed the SAME Anchorage Post on the extreme importance of Alaskan construction and facilities maintenance to the Air Force and the nation and the dedication of the people involved.



1963 On 2 September, two F-106s from King Salmon FOB succeeded in intercepting two TU-16s over the Bering Sea. ADC chose to begin rotational deployments of the F-106 to Elmendorf AFB and onto Galena and King Salmon for alert duty, continuing until 1970, when the F-4E Phantom II arrived in Alaska. Production of the F-106, the last dedicated all-weather Interceptor that was designed for that purpose, had ended in 1961, and ADC had none to send to Alaska. In late 1961, Kennedy's Secretary of Defense Robert S. McNamara spoke of reopening the F-106 production line to build another 36 aircraft, but this did not happen.

1963 This year saw the beginnings of the Permafrost Tunnel Research Facility (PTRF) excavation near Fox, Alaska by the USACE. Excavation went from 1963 through 1969 for the study of permafrost, geology, ice science, and mining and construction techniques specific to permafrost environments. The PTRF is one of the USACE and the Nation's unique, natural research facilities. The Cold Regions Research and Engineering Laboratory (CRREL) operates, maintains, and provides research at this field site for the nation and the world as part of its mission for the US Army Engineer Research and Development Center.

1964 Friday 27 March was a typical late afternoon in Alaska with many in Anchorage, Valdez, Kodiak, and Seward honoring Good Friday anticipating a pleasant Easter Sunday. At 5:36 pm that all changed. An enormously powerful 9.2 magnitude earthquake struck in Prince William Sound. Its epicenter was 6-miles east of the entrance to College Fjord, 78-miles east of Anchorage, and at a 15-mile depth. It was the second largest earthquake in recorded history behind the 9.5 magnitude earthquake that struck Chile in 1960.



1964 Alaska earthquake destruction at Kodiak



The largest landslide in Anchorage occurred along Knik Arm between Point Woronzof and Fish Creek, causing substantial damage to numerous homes in the Turnagain-By-The-Sea subdivision.

1964

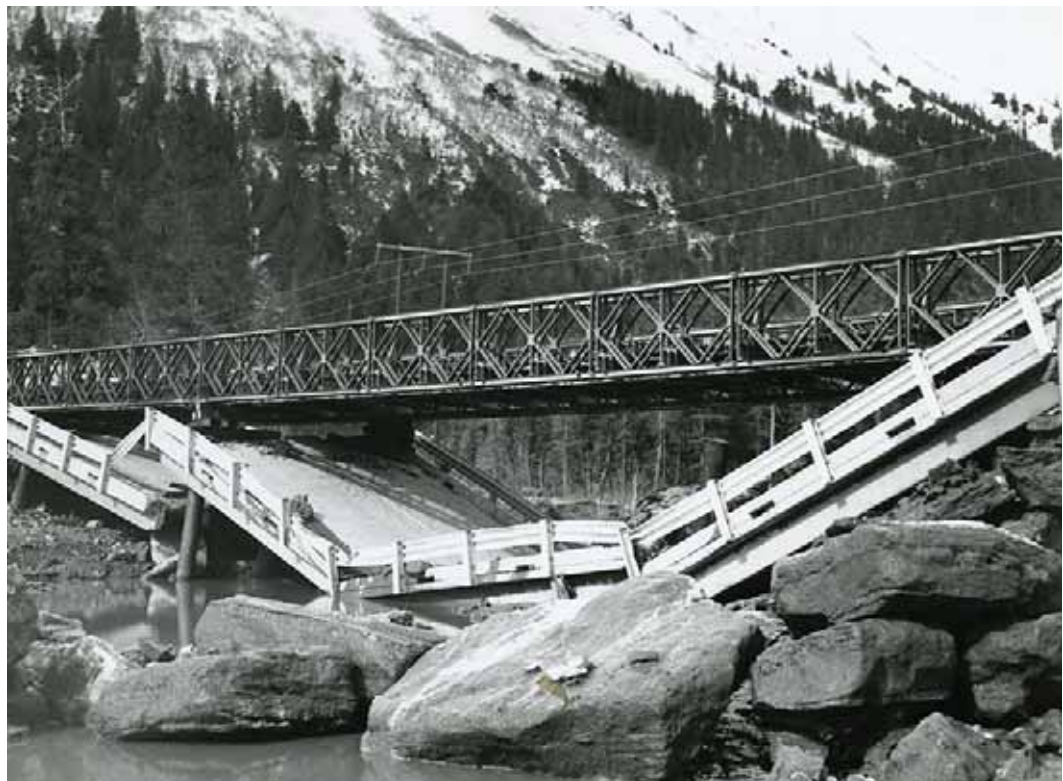
Immediately following the earthquake on that memorable 27 March afternoon, the military in Alaska assumed a prominent role in search and recovery operations through operation "Helping Hand." Lt Gen Raymond J. Reeves, USAF, Commander in Chief, Alaska, made an initial report to DoD through the Joint Chiefs of Staff. Known demographics of the quake's magnitude and location were provided as well as reports of significant damage with some injury and casualties within the communities of Anchorage, Seward, Valdez, Cordova, Kodiak, and Kenai. Long distance military communication lines were the first major infrastructure systems reestablished. Within 90 minutes, 95 percent of Fort Richardson's and Elmendorf AFB's local communications were restored, albeit to a limited degree. On the commercial side, Alaska Communications was passing emergency and Civil Defense telephone traffic to other states. Telephone communications were restored to Anchorage within two hours following the quake. Calls for assistance began pouring into the Alaska Command operations center. Anchorage received almost immediate assistance but those further out had to rely on airlift for equipment and personnel, which experienced delay by a combination of bad weather and insufficient airfield status of infrastructure on the receiving end. Response to the earthquake by all the engineering organizations—from the military and civilians work forces was immediate and effective. Operation "Helping Hand" was implemented on the military side and soldiers, airmen and equipment started rolling in from other parts of the state—then in the throes of the Cold War with the Soviet Union. At the time, military equipment brought to



bear throughout affected areas included dozers, cranes, dump trucks, front end loaders, Bailey Bridges, generators, water purification units (ERDLators), water distributors, and even mine detectors to help locate water lines. Snow and rockslides on access routes were cleared. Electricity, heat, and water were restored to Elmendorf AFB and Fort Richardson within days, but water use was restricted because of the impacts throughout the Anchorage bowl. As a result of the 1964 earthquake, about 20 miles of the Seward Highway sank below the Turnagain Arm high water mark, so the bridges and highway had to be raised and rebuilt over the next two years.

1964 On 27 March railroad damage from the Good Friday earthquake was estimated at \$30 million. Freight service from Anchorage to Fairbanks was restored on 6 April. Passenger service was back online April 11. Freight service to Whittier resumed 20 April.

1964 Former USACE Alaska District leader during World War II, retired Brig. Gen. Benjamin Talley, F.SAME, USA, worked as a consultant for the Metcalf & Eddy engineering firm. He participated as a consultant in the restoration of Alaska following the great earthquake.



*4Good Friday Earthquake damage in Girdwood, Alaska – 1964.
Photo: U.S. National Archives, via Wikimedia Commons*



1964 Many meetings of the SAME Anchorage Post discussed recovery efforts of so many following the devastation of the Good Friday Quake. One such presentation by the Alaska Railroad portrayed the repair efforts to address 30 bridges between Anchorage and Seward that were destroyed. BG Talley, Project Manager from Metcalf & Eddy, and the first Anchorage SAME Post President made presentations on "Good Friday Earthquake Recovery" and "Military Construction in Alaska in World War II". Another presentation was by William Shannon, Principal, Shannon & Wilson, under contract to the USACE, Alaska District on "Soil Surveys in Connection with the Earthquake Reconstruction Efforts". On 25 July, Major General Robert Curtin, Director of Civil Engineering, USAF, and National SAME President addressed the SAME Anchorage Post during his annual visit. In attendance was Deputy Secretary of Defense, Ed Sheridan; Assistant Secretary of the Air Force, Dr. Edwin Harrison, many University Presidents and Engineering Deans from around the country and Colonel Berndt Balchen, retired, USAF, a well-known and highly decorated friend of Alaska and wartime pilot. At another July meeting of the SAME Anchorage Post, Lt Gen Walter K. Wilson, Jr., Chief of Engineers, USACE, spoke on the Alaska Earthquake Recovery.

1964 The SAME Anchorage Post Scholarship Fund was established and valued at \$500.

1964 By the end of the year, the Anchorage Post eclipsed its all-time membership number and counted 148 on the roles.

1965 In June, the Katmai Peninsula in general, and the Valley of 10,000 Smokes in particular, were used by NASA and the USGS to geologically train the Apollo astronauts in recognizing volcanic features, land-forms and materials, especially fumaroles and vents. Their field exercises included simulating a lunar mission. "Playing the Moon Game" involved pairing up astronauts and placing them in a location with sparse prior information. They then planned traverses and collected representative samples. They communicated with their geologist instructors via radio. A separate group of astronauts trained here in August 1966.



Colorful ash Valley of Ten Thousand Smokes

1965 The USACE Alaska District working in coordination with military nuclear test folks, launched construction of a nuclear test facility on Amchitka Island. Construction included a trailer camp, rehabilitation of a World War II Birchwood hangar, a dock,



and very deep holes for nuclear detonation. The main shot hole was 32 inches in diameter and 2,350 feet deep.

1965 An earthquake in the Aleutians at the Rat Islands measuring 8.7 magnitude on the Richter scale caused cracks in nearby Shemya's asphalt runway and created crevasses with as much as 16.5 meters of vertical displacement. Landslides occurred, storage tanks twisted, and underground water pipes broke. Many aftershocks were felt during the following weeks, and the quake generated a tsunami on Shemya reported to be about 10.7 meters high.

1966 At Elmendorf AFB a large circular antenna array, the AN/FLR-9, or Flare-9, was built during the height of the Cold War. The facility is commonly referred to as the "Elephant Cage" due to its large 40-acre footprint and 120-foot tower height. The "Elephant Cage" has cast a shadow over the Alaska landscape, silently collecting and finding the direction of communications signals, guarding against adversary threats and intentions. The system could intercept and directionally locate high-frequency radio transmissions up to 4,000 nautical miles away. Over time, these structures succumbed to many different fates. The intelligence collected informed our nation's and allied decision makers, from presidents to warfighters. In later years it fulfilled a crucial role aiding in navigation and direction-finding for civilian and military search and rescue missions.



AN/FLR-9 in Elmendorf, Alaska, date unknown.


1966 The first nuclear detonation at Amchitka: it was named "Long Shot". This blast shook the earth, measuring 6.5 magnitude on the Richter scale.

1966 Cold Bay takes on a more important role in support of the Vietnam War. The Cold Bay airfield at 10,415 feet, was suited for refueling flights headed to southeast Asia. To this day, the Cold Bay Airport serves as a regional transportation center. The State-owned airfield also became the "safe haven" for domestic and international flights flying the Great Northern Circle Route to Asia.



The first nuclear detonation at Amchitka



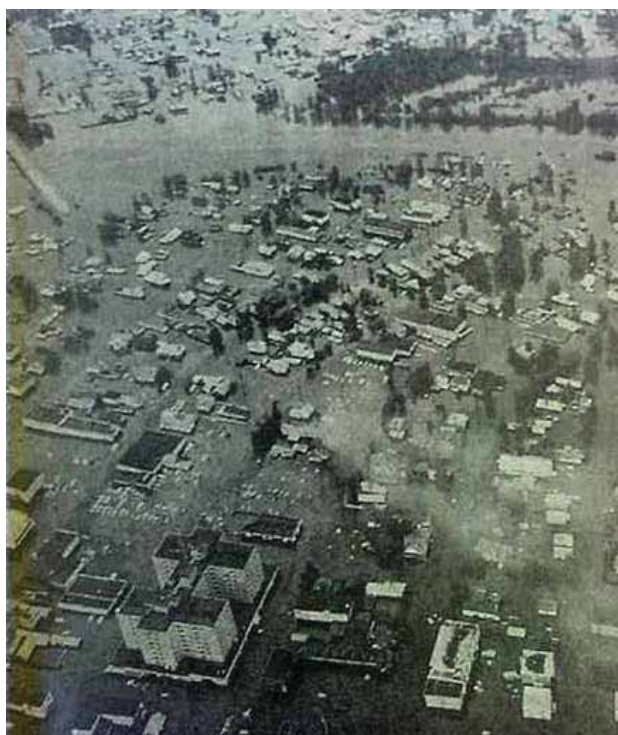
- 1966** In June it was announced that the research mission of SM-1A Nuclear Power Plant at Fort Greely had been completed, the US Army announced that it would shut down the nuclear reactor at Fort Greely sometime in 1968 when its fuel core became exhausted. Rather than dismantling the entire power plant, the turbo-generator would then be connected to existing steam boilers to continue providing power for the post.
- 1967** The USAF Arctic Transport Barge System was renamed from “Project Mona Lisa” to “Cool Barge”, and by that time this well-oiled logistics approach was institutionalized and extremely efficient.
- 1967** Large natural gas reserves were discovered in Prudhoe Bay after several years of commercial exploration in the region. The discovery is listed in the National Register of Historic Places.
- 1967** The Municipality Of Skagway (MOS) leased property on the harbor side of the peninsula to White Pass and Yukon Route Railroad (White Pass) and by 1969, White Pass had constructed the Skagway (Nahku) Ore Terminal and began transporting ore by rail from the Cypress Anvil (Faro) Mine located in the Yukon Territory in Canada. The lease site was created in the mid-1960s, when the MOS constructed a peninsula over tidal flats between the Skagway River and the State Ferry Dock by importing granite-based alluvial fill material and dredging sediments up to the eastern shoreline, thus expanding the harbor basin. Lead and zinc ore concentrate from the Yukon was loaded onto freighters and barges at the terminal from 1967-1997, with brief interruptions from 1982-1986 and 1995-1997. An estimated volume of 50,000 tons of low-grade zinc (60%) and lead (40%) ore concentrate from the Faro Mine passed through the terminal each month. Ore was transported to the terminal by White Pass railcars until 1982, when truck transport of ore by highway began and continues today. Ore concentrate was loaded onto freighters and barges every two weeks on an open conveyor system until 1991 when the system was enclosed during a major renovation of the entire terminal.
- 
- 1967** The Susitna Hydroelectric Project commonly called the Susitna Dam is proposed as a hydroelectric power project along the Susitna River in southern Alaska. The project, which originally consisted of two dams along the river, was proposed by the US Bureau of Reclamation to supply electricity to the Rail Belt Region of Alaska, as well as Anchorage and Fairbanks. It was known as the Devil's Canyon Dam, for its location just upstream of Devils Canyon, a 1,000-foot deep gorge and



whitewater rapids formed by the Susitna River. When oil prices and State revenue (based on taxes levied on oil extraction) declined, the plan was put on hold.

1967 In March, the 4157th Strategic Wing was replaced at Eielson by the 6th Strategic Wing, it had primarily been a reconnaissance and refueling wing, and would remain so going forward, flying and maintaining RC-135 and KC-135 aircraft.

1967 The Chena River floods Fairbanks and considered one of the worst disasters to ever hit Alaska. Fairbanks saw 6.20-inches of rain in August that year where the average is only 2.20 inches. This unprecedented rainfall caused the Chena River to overflow. The Chena River surpassed flood stages quickly and continued to rise. However, because of hydrological gear being too far downstream from Fairbanks to inform the public of the increasing water levels, "Fairbanksians" were mostly clueless of the flood's enormity until it hit. Many people were displaced from their homes, and four people lost their lives in the flood. In the flood's aftermath, the US Congress passed the Flood Control Act of 1968, which included funding the Chena River Lakes Flood Control Project, for dams and dikes to prevent future flooding incidents. Project was to be operated by the US Army Corps of Engineers out of the North Pole office. Preconstruction planning was initiated in 1970 and majority of the construction was completed in 1979. Water outflowed the banks of the Chena River in August flooding Fairbanks and Fort Wainwright.



The Chena River floods Fairbanks 1967

1968 Governor Walter Hickel summoned a group of Alaska Native leaders to work out a settlement that would be satisfactory to all Alaskan Natives. The group met for ten days and asked for \$20 million in exchange for requested lands. They also asked for 10 percent of federal mineral lease revenue.

1968 The Atlantic Richfield Company discovered oil at Prudhoe Bay on the Arctic Coast. To lessen the difficulty of drilling at such a remote location and transporting the oil to CONUS, the oil companies proposed building a pipeline to carry the oil across



Alaska to the Port of Valdez. At Valdez, the Alaskan oil would be loaded onto tankers and shipped to the "Lower 48". The plan had been approved, but a permit to construct the pipeline, crossing lands involved in the land claims dispute, could not be granted until the Native claims were settled. With major petroleum dollars on the line, pressure mounted to achieve a definitive legislative resolution at the federal level.

1968 On 19 May, Convair Delta Daggers (F-102s) from Galena intercepted a Soviet Antonov AN-24 "Coke" marking the first time that a Soviet aircraft was intercepted while in US airspace.

1968 Alaskans conceived a megaproject known as "Seward's Success" developing a planned community at Point Mackenzie, across Cook Inlet to the north of Anchorage. The megaproject was to be fully enclosed by a dome spanning the Knik Arm and holding a community of 40,000 residents, with ample residential, office, recreational and commercial space. Access from Anchorage to Seward's Success was proposed to be by an aerial cable way with tram units. The project was presented to Senator Mike Gravel and later died in the starting chute.

1969 Route studies for the Trans Alaska Pipeline System were begun both for a pipeline and for a railroad solution to move oil from Prudhoe Bay to tidewater in Prince William Sound or Cook Inlet areas.

1969 On 13 January, USAF RC-135S "Rivet Ball" was returning to Shemya AFB from a reconnaissance mission. Upon landing, the aircraft hydroplaned, slid off the ice-covered runway and plunged into a 40-foot ravine. All 18 crew members survived.

1969 On 5 June, USAF RC-135E, 62-4137 "Rivet Amber" disappeared about 30 minutes into a ferry flight from Shemya AFB to Eielson AFB after reporting it was experiencing vibration. The aircraft had encountered



5RC-135 Rivet aircraft in flight.

severe turbulence on its previous flight and was flying to its maintenance base to be checked for possible structural damage. All 19 crew members on board died and the wreckage was never found despite extensive searches.

1969 By this time, the North American Air Defense Command (NORAD) recognized the importance of the Alaskan NORAD Region (ANR) mission. The ANR interceptors and radars by then were very attuned to guard and watch over 1.0 million square miles of the most hazardous terrain on the face of the earth. Strategically ANR sits



at the hub of the great circle routes linking East and West, and is astride the shortest routes from Siberian airfields and intercontinental ballistic missile launch sites to the industrial heart of the United States and demanded the resources, modernization, and will to succeed at this significant homeland defense mission in the midst of the Cold War.

- 1969** Another mission not widely discussed was the US Army having the capability to provide specially outfitted Nike-Hercules guided missiles armed with nuclear warheads in Alaska without disclosing where.
- 1969** The ANR mission in place was 15 aircraft control and warning units, 13 DEW units, and a BMEW station operational in the Alaskan Region. The Alaskan NORAD Region has three NORAD Control Centers—Murphy Dome, King Salmon, and Campion—which control fighter interceptors' aircraft and Nike missiles.
- 1969** The Joint Chiefs of Staff directed a reduction in air defense forces. As a result, the Fire Island NORAD control center and the NORAD surveillance sites at Unalakleet and Northeast Cape closed during the last half of 1969. The Aleutian DEW line segment was deactivated on 30 September 1969. The main site at Cold Bay was converted to a NORAD surveillance site.
- 1969** The Air Force conducted an environmental and engineering study to determine the appropriate location for a bombing range in Alaska, and Blair Lake Range was chosen despite permafrost and remote logistics, as well as lack of any infrastructure. The engineers took the challenge head on and made it work from a fledgling location to premier site today.
- 1969** By this time, the USACE drilled additional holes at Amchitka for nuclear tests, code-named "Milrow". Two of these holes would reach down 6,200 feet. Milrow, a 1-megaton explosion, was carried out on 2 October.
- 1970** This year saw the first facilities built at the Blair Lake bombing range. The existing Blair Lake range is a 63,100-acre tract that is part of the 642,215-acre US Army, Fort Wainwright, Tanana Flats Training Area. The USAF's Land Use Permit provides them exclusive use of a 33,963-acre portion of the tract, designated R-2211, and joint use of the remaining 29,137 acres. The range is 26 miles southwest of Eielson AFB and 32 miles due south of Fairbanks.



1970 The Alyeska Pipeline Service Company was founded to design, construct, operate, and maintain a pipeline to transport oil discovered in 1968 from the fields on the North Slope to an ice-free deep-water port in Valdez.

1970 The Anchorage population soars to more than 48,000, and much construction of need housing and infrastructure commenced.

1970 The F-4E "Phantom II" was deployed to Alaska. This aircraft had a maximum speed exceeding Mach 2, a range of 2,300 miles with centerline and tip tanks, and a combat ceiling of 71,000 feet, using AIM-7 and AIM-9 missiles and guns. This high-powered aircraft was responsible for increasing the number of intercepts of Soviet aircraft despite a reduction in interceptor squadrons.

1970-72 Road support builds on both sides of border. Canadians build new bridge in Carcross and extend road to B.C.-Yukon border in 1971 with activity at Venus Mine. In February 1972 Canadians agree to build remaining 33.6 miles to Alaska border, and Alaska agrees to construct their 9.4 miles. It will be called the South Klondike Highway. Park master plan is developed. White Pass donates old depot to National Park Foundation. Yukon-Taiya Commission disbands.

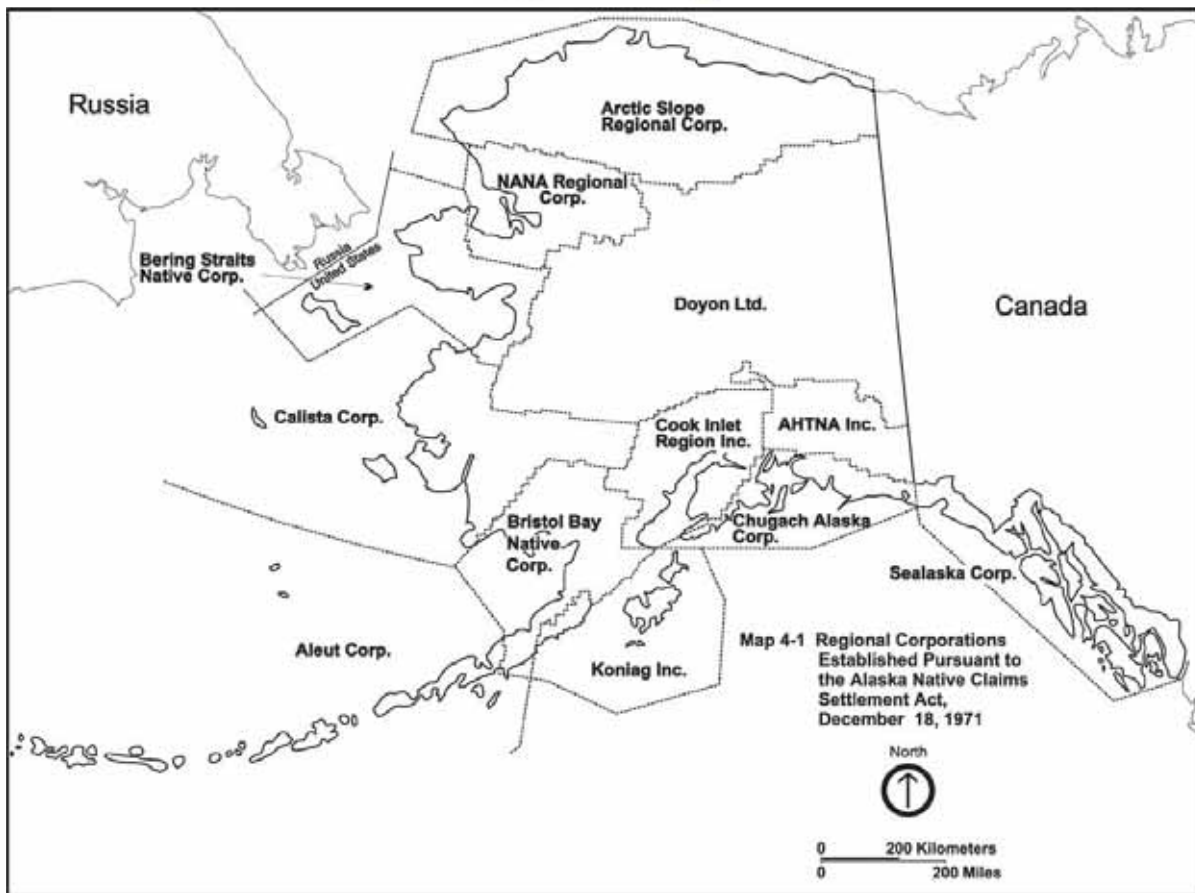
1971 Opposition to the Amchitka nuclear tests became stronger after Milrow and the even larger test planned for 1971. Despite protests, the tests were accomplished on 6 November. Following the tests there was evidence of wildlife damage, creating so much opposition that the testing was halted. The holes were capped, and the trailer camp removed. Left behind at the last drill hole was a bronze plaque with a description of the test program. This drill hole is located at the center of the island.

1971 The University of Alaska Anchorage (UAA) was established as a public research university and part of the University of Alaska system. It became a boon to military and their dependents assigned to bases near Anchorage in gaining higher education credits during their tours to Alaska.

1971 On 26 September, Emperor Hirohito becomes the first reigning monarch of Japan to step on foreign soil. President Nixon welcomed the Emperor at Elmendorf AFB, where he was given a formal welcome with full military honors.



The pipeline includes slider supports where it crosses the Denali Fault.



Regional corporations established by the Alaska Native Claims Settlement Act.

1971 The Alaska Native Claims Settlement Act (ANCSA) was signed into law by President Nixon, abrogating Alaska Native claims to aboriginal lands, except those that were the subject of the law. In return, Alaska Natives received up to 44 million acres of land and were paid \$963 million. The land and money were to be divided among regional, urban, and village tribal corporations established under the law, often recognizing existing leadership. ANCSA created twelve Alaska Native regional economic development corporations. Each corporation was associated with a specific region of Alaska and the Natives who had traditionally lived there. Each Alaska Native corporation was associated with a specific region of Alaska and the Natives who had traditionally lived there from an idea born out of the Alaska Federation of Natives conference. As stockholders in these corporations, the Natives could earn some income and stay in their traditional villages. A 13th Native Corporation was added to cater for Alaska Natives who did not live on the land in Alaska but were resident outside of Alaska.

1971 Congress authorized construction of the phased array Cobra Dane radar at Shemya Air Force Base on the Aleutians.



1972 On 18 May, an F-4 intercepted a Soviet AN-24 Coke over the Chukchi Sea. This represented the first intercept by an F-4 aircraft since arrival in Alaska.

1972 On 16 October, a Cessna 310 light airplane carrying Congressman Nick Begich (D-Alaska) and Congressman Hale Boggs (D-Louisiana) along with the pilot and Begich's aide disappeared on a flight from Anchorage to Juneau. The disappearance of two members of Congress led to a massive search being mounted, continuing for 39 days until no hope of finding the plane's occupants alive remained. No trace was every found of the plane or its passengers, and this incident led to legislation requiring Emergency Locating Transmitters on all US commercial flights.



Nick Begich, Member of the U.S. House of Representatives

1972 The Fort Greely SM-1A Nuclear Power Plant Reactor that was built in the 1960s was shut down by the US Army. It would be some forty years later for it to be slated for removal and proper disposition.

1973 The first Iditarod Trail Sled Dog Race was run in Alaska. Joe Redington, Sr. became known forever as the Father of the Iditarod due to his untiring efforts to create such an event. Twelve mushers withdrew or scratched during that race, but 22 did finish, with the musher champion being Dick Wilmarth of Red Devil. He claimed the \$12,000 first place prize money in a little over 20 days from the start in Anchorage to the finish in Nome. Redington had two reasons for organizing the long-distance Iditarod Race. First, to save the sled dog culture and Alaskan huskies, which were being phased out of existence due to the introduction of snowmobiles in Alaska; and secondly, to preserve the historical Iditarod Trail between Seward and Nome.

1973 The US Army Corps of Engineers, Alaska District, completes first phase of the Snettisham Dam in Southeast Alaska and delivers 47.2 megawatts to Juneau. The Hydroelectric Dam was deemed to have the deepest lake tap ever for a United States project and established an artificial run of several Pacific Salmon species.

1973 AC&W was hugely expensive to maintain and was close to being obsolete, so in July, USAF Chief of Staff, Gen John D. Ryan, personally inspected the system.

1973 Work begins on constructing the Cobra Dane Radar at the very remote Aleutian Island of Shemya. The structure took three years to complete and is 120 feet tall with a radar array over 94 feet across. The primary purpose was intelligence gathering in support of verification of arms limitation treaties. The radar facility is



1,455 miles west of Anchorage, and now provides precise tracking data for Missile Defense and Space activities.

1973 Talk of a gas pipeline from the North Slope to bring abundant US energy to the marketplace peaked during the 1973 OPEC oil embargo and several companies came out in favor of large pipeline projects.

1974 USPHS Barrow Water Supply, a later Public Health Service project in Barrow Alaska was unique in that it provided a water storage dam constructed with hydraulic dredged fill on an ocean inlet near the village. The water supply lake was pumped to the sea for several years and refilled with natural runoff to lower the salt content of the lake so it could be used for domestic use. This water supply was used to supply the piped water and sewer system built later by the North Slope Borough and is still used today. The construction program started by the Public Health Service built many projects with the Village Safe Water Program funded by the State of Alaska starting in the Late 1970's. The federal program is now operated by the Alaska Native Tribal Consortium and works with the VSW program to continue improvements to the systems serving rural villages in Alaska. Many other projects were completed during these years providing dams, water storage, water distribution, sewage collection and treatment facilities.

1974 On 27 February, two F-4s out of Galena Airport intercepted an AN-24 Coke. In route to its home base, the Soviet craft ran into bad weather and fuel problems and forced to land on Alaska's St. Lawrence Island, located west of mainland Alaska in the Bering Sea—36 miles from the Chukchi Peninsula of the Soviet Union. A United States C-130 aircraft flew from Elmendorf AFB to attend to the stranded Soviet crew. This incident represented the first time a Soviet aircraft had landed on American soil since World War II.



AN-24 Coke

1974 A \$10.9 million contract is awarded to Central Construction of Seattle, a company affiliated with one of Alaska's new Native corporations, for the Alaska portion of the Klondike Highway. Canadian contracts go to Ben Ginter of Prince George, B.C. (16 miles to Tutshi River) and General Enterprises of Whitehorse (20 miles to border). Construction to take three years.

1974 The Air Staff released its Saber Yukon Study, which recommended that the system be modernized. As a result, AAC was included in the Electronic Systems Division-managed program to replace the SAGE system with a joint US Air Force and



Federal Aviation Administration (USAF-FAA) use Region Operations Control Center/Joint Surveillance System (ROCC/JSS). The command also initiated another program to replace the site radars with minimally attended radars. The Alaska-Unique Seek Igloo Program—as it became known—was also managed by the Electronic Systems Division.

1974 Recently promoted to Colonel, H. Norman Schwarzkopf volunteered for an assignment in Alaska, and became deputy commander of the 172nd Infantry Brigade at Fort Richardson. He later commanded the American-led forces that crushed Iraq in the 1991 Persian Gulf War and became widely known as “Stormin’ Norman”.

1974 On 22 August, the Mears Memorial Bridge, a 700-foot long truss bridge spanning the Tanana River at Nenana was dedicated by the Alaska Railroad in Colonel Frederick Mears’ memory, 51 years after driving the golden spike at that spot signifying completion of the Alaska Railroad in 1923.



Mears Memorial Bridge over the Tanana River, Nenana. Photo taken shortly after bridge completion. Built by the Alaskan Engineering Commission for the Alaska Railroad.

1975 The Trans Alaska Pipeline System (TAPS) pipeline started a three-year planned project construction in March. The route would run from the North Slope oilfields at Prudhoe Bay to the Marine Terminal at Valdez on Prince William Sound, a total of 800 miles south.

1976 The Air Force A-76 Blue Ribbon Panel with Maj Gen Robert Thompson, USAF, at the helm recommends direct contracting out of nearly 1,700 positions including nearly all civil engineering operations and maintenance personnel responsible for maintaining the Alaskan Remote AC&W Stations. This workload has been streamlined but it is still being accomplished by contractors and saved the Air Force personnel from serving many more remote tours over the years, greatly improving family life.

1977 In June, the USAF evacuated all but key and essential military and civilian personnel via C-130s to Fairbanks from the Galena Airport. The Yukon River had exceeded its banks and flooded the town and parts of the military installation, causing extensive damage to roads and facilities. The base civil engineers and their support personnel rode out the massive flooding and provided immediate recovery capability to allow the mission force to return to the installation. Fairbanks was also significantly impacted by flood waters inundating much of the city and surrounding area during this same period. Fort Wainwright was seriously



affected, and an emergency evacuation of dependent personnel was affected by the Army personnel on site.

1977 Four years after start of fielding, at a cost of \$68 million, COBRA DANE was operational. The AN/FPS-85 radar and AN/FPS-46 passive optical and radiometric sensors could track up to 100 objects simultaneously with precise three-dimensional data on as many as 20 targets. COBRA DANE surveyed a 2,000-mile, 120-degree corridor to collect data. Information from COBRA DANE is fed to (SPADOC).



COBRA DANE, Shemya, Alaska.

The COBRA DANE facility is a single, multi-story, steel frame building. The building's western elevation is canted 20 degrees and provides the backdrop to which a 96-foot diameter, nearly circular phased array radar assembly is attached with more than 34,700 individual radiating elements (antennas). The radar is electronically steered.

1977 The USAF began rapidly contracting out Operations and Maintenance of AC&W sites across Alaska, curtailing military engineering forces and replacing them with rapidly mobilized, multi-skilled and tasked contractors, greatly reducing the footprint of each radar station.

1977 Alyeska begins operations and maintenance of TAPS. The first oil flowed into the pipeline on 20 June, and the first tanker load departed from Valdez on 1 August. Some 420 miles of the 800-mile-long pipeline is elevated on 78,000 vertical support members due to permafrost. The high point of the pipeline can be found at Atigun Pass with an elevation of 4,739 feet. The Operations Control Center (OCC), located in Anchorage, monitors and controls pipeline and terminal operations 24/7. Booster pumps are located at all pump stations to move oil from the storage tanks to the mainline. Cleaning pigs sweep the pipe of built up wax, water or other solids that precipitate out of the oil stream. They also prevent the built-up of corrosive environment and makes the oil easier to pump. TAPS pipeline crosses three mountain ranges and more than 30 major rivers and streams.

1977 Created by the Bureau of Land Management, the first hotshot crew to fight fires in Alaska. A large fire near Galena saw that location become the base for hundreds of fire hotshots. All told, the hotshot crew supported 291 fires, during the severe 1977 fire season with 2.3 million acres burned throughout Alaska.



1978 The USAF develops a Minimally Attended Radar concept to replace equipment and facilities at AC&W stations throughout Alaska.

1978 In February, Erwin Long, USACE, Alaska District was recognized as the 1977 Alaska Engineer of the Year. During the late 50s, Mr. Long invented the Long Thermopile which revolutionized construction of stable foundations for structures and pipelines in permafrost. His Thermopiles prevented frozen ground from thawing, accepting the arctic ground as a frozen asset. His invention became widely used in construction on frozen ground through the State and was a tremendous innovation. The vertical support members (VSM's) of the pipeline supports on the Trans-Alaska Pipeline are based on the Long thermopile as well as many building foundations and soil stabilization projects in the Arctic. He helped the USACE Alaska District to become the recognized leader in Arctic construction and engineering techniques.



*Erwin "Erv" Long,
Northern Innovators Hall
of Fame Member.
Photo: University of
Alaska*

1978



In February at Bolling Air Force Base, the Galena Airport Alaska Base Civil Engineer, Captain Patrick Coullahan, assigned to the 5072nd Air Base Squadron, was awarded the 1977 United States Air Force Engineering and Services Meritorious Achievement Award for Professional Excellence at National Engineer's Week Annual Luncheon. He was presented the Award by Maj Gen Robert C. Thompson, Director of Engineering and Services, Deputy Chief of Staff, Programs and Resources, HQ USAF. Maj Gen Thompson was Past President of the Society of American Military Engineers.

1978 On 28 April, a USAF HC-130 Lockheed Hercules Cargo Plane with seven souls aboard crashed and exploded on impact less than a mile from the Sparrevohn AC&W Site's 4,000-foot long runway, located on the slope of a 3,302 foot mountain. All on board perished.

1978 A fire in Bethel left the town without water and sewer service, and the USACE, Alaska District developed an emergency aboveground system to replace the capability that was lost in the fire.

1978 Planning by AAC began for a cold weather readiness training exercise called "Jack Frost 79" because of the similarities between the Alaskan Arctic and the terrain and environment of portions of Asia and Europe.



1978-9 The Klondike Highway officially opens in spring with a final cost of \$14.4 million on U.S. side and \$12.2 million in Canada. In July, a scary fire in Skagway destroys Sourdough Inn, Igloo Bar, and a drug store, but SVFD prevents it from spreading through Historic District. A new city barge facility/ferry terminal completed.

1979 In January, Jack Frost kicked off with the reconstruction of the long abandoned Clear Creek Landing Zone (40 miles south of Fort Wainwright). The tasks assigned to composite Prime BEEF teams included developing a 4,100-foot runway with lights for a 24-hour a day C-130 resupply operation of 10,000 Army troops, as well as constructing an austere base camp for the support and logistics equipment, storage, and personnel. Clear Creek Landing Zone was only accessible by helicopter or vehicles and equipment that crossed several manmade ice bridges. The first C-130s touched down on 12 January and on 15 January, the site was fully operational.

1979 The USACE, Alaska District completes the Chena River Lakes Flood Control Project. The development and ultimately the construction of this project provided a 7-mile dam and 22-mile levee built to prevent the Chena River from overflowing. The construction crews saw temperature extremes from 90



The Moose Creek Dam is about 8 miles long, running from north of the Chena River to the Tanana River. Photo: POA.USACE

degrees Fahrenheit to minus 65 degrees Fahrenheit. They also encountered several geological challenges, and Roller compacted concrete was used for the first time on an Alaskan project. The Chena River Lakes Flood Control Project dam is about 40 miles up the Chena River from Fairbanks. The dam was built in response to the 1967 Fairbanks flood, which inundated much of the city. When closed, the dam impounds water and, when the inflow is high enough, diverts it about 8 miles to the Tanana River near North Pole, upstream of Fairbanks and the natural mouth of the Chena.

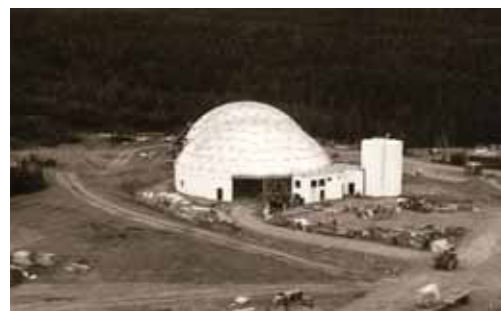


1979 A large number of USAF Civil Engineering Squadron personnel from Elmendorf AFB started a two-year rotational program to create upgraded roads and non-frost susceptible strafing pits at Blair Lake Range and relocate facilities built earlier by contingency forces that had suffered permafrost damages. The changes improved operational safety, living conditions, and the lifespan of this important operational training asset. Located 20 air miles southwest of Eielson AFB, Blair Lakes is a conventional bombing range used by DoD personnel from Eielson AFB and Elmendorf AFB. It is accessible year-round via a 2,500-foot-long gravel airstrip and from mid-January to mid-March via an ice road that is built annually across Alaskan rivers and tundra.

1979 In December, the USAF Civil Engineers at AAC published the Minimally Attended Radar (MAR) Civil Engineering Organizational Concept. This document addressed the economical and productive concept of operations to provide a 2-tiered organization of onsite contractor and in-house civil engineering personnel at the MAR locations and reinforced by supporting travelling and home headquarters personnel in Alaska.

1980 Construction of the Alaskan ROCC, or "Top ROCC," was begun. It achieved initial operational capability on 14 June 1983 and full operational capability on 15 September 1983.

1980 The Minimally Attended Radar (MAR) program installed new and more effective radars around Alaska, enabling a much smaller operational staff. With the reduced staffing, fewer support and operational buildings were necessary, and a more economical facility could be used. The USAF's answer at four sites was to replace most of the AC&W facility with two energy efficient aluminum domes—one dome for radar operations and the second for housing at Indian Mountain, Sparrevohn, Cape Romanzof, and Tatalina. The USACE, Alaska District reviewed the design, voiced opposition to the aluminum domes, and made some major design changes and value engineering edicts to purportedly address their main deficiency of using aluminum panels that would probably cause it to expand and contract dramatically in extreme temperature. An aluminum dome would be exposed to warm sunrays on one side while the other side was cold, creating pulls and pressures on the many seams, resulting in seam leakage.



MAR Domes under construction. Photo: USACE.



- 1980** This year saw the passage of the Alaska National Interest Lands Conservation Act (ANILCA), acknowledging the realization of the greater importance of tourism and the environment than in the past. It added 53.7 million acres to the National Wildlife Refuge system, parts of 25 rivers to the National Wild and Scenic Rivers system, 3.3 million acres to National Forest lands, and 43.6 million acres to National Park land.
- 1980** A new 10,496-foot north/south runway was completed at Anchorage International Airport enabling safer flight operations at this increasingly busy airport.
- 1980-5** Alaska Power Authority constructs four power dams in southern Alaska including Swan Lake near Ketchikan, Terror Lake near Kodiak, Solomon Gulch near Valdez, and Tyee near Wrangell and Petersburg.
- 1981** On 15 March 1981, USAF RC-135S, 61-2664 "Cobra Ball II" crashed in a blizzard on landing at Shemya AFB after a training flight from Eielson AFB. The plane descended too low and hit the ground just short of the runway. There were no overruns or shoulders available. The main landing gear and two right-wing engines then hit the runway and were sheared off. The tail slammed into the ground and fire and smoke filled the plane. Six of 24 men aboard were killed. The injured were evacuated to Elmendorf AFB two days later after the runway was cleared. The outrage over the crash site involving abandoned World War II facilities, which contributed to the difficulties of rescuing the crew led to increasing the pressure on abandoned facility construction. This enabled the potential demolition funding by developing DoD Restoration Program legislation, championed by U.S. Senator Ted Stevens.
- 1981** At the end of the year, SAME Anchorage Post membership stood at 128.
- 1982** The Anchorage Post was named a Society of American Military Engineers Distinguished Post.
- 1982** This year saw the arrival of F-15 Eagle air superiority fighters at Elmendorf AFB with rotational alerts at Galena and King Salmon airports, replacing the F-4E in Forward Operating Base (FOB) operations in Alaska. The F-15 had greatly improved maneuverability, speed, and range over the F-4E and was deemed the most effective interceptor used during the Cold War.

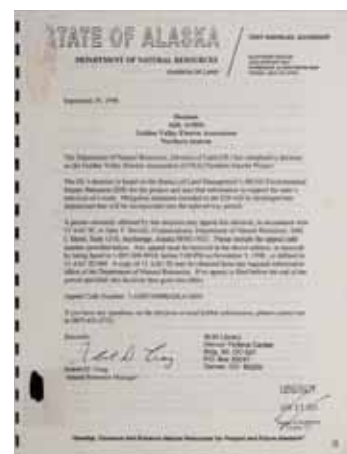


An F-15E Strike Eagle breaking away from a tanker.



- 1982** The Alaska Fire Service was established and had four management zones: Galena, McGrath, Tanana, and Circle Hot Springs.
- 1982** On 28 November, an E-3 Sentry aircraft directed two F-15s out of Shemya AFB to intercept two Soviet Tu-95 Bears. This was the first time a Sentry had been used in an intercept mission and was the first intercept ever flown from Shemya AFB.
- 1983** Governor Jay Hammond, establishes the 48,000-acre Chilkat Bald Eagle Preserve, and the adjacent Haines State Forest Resource Management Area.

Mid 80s Construction of the Alaska Intertie -The Alaska Intertie transmission line is a 170-mile long, 345kV transmission line between Willow and Healy that is owned by AEA and operates at 138 kV. The Intertie interconnects Golden Valley Electric Association (GVEA), the regulated utility that serves areas north of the Alaska Range, with southcentral Alaska utilities. As an integral part of the interconnected Bulk Electrical System (BES) for the rail belt region, this AEA owned asset transmits Bradley Lake and economy power north into the GVEA system. The economy power is generated by Chugach Electric Association (CEA), Matanuska Electric Association (MEA), and Municipal Light and Power (ML&P). Although power generally flows north, the line is also available for GVEA to transfer energy south if an emergency finds the Cook Inlet region short of electric power.



BLM Environmental Impact Statement Decision document

- 1983** In January President Ronald Reagan signs legislation authorizing transfer of the Alaska Railroad to the State of Alaska.
- 1983** On 1 September, Korean Air Lines (KAL) Flight 007, scheduled from New York City to Seoul via Anchorage, was shot down by a Soviet Su-15 interceptor. The Boeing 747 airliner had departed Anchorage for Seoul, but due to a navigational error the airliner flew through Soviet prohibited airspace about the same time of a US aerial reconnaissance mission. The Soviet Air Forces treated the unidentified aircraft as an intruding US spy plane, and destroyed it with air-to-air missiles, KAL007 eventually crashed into the Sea of Japan, and all 269 passengers and crew aboard perished. The Soviets found the wreckage under the sea on 15 September, and found the flight recorders in October, but this information was kept secret until 1993.



1984 The USAF MAR USACE construction was completed at Sparrevohn, Indian Mountain, Cape Romanzof, and Tatalina radar stations. The new high-tech administrative and operational domes were particularly important at those four locations because the facilities already in use were worn out and very energy inefficient. Additionally, since all material for the domes at Sparrevohn and Indian Mountain had to be sized enabling C-130 air transportability, it was a reason to celebrate the constructability aspects of these state-of-the-art joined domes. Predictions of the maintainability were quite dire and soon problems of leakage and condensation came to light.

1984 On 3 May, President Ronald Reagan joined with 5,000 Alaskans in Fairbanks that day to greet Pope John Paul II and hear him appeal for "an openness of heart, a readiness to accept differences and an ability to listen to each other's viewpoint without prejudice." "In a violent world, Your Holiness, you have been a minister of peace and love," said Mr. Reagan, who arrived in the central Alaska city of Fairbanks Tuesday morning after his trip to China and stayed to meet with Pope John Paul II.



Photo "Courtesy Ronald Reagan Library.", Public domain, via Wikimedia Commons

1984 In July Governor Sheffield signs legislation establishing the quasi-public Alaska Railroad Corporation and its seven-member board of directors.

1984 The Seward Coal Loading Facility, referred to as the Seward Coal Terminal, was built in 1984 to provide for the export of coal from Usibelli Coal Mine Inc. The facility consists of a railroad spur, a variety of coal storage and handling and loading equipment, as well as a large dock.

1985 On 25 February, USAF RC-135T, "Rivet Dandy" from Eielson AFB was flying practice approaches in poor weather at the Valdez Municipal Airport. After two uneventful approaches, the crew apparently became disoriented and started the next approach 4 miles off course. The aircraft flew into the side of a mountain, killing all three crew members. The wreckage was found six months later.

1985 On 5 April, the first intercept of Soviet Aircraft by Alaskan Air Command incorporating aerial refueling took place.

1985 The first multiple intercepts involving planes from Galena and King Salmon occurred on 17 September. After intercepting two Soviet Tu-95 Bears over the

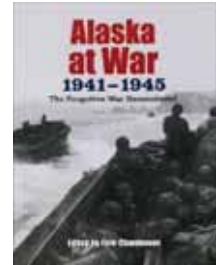


Bering Sea, the King Salmon-based pilots were directed by an E-3 Sentry to intercept two other Soviet Tu-95 Bears in the North Pacific Ocean.

1985 In January the Alaska Railroad becomes the property of the State of Alaska in transfer ceremonies held in Nenana and Seward.

1986 Two AWACS Airborne Warning and Control Aircraft became permanently stationed at Elmendorf AFB.

1986 A documentary film “Alaska at War” about World War II in the Aleutians and compiled by BG B.B. Talley and Mrs. Virginia Talley premiered at the Alaska District of the Corps of Engineers.



1986 From 6 September through 8 September, the Anchorage Post hosted the SAME Northwest Regional Conference at the Anchorage Clarion Hotel. Conference co-chairs from the Anchorage Post were Bruce Corwin and Leo Von Scheben. The theme for this well attended Regional Conference was “Arctic Technology for the Nineties”.

1986 On 10 September, the longest intercept ever made took place when interceptor aircraft scrambled from Elmendorf AFB to intercept two Soviet Tu-95s 340 nautical miles northeast of Point Barrow.

1986 Groundbreaking was held for the American Bald Eagle Foundation Center. The construction of the Center in Haines was completed in time to open its doors to the public.

1987 Construction of the Red Dog Mine in Alaska’s Northwest Arctic Borough begins in an area rich in metals—in this case primarily zinc. The mine is now the second largest producer of zinc in the world.

1987 Cominco Alaska Exploration collected mineralized surface samples at the Pebble site near Lake Iliamna from color anomalies visible from aircraft. The first two exploration holes were drilled in 1988. In 1989, twelve more drill holes, soil sampling, and geophysical surveys indicated that the Pebble West occurrence (originally named Pebble Beach) was part of a large copper porphyry system.

1988 The WACS was transferred from USAF control to RCA Alascom and served civilian use until the late 1970s, when it was superseded by satellite communication earth stations. The very last WACS tropospheric link, from Boswell Bay to Neklasson Lake, was used until January 1985 to connect Middleton Island to the network.



Vandalism, unsafe conditions, and environmental concerns at the abandoned sites caused DoD to remove physical structures at the sites, and the USAF Civil Engineering Program Operation Clean Sweep was born. The WACS cleanups would take decades to complete as several former WACS and collocated facilities became contaminated sites managed by the Alaska Department of Environmental Conservation, primarily because of PCB usage and fuel leakage from storage tanks.

1988 Renowned writer James A. Michener authors the 868-page historical best-selling novel titled "Alaska" which spans a considerable amount of time traced through the interlinking of several families, combining fact, fiction, and imagined history.

1988 After much anticipation and construction effort, it turned out the Over the Horizon Backscatter Radar (OTH-B) never actually materialized in Alaska, a direct result of defense funding and shifting tactical and strategic approaches. The system would have employed ionospheric refraction to monitor aircraft in over-the-horizon sectors up to 1,800 miles out, and Alaska was to be one of four sectors, and linked



U.S. Navy Relocatable Over-the-Horizon Radar station

to the North Warning System DEW Line upgrade. Just as the system was coming online, the Cold War ended, prompting the USAF to immediately cancel the Alaska system. However, when the project was still funded, USAF had authorized construction of a massive facility to house the system in Alaska. The OTH-B main transmitting station was just north of Gakona, with a smaller receiving station near Tok. While the military embarked on a major construction enterprise and built access roads and a new coal power plant at Gakona to support the OTH-B site, OTH-B never occupied its new home. The Tok station never made it past the planning stage. Neither did the operations center. The US Navy Relocatable Over-the-Horizon Radar (ROTHR) site for monitoring ships was located in the Aleutians at Amchitka and the portions of the system constructed by the end of the Cold War were removed and supporting marine facilities were ultimately decommissioned.

1988 Project Queen Match was fielded as an effort to replace the 24-hour COBRA BALL alert crews and aircraft with a safer, cheaper alternative. Using a purpose-built launch facility at Shemya, along with Aries rockets that had been highly modified to include sensor equipment, the idea was to launch a Queen Match rocket in response to any Soviet launches from their facilities on the Kamchatka Peninsula. The first Queen Match launch took place in August, but the rocket failed to perform as designed.



1988 In October crews rescued three gray whales trapped in Arctic ice near Barrow, Alaska. The story was the inspiration for the 2012 film "Big Miracle," starring Drew Barrymore.

1989 The SAME Anchorage Post Annual Banquet had a new addition—the charity art raffles. As the Post President of SAME, Colonel Ev Mabry said years later, “I think about 80% of the Alaskan Art in my house came from the Banquet Art Auctions over the Years”. Barb and Ev Mabry’s plan was to “buy a lot of tickets and win a



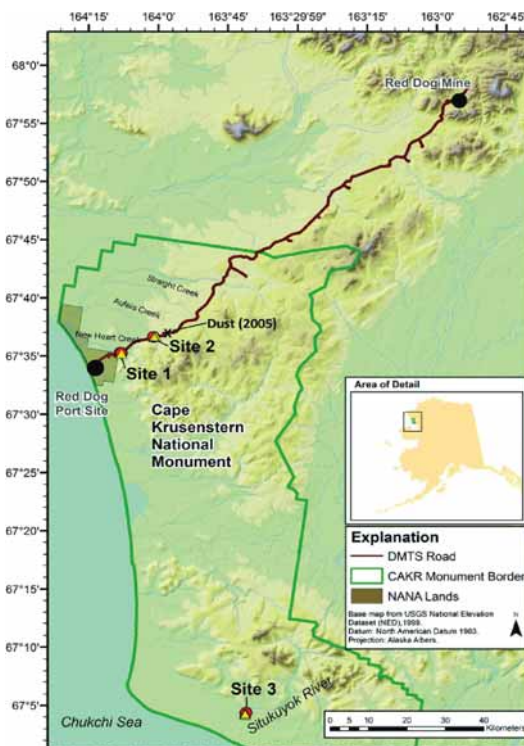
Art prints, a quilt, and other prizes in the colorful auction of SAME Annual Banquet. Photo Tom Talasz

prize”. That methodology came to be adopted by many attendees and their artwork collections they won reflect their generosity and good luck.

1989 A second Queen Match Star Wars Research Missile Facility rocket launch from Shemya took place in July and the test was declared successful.

1989 As one of AIDEA’s original projects, the Delong Mountain Transportation System (DMTS) was opened in 1989 to support the development of the Red Dog mine in northwest Alaska. The Red Dog mine, operated by Teck Alaska, Inc. on behalf of the local native regional corporation (NANA Regional Corporation, Inc.), is one of the world’s largest producing zinc mines. The DMTS provides the necessary infrastructure for the transport of the ore from the mine site to the export barges. Expansion of the DMTS port facilities in 1999 enabled Teck to increase mine and port throughput, improving the overall project economics. The full system includes the following infrastructure:

- A 52-mile, 30-foot all-weather gravel industrial haul road from the mine site to the port facility



Map showing sampling locations along the Delong Mountain Transportation System (DMTS) haul road in relation to the Red Dog Mine and Port Facility, and Cape Krusenstern National Monument boundary. Image USGS.



- A shallow water dock to receive supplies, fuel, equipment, and personnel
- An offshore conveyor system to load ore concentrate to lightering vessels that can convey the concentrate to larger ships further offshore
- A fuel distribution facility including 6 bulk tanks capable of storing approximately 15 million gallons of fuel for port and mine use
- Storage facilities, including 2 buildings with approximately 1.2 million tons of ore storage capacity
- On-site power, other utilities, and residential quarters for up to 96 workers

1989 The aborted OTH-B facility now serves in a different capacity than its planners envisioned. The USAF repurposed Gakona for an experimental communications venture called HAARP, for High Frequency Active Auroral Research Program. HAARP, which also incorporates a civilian physics research component overseen by the University of Alaska, is designed to transmit through the ionosphere (rather than bouncing off it, as the Navy ROTH-R does). The goal was to communicate with a low-powered receiver anywhere in the world.

1989 The Alaska District of the Corps of Engineers completes the second Phase of the multi-year Snettisham Dam project near Juneau. In 1967, construction began on the Long Lake hydroelectric project by the U.S. Army Corps of Engineers. By 1973, 47.2 Megawatts (MW) of power were delivered to the City of Juneau by the recently completed facility that included, an 8,400 foot power tunnel (to deliver water from the lake to the turbines), a remote camp, a boat slip, an airstrip, and a 44 mile long high voltage transmission line. The nearby Crater Lake facility was brought on-line, contributing an additional 31 MW from the newly installed third and final hydropower generator. The sole water resource for the third unit comes from Crater Lake. The Snettisham hydro-power plant now has a total of three hydropower generating units. The combined 78.2 MW from the project now provides approximately 65% of the power for the local electric utility, Alaska Electric Light and Power Company (AEL&P).



Snettisham Dam near Juneau. Photo AIDEA

1989 President George Bush stopped at Elmendorf AFB enroute to Japan for the state funeral of Japanese Emperor Hirohito and addressed a crowd of over 7,000 in Hangar Five. This was the same hangar in which President Richard Nixon had



greeted Hirohito 18 years previously when the emperor had made his first official State visit outside his native land.

1989

On 4 March, the oil tanker Exxon Valdez struck the Bligh Reef in the Prince William Sound Region. The tanker was under the command of Captain Joseph Hazelwood, who was allegedly drunk and was fast asleep in his bunk when the accident occurred. The tanker, loaded with roughly 54 million gallons of oil, slammed into the reef at around 12 am Alaska time. In the process, 10.8 million gallons of oil was released into the waters of



Shortly after leaving the Port of Valdez, the Exxon Valdez ran aground on Bligh Reef. The picture below was taken 3 days after the vessel grounded, just before a storm arrived.

Prince William Sound. The captain had handed over the ship's control to the Third Mate who, unfortunately, failed to maneuver the vessel properly. The tanker collided with the reef causing the hull of the vessel to be torn open. The cleanup mission was by now imminent, but one of the most significant problems in the oil cleanup operations centered around the confusion in a coherent the command and control structure. Compounding the problem was the remoteness, the difficulty of communicating between all the key players, the mixture of the civilian and military worlds and the US Coast Guard, and the high level of national attention. The confusion and second guessing at times hampered operations and left the public with the impression that little was being accomplished and no one was in charge. Although Exxon and the US Coast Guard had responsibility for the cleanup operations and played a larger role than the USACE, Alaska District nonetheless made significant contributions. As part of DoD's response, the Alaska District provided dredges, which proved to be the most effective equipment for recovering oil that had been collected on the water; advanced the ability to locate oil on the water surface and the shoreline using remote sensing; and provided officials in the White House and Pentagon with information on the scope of the problem that they could use in decision making. Colonel Bill Kakel and the USACE, Alaska District made a significant and timely impact on mitigating the horrendous spill due to dedication and innovation of the Alaska District's people and the responding USACE dredges. They were supported by the Joint Task Force Military Commander, USAF Lt Gen Thomas McInerney, who paved the way to get things off top dead center.



1989 A massive military construction effort called "Fix Shemya" was used to build replacement facilities and repair existing facilities, the situation had become dire often due to the war against the elements. This program enabled the start of 25 large scale projects to modernize the installation including building three large



Shemya Island

hangars to replace World War II wooden Birchwood hangars, new dormitories, and new Quality of Life and other Recreation facility improvements. The merits of this program were top prioritization of all efforts. "Fix Shemya" did not have to compete with other MILCON priorities in Alaska or the USAF, enabling more efficient contracting of effort and improved mobilization and demobilization effectiveness. The Alaska District of the Corps of Engineers carried out most of work oversight the military construction agent.

1989 Federal Express (FedEx) and United Parcel Service (UPS) begin major transpacific sorting hubs at Anchorage International Airport, and Russian airspace opens to commercial traffic.

1989 In June, the Anchorage SAME Post held its first Annual Scholarship Golf Tournament at the Elmendorf AFB Eagleleglen golf course. The tournament was the brainchild of the SAME Anchorage Post President Colonel Everett Mabry, USAF. In its first outing, it realized over \$3,000 in scholarship donations for Anchorage Post to distribute to deserving college students. Ev said "getting the Yearly Golf Tournament launched took a lot of work from everyone involved and turned out to be a consistent major fund raiser for the Anchorage SAME Post yearly Scholarship Fund."

1989 Establishment of Camp Mad Bull a cantonment area and airfield training infrastructure hands on site for civil engineering Prime BEEF (Base Engineer Emergency Force) personnel at Elmendorf AFB began under the Command of Colonel Everett Mabry, P.E., 21st Civil Engineering Squadron Commander.



1989 On 18 August, Mount Spurr erupted, coming into the view of Anchorage residents when a towering eruption column rose from Crater Peak and an eruption cloud spread a short distance upwind. The eruption lasted about 3.5 hours and produced about 52 million cubic meters of volcanic ash. Westerly winds carried the ash eastward over Anchorage, across the Chugach Mountains and northern half of Prince William Sound. Up to 3 mm of sand sized ash fell in Anchorage, and coastal communities 1,200 km downwind reported dustings of fine ash. Anchorage International Airport was closed for 20 hours because of the ash fall.



Mount Spurr eruption

1989



Photo by R. Lucas

On 14 December, Mount Redoubt—located about 100 miles southwest of Anchorage, on the West side of Cook Inlet—erupted spitting an ash cloud into the sky following a day of intensifying seismic activity. KLM flight 867, a Boeing 747 headed for Anchorage International Airport, flew through the ash cloud at an altitude of about 25,000 feet, resulting in all four of the aircraft's engines dying. After plunging more than two miles to about 13,000 feet, the pilots were able to miraculously restart the engines and land safely at the airport—but the plane suffered \$80 million in damages.

1989 By the end of the year, the Anchorage SAME Post had 18 Sustaining Member firms and 230 individual members.

1989-90 Cleanup at Skagway was conducted. The massive \$6 million super-fund clean-up to remove lead ore concentrates and fugitive concentrates dust was done by use of “supersuckers” paid for by Curragh and White Pass along waterfront, railroad, and highway through town.

1989-90 A severe winter of extended cold and heavy snowfall causes delays to train operations. Attempts to deter moose from the tracks include noise-making shotgun shells and a pilot car that runs in front of freight trains to shoo moose off the tracks.



1990 With the cessation of the Cold War dissolution of the Soviet Union on the horizon, the Queen Match program was paused and the Shemya launch facility was closed shortly thereafter.

1990 On 9 August, Honorable Donald B. Rice, Secretary of the Air Force, and General Merrill McPeak, Commander in Chief, Pacific Air Forces conducted a Re-designation Ceremony of Alaskan Air Command to Eleventh Air Force.

1990 In February, the 5099th Civil Engineer Operations Squadron, (commanded by Lt Col Patrick M. Coullahan), Elmendorf AFB, was honored as winner of the Society of American Military Engineers Curtin Award as the most outstanding civil engineering small unit in the USAF. The Curtin Award has been presented annually since 1966. This was the first time a unit from Alaska had won this prestigious SAME and USAF Award.



1990 The landmark Environmental Statement of Cooperation between the Alaska Department of Environmental Conservation, the Federal Environmental Protection Agency, and DoD in Alaska was signed. A widely recognized event known as the Alaska Federal Facility Environmental Roundtable was launched by the SOC Agreement and focused on contaminants, hazardous waste cleanup, hazardous materials management, pollution prevention, etc. at federal facilities.

1990 In July AIDEA purchased the Skagway Ore Terminal (SOT) to bring stability to Skagway's then major year-round industry; fund essential environmentally efficient renovations to the terminal; and open the door to additional economic growth by marketing the terminal to other potential users. The terminal was purchased from White Pass Railway, with a sublease of City property approved by the Municipality of Skagway. The current user is Minto Explorations Ltd., a subsidiary of Capstone Mining Corp. (previously Sherwood Copper Corp.). The user contracted with Mineral Services Inc. (MSI) to operate and maintain the terminal in April 2008. The SOT consists of a 6.7 acre industrial waterfront lot whose primary features include: a 98,000 square foot 16-inch thick concrete floor, a 42,000 square foot concentrate storage building (the original concentrate storage building was demolished in 2003) surrounded by concrete containment walls, office, shop, laboratory, electrical and wash buildings; enclosed materials handling loadout



*Skagway Ore Terminal and ship loader.
Photo courtesy AIDEA*



conveyors and ship loader; and a .37 acre adjacent lot which contains a fueling facility (two 10,000 gallon day tanks) and tank farm (four 30,000 gallon tanks).

1990 SAME membership in Alaska totaled 230, with the Anchorage Post at 194 members, the Aleutian Post with 3 members, and the Polaris Post with 33 members.

1991 Following the incorporation of the Alaska Aerospace Development Corporation by the Alaska State Legislature, plans were begun for the Kodiak based spaceport, known during development as the Alaska Orbital Launch Complex.



Athena 1 rocket launching from Kodiak Island

1991 In the aftermath of the Exxon Valdez oil spill in Prince William Sound a Bald Eagle aviary was created at Elmendorf Air Force Base to house and study injured Alaskan bald eagles. The "Eagle cage" is managed by civil engineers and supported by volunteers.

1991 The Bradley Lake Project begins commercial operation. The project is located at the southern end of south-central Alaska off Kachemak Bay near Homer. The 120-megawatt project generates an average of 380,000 MWh of energy per year and transmits it to the state's main power grid via two parallel 20-mile transmission lines. Bradley Lake serves Alaska's Railbelt from Homer to Fairbanks as well as the Delta Junction area. Homer Electric Association under contract with AEA operates the project.

1991 In November, SAME published their first Strategic Plan to govern the Society's mid, near, and long-term objectives, goals, and activities.

1991 On 19 December, the 21st Wing at Elmendorf AFB was re-designated as the Air Force's historic "3rd Wing" following the abrupt closure of Clark Air Base in the Philippines due to the eruption of Mount Pinatubo. With the closure of Clark AB, the Cope Thunder series of exercises was also transferred to Eielson AFB in this timeframe to take advantage of the installation's impressive facilities and ranges.

1992 In January, Frank Turpin of the Alaska Department of Transportation and Public Facilities spoke to the Anchorage SAME Post about celebrating the 50th Anniversary of the Alaskan Highway.



1992 In February, Ted Trueblood, PE, M.SAME, President of Tryck Nyman Hayes, was recognized as the 1991 Alaska Engineer of the Year by all Alaskan Engineering Societies during National Engineers Week.



*Ted Trueblood, PE,
M.SAME.*

1992 In March, Lt Gen Thomas McInerney, USAF, Commander of the Alaskan Command spoke to the Anchorage Post on the "Military Future in Alaska".

1992 The design began for the Joint Venture Medical Treatment Facility between the USAF and Veteran's Affairs, ultimately replacing the Elmendorf AFB hospital with a new, efficient, and flexible facility to meet the health needs of the military and their families, retirees, and veterans.

1992 Mount Spurr volcano erupted 80 miles east of Anchorage, causing widespread havoc in Alaska. On 27 June, the Crater Peak vent on the south side of the volcano awoke from 39 years of dormancy and burst into eruption after 10 months of elevated seismicity. An additional two significant eruptions followed in August and September that year.

1992 On 31 August, the Alaskan Air National Guard 168th Refueling Wing took over the KC-135 support from the Strategic Air Command's Alaska Tanker Force.

1992 On 1 September, the 6th SW stationed at Eielson AFB was inactivated as part of the reorganization of the USAF command structure following the collapse of the Soviet Union.

1992 The United States Air Force Civil Engineering Military Manager of the Year Award was presented to Lieutenant Colonel Patrick M. Coullahan, Commander, 11th Civil Engineer Squadron, Elmendorf AFB.



1993 In January, the Anchorage Post held their Annual Banquet at the Elmendorf AFB Officers Club, with Major General Ernest J. Harrell, Commander and Division Engineer, USACE, North Pacific Division as the guest speaker. The Anchorage Post 1993 Officers and Board members were inducted by Brigadier General Benjamin Talley, USA (retired). Three \$500 scholarships were awarded.

1993 On 6 April, China Eastern Airlines Flight 583 was in route from Shanghai to the Los Angeles International Airport was involved in a disaster. The McDonnell-Douglas



MD-11 was cruising above the Pacific Ocean at Mach 0.84 when a crew member accidentally deployed the slats near the Aleutian Islands. The plane then encountered severe oscillations and made an emergency landing at Shemya AFB. Of the 255 passengers and crew, 60 were hospitalized, and two ultimately died. Best-selling author Michael Crichton's novel "Airframe" opens with a fatal incident based on Flight 583.

1993 In May, Lt General Joe Ralston, USAF, Commander of the Alaskan Command and the 11th Air Force, spoke to the SAME Anchorage Post on "The Air Force in Alaska" citing the important mission, quality of life, and operational roles that military engineers generate such a tremendous positive impact. Lt Gen Ralston later became Vice Chairman of the Joint Chiefs of Staff.

1993 The US Navy closed the Relocatable-Over-The-Horizon-Backscatter (ROTHB) Radar on the Aleutian Island of Amchitka.

1993 Shemya AFB was renamed Eareckson AS in honor of Col William O. Eareckson. In 1942 and 1943, Colonel Eareckson personally led the difficult missions against the Japanese on Kiska and Attu, helping plan the successful retaking of Attu. The "Fix Shemya" program was also completed this year.



William Olmstead Eareckson. Photo: The Military Times

1993 In October, the USAF withdrew all permanent military personnel and aircraft from Galena. The USAF reverted facilities to standby status and hired a contractor to maintain the runway and a small number of USAF facilities on a standby basis. Part of the facilities were transferred to local Native Corporations and used as a regional school.

1993 Dr. Alex Hills and his team built the world's first big Wi-Fi network. As described in his book, *Wi-Fi and the Bad Boys of Radio*, the team overcame major obstacles to create the first wireless campus. The new network, which came to be called "Wireless Andrew," was the prototype used by many others to build Wi-Fi networks now in use around the world. Before he joined Carnegie Mellon, Professor Hills spent several years living in remote areas of Alaska working to provide modern broadcasting and telecommunications services to the many small villages spread across our state. He fought Alaska's difficult weather and terrain, and helped to persuade some reluctant executives, to make the services possible.

1993 In December, an 8-foot polar bear crashed through a window into a dormitory at Oliktok, a remote USAF radar station, mauling a 55-year-old mechanic. "The bear climbed through the window and chased the attacked victim into the recreation room, where the polar bear pushed him to the floor and began biting his head,"



said Larry Hinkin, a North Slope Borough police officer. Another one of victim's terrified co-worker's shot the animal with a shotgun, and the animal walked into the dorm's library and died.

1994 In January, Brigadier General Benjamin B. Talley performed his last ever official SAME activity at the Anchorage Post Annual Meeting at the Elmendorf Officers Club when he installed John K. Magee, PE, as the Anchorage Post President and recognized Lt.Colonel Patrick M. Coullahan, USAF, as outgoing Anchorage Post President. Brigadier General Talley was the Post's charter President in 1942 and made a huge and lasting impact on SAME and Alaska over the years, and his legacy has been a highlight of our post.



1994 The USAF withdrew all permanent military personnel and aircraft from King Salmon airport as part of post-Cold War reductions throughout the USAF and converted the installation to a contingency field maintained by a civilian contractor.

1994 Elmendorf AFB won the DoD Installation Excellence Award and several Anchorage Post members along with Senator Ted Stevens and prominent Anchorage public figures attended the official award presentation at the Pentagon by the Assistant Secretary of Defense.



1994 The Anchorage Post award four college scholarships totaling \$2,000.

1994 By 31 March Anchorage Post membership totaled at 206.

1994 The Air Force Center for Environmental Excellence (AFCEE), today's Air Force Civil Engineer Center (AFCEC) established a presence in Alaska in April 1994 by opening an office on Elmendorf AFB. AFCEE's mission at the time was to improve customer service, particularly for environmental cleanup on remote radar sites, through better communication with stakeholders and increased contracting actions with small business and Alaska Native Corporations. The original office of four grew over the years, as did the mission and customers the office supported, but a focus on environmental restoration has remained constant.



1994 On 1 July, the Rescue Coordination Center (RCC) became manned solely by Alaska Air National Guardsmen under the operational active-duty commander of the 11th Air Force at Elmendorf AFB.

1994 On 28 July, a robot named Dante II began its descent into Mount Spurr, an active volcano near Anchorage. Dante II was staged and prepped an Air Force civil engineering hangar at Elmendorf AFB. Dante II was primarily NASA sponsored. It was a multi-legged, rappelling robot designed and built by Carnegie Mellon



The legged robot Dante II, built by Carnegie Mellon University and sponsored by NASA, explored and sampled the active volcano at Alaska's Mt. Spurr in 1993. Photo: CMU.

University to investigate live volcanoes. Dante II's mission was to walk autonomously over the crater floor and to provide detailed data regarding the gaseous mixture emanating from fumaroles within the crater. The robot was 10' tall and 8' wide, weighing 1700 pounds. It was equipped with leg sensors to measure contact surfaces, laser range finders, six regular video cameras, two stereo video cameras and a high-resolution still-frame camera to view its position and receive data. Using satellite technology, the robot also received instructions from remote human operators at control stations in Anchorage, Washington DC, and the NASA Research Center in San Francisco. Dante II descended toward the crater floor from a tether at the rim of the volcano, approximately six hundred feet. Rappelling with its speed of approximately three feet per minute, Dante II climbed down the sheer crater walls using its on-board computer to create a terrain map to ensure safe passage. On the third day of its descent, Dante II was struck by a falling boulder, but the robot still managed to reach the crater floor and receive gas and water samples for analysis. During its time within the volcano, Dante II relayed video images back to

mission headquarters. Upon its ascent, the robot lost its grip on the wall and fell back down to into the volcano from a height of approximately two hundred feet. A helicopter was used to airlift the damaged robot, but the tether broke, and Dante was again dropped to the crater floor. Despite the unceremonious end to the expedition, the project was considered remarkably successful. The information and data that Dante relayed and gathered from its harsh surrounds demonstrated the potential for further robotic exploration and provided scientists researching Mount Spurr with invaluable information, without risking more deaths of volcanologists while descending into volcanoes

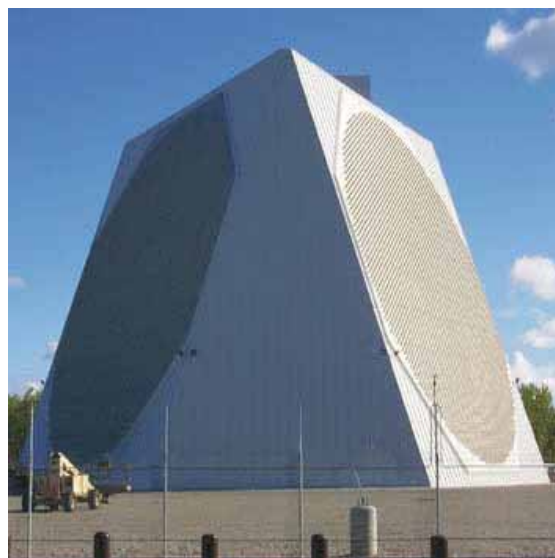
1994 On 29 July, an Australian tourist had a brush with death after she snuck into the polar bear enclosure at the Anchorage Zoo. Kathryn Warburton got out alive, but



Binky the polar bear kept one of her shoes as a trophy and was celebrated with an iconic picture of the shoe in Binky's mouth.

1994 On Veteran's Day, 11 November, President Bill Clinton addressed 5,000 military members and their families, and local dignitaries at Elmendorf AFB. He was greeted by Lt Gen Lawrence Boese, Brig Gen Thomas Case, Maj Gen Hugh Cox III, and Maj Gen Thomas "Nukem" Needham, as well as Senator Ted Stevens, Mayor Rick Mystrom, Governor Wally Hickel, and former Governor Bill Sheffield. He acknowledged that Republicans controlled both the Senate and the House of Representatives going forward and pledged to work with Senator Ted Stevens, Senator Frank Murkowski, and Congressman Don Young on issues of concern to the State of Alaska in a nonpartisan way. He also mentioned he concluded an agreement with North Korea to make sure that that nation becomes a nonnuclear state and does not contribute to the proliferation of weapons of mass destruction. He thanked all the troops in the Persian Gulf, where he further said, "we moved with amazing speed and strength to make sure that Iraq poses no threat to its neighbors or the stability of the Gulf region".

1994 Elmendorf AFB Civil Engineers conducted a complete fence to fence survey of base facilities and maintenance needs. As a test base for the Department of Defense Condition Assessment Survey, the Elmendorf team efforts provided all defense agencies with powerful new facility maintenance and repair requirements tools that improved mission support and quality of life of all service members based on a factual, analytical approach. Captain Andra Clapsaddle was the Project Officer for setting up and conducting the intensive 3rd CES survey—one of 16 conducted DoD wide in the \$50 million program. Ultimately DoD determined it was feasible to develop a set of uniform standards to assess conditions of similar types of facilities across the services.



PAVE PAWS transmitter building, Clear Air Force Base, Alaska, showing the two circular phased array antennas.

1995 This year saw the AN/FPS-123, Solid State Phased Array Radar System coming to Clear, previously part of the PAVE PAWS program at El Dorado Air Station, Texas.

1995 The Anchorage Post published the First "Operation Fast Start" Readiness Plan. It stressed the strategic importance of the State of Alaska in any scenario that might involve mobilization to support a National emergency. It also recognized that Alaska has experienced a fair amount



of disasters including the 1964 Earthquake, the 1967 Fairbanks flood, the Exxon Valdez incident, and 1993 Floods in Interior Alaska.

- 1995** Fort Greely was selected for the Base Realignment and Closure (BRAC) program, specifically for closing selected parcels of the Fort, essentially “warm basing” it.
- 1995** In June, the Joint Mobility Complex was completed at Elmendorf AFB. The project was allocated in November 1993 and construction contract awarded September 1994. The 80,000 square foot facility sat on 12 acres containing logistics and material handling machinery, wash rack, mobility officers, room for processing 750 personnel, and upgraded aircraft parking ramps to bring cargo aircraft less than 800-feet from the marshalling area. This was a totally new facility type, conceived, planned, co-funded, designed and constructed in record time, to allow rapid mobilization of Joint Army and Air Force personnel and equipment.
- 1995** On 1 August, the ribbon was cut for the Alaskan NORAD Region’s Maintenance Control and Communications Center at Elmendorf AFB and The Alaska Short Range Radar System at Wainwright (LIZ-3), Lonely (POW-1) and Bullen Point (POW-3) connected via Satellite ANIK E-1.
- 1995** On 22 September, the crash of a USAF Boeing E-3 Sentry airborne early warning aircraft with all 24 crew on board perishing at Elmendorf AFB. The aircraft, with call sign Yukla 27, had hit a flock of Canadian Geese on departure, resulting in the loss of thrust from both of the left engines, and the aircraft crashed into a wooded area with rising terrain less than a mile from the end of the runway.
- 1995** On 14 September, SAME presented the Award of Merit to Brigadier General B.B. Talley, USA (ret), F.SAME, for his engineering leadership and accomplishments worldwide. The ceremony was conducted by Colonel Peter Topp, P.E., F.SAME at the Alaska District of the Corps of Engineers with Virginia Talley and numerous Anchorage Post SAME members and leaders in the gathered crowd honoring the renowned Alaskan Engineering great.
- 1995** Eareckson Air Station on Shemya Island in the Aleutians went through a draw down phase and converted to contractor support and maintenance for operation of the Cobra Dane radar.
- 1996** The Harry P. Reitman Award for Outstanding Civil Engineer Manager of the Year, Senior Civilian Manager for Pacific Air Forces, was awarded to Alan J. Quesnel, P.E., 611th Civil Engineer Squadron, Elmendorf AFB, Alaska.

**1996**

Nike Site Summit was listed in the National Register of Historic Places. The JBER Environmental Website describes Nike Site Summit as a former U.S. Army Nike Hercules missile installation that sits atop Mount Gordon Lyon in the Chugach Mountains, on the eastern edge of Joint Base Elmendorf-Richardson (JBER), adjacent to Chugach State Park. Sitting at 3,900 feet above sea level, the Integrated Fire Control Area (IFC) - or Battery Control area - overlooks Anchorage, Eagle River, and JBER. It was one of 145 Nike Hercules sites, and part of an extensive defense network, that protected the U.S. during the Cold War. Of these 145 sites, 110 were upgraded Nike Ajax missile sites, while 35, including those in Alaska, were completely new sites. Eight Nike sites were constructed in Alaska; five around Fairbanks and three around Anchorage. Site Summit was constructed by the Patti-MacDonald Company, M-B Contracting Company, and Connelly Construction Company. Construction began in May 1957 and was completed in September 1958, with the work being completed over two construction seasons (May-September). Construction involved blasting 60 vertical feet from Mount



Nike Site Summit, JBER. Photo: www.jber.jb.mil

Gordon Lyon to provide a level space for the IFC area and leveling a ridge for the Missile Launch and Storage area. Additionally, a road of approximately 1.5 miles in length was cut to connect the two areas. Site Summit was kept operational from 1959 to 1979 by the soldiers of the 4th Missile Battalion, 43rd Artillery (re-designated the 1st Battalion, 43rd Air Defense Artillery in 1972). Typically, 125 soldiers were needed to operate a Nike site. Housing at the Battery Control building could accommodate fifty men. Although not all personnel were required to live on the premises, the site was staffed 24 hours a day, seven days a week.



1996 In June, the Joint Mobility Complex was completed at Elmendorf AFB. The project was allocated in November 1993 and construction contract awarded September 1994. The 80,000 square foot facility sat on 12 acres containing logistics and material handling machinery, wash rack, mobility officers, room for processing 750 personnel, and upgraded aircraft parking ramps to bring cargo aircraft less than 800-feet from the marshalling area. This was a totally new facility type, conceived, planned, co-funded, designed and constructed in record time, to allow rapid mobilization of Joint Army and Air Force personnel and equipment.

1996 In June the YUKLA 27 Memorial was dedicated to the memory of the 24 American and Canadian crewmembers who died when their E-3B Sentry aircraft crashed in 1995 after a severe bird strike to two engines just after takeoff. The memorial has 24 plaques listing the name and hometown of each crewmember mounted on a half-oval wall, with an E-3 model aircraft in a climbing left bank mounted on a pedestal at the center of the memorial. It also has 24 trees planted in and around the memorial.

1996 The 3rd Civil Engineer Squadron, Elmendorf AFB was awarded "The Balchen/Post Award for Excellence in the performance of snow and ice control at a Military Airport at the 30th Annual International Aviation Snow Symposium.

1996 The USAF Honor Design Award winning Iditarod Dining Hall constructed by a USACE Alaska District contractor opened at Elmendorf AFB with the Father of the Iditarod, Joe Redington, Sr. cutting the ribbon and having a historical dog sled unveiled for permanent display in the facility.

1996 General John Lorber, Commander of the Pacific Air Forces presented the 3rd Civil Engineer Squadron Commander, Colonel Patrick Coullahan, and the NCOIC of Readiness, Chief Master Sergeant Chris Kendrick with the PACAF Commander's Award of Excellence for Camp Mad Bull Training Complex initiatives. Since its inception the Camp has enabled realistic field training of hundreds of civil engineers for their Prime BEEF roles, and other support personnel on critical contingency



3rd Civil Engineer Squadron Commander, Colonel Patrick Coullahan, and the NCOIC of Readiness, Chief Master Sergeant Chris Kendrick with the PACAF Commander's Award of Excellence for Camp Mad Bull Training Complex initiatives.



Camp Mad Bull Training Complex.

Photo: JBERStaff Sgt. Sheila deVera, Public domain, via Wikimedia Commons

skills. Rapid Runway Repair, Rapid Utilities Repair, Establishing Infrastructure in the Field, Mobile Aircraft Arresting Systems, Airfield Lighting, Camp Cantonment Erection and Operations, Physical Security, Fire Protection in a Contingency Environment, Explosives Ordnance Disposal, and Chemical Warfare Protection were among the course matter conducted at this site.

- 1996** The Miller's Reach Fire in the Matanuska-Susitna Valley destroyed over 300 structures and burned over 37,000 acres. It was called the "worst urban/wildland fire in Alaska's history. It began on 2 June and took nearly two weeks to control the fire and consumed more structures than all other fires in Alaskan history. Many military associated families were impacted by this wildfire which was right after experiencing a 9-month drought. On 8 June President Clinton signed a Federal Disaster Declaration which enabled the access to \$8 million in disaster relief funds.
- 1996** The Anchorage SAME Post Sustaining Member count was 49.
- 1996** White Pass officials are indicted, tried, and convicted by a jury for their involvement in the 1994 spill occurring when a backhoe operator accidentally struck a petroleum pipeline near the railroad tracks. The operator's mistake caused the pipeline to rupture and spill between 1,000 and 5,000 US gallons of heating oil into the Skagway river. They appeal: one conviction stands, the other is tossed out.
- 1997** On 24 January at the Defense Forum Foundation in Washington, DC, General Ronald R. Fogleman, former USAF Chief of Staff, said that Shemya was "a God-forsaken place if you want to know the truth." However, despite that assessment



and knowing the formidable challenges faced out there, Shemya's location makes it vitally important to new and emerging mission needs.

1997 On 31 March, the US Navy closed the Adak Island Anti-Submarine Warfare Base. The U.S. Flag was lowered after flying following an era that began on 31 August 1942 when U.S. Forces landed on the Aleutian Island to establish an advance base for operations against the Japanese on Attu and Kiska Islands in the Alaska Territory.

1997 After a few years of development, the BG Benjamin B. Talley Scholarship Endowment Fund, was created by the Anchorage Post Board of Directors, honoring BG Talley, charter Anchorage Post member and First President and a distinguished engineer popularly known as the "Father of Military Engineering" in Alaska and Mrs. Virginia Wheeler Talley. The founding Chairman of the Endowment was John K. Magee, PE, F.SAME.



Scholarship Recipients at the 2017 SAME Anchorage Post Annual Banquet

1998 Construction on the Kodiak Launch Site began in January to prepare for the first launch scheduled later in the year from temporary accommodations at the site.

1998 The Alaska Department of Transportation and Public Facilities starts the design and construction of the Whittier Tunnel vehicular access project. Completed in 2001, the expanded capability of tunnel allows vehicular traffic to pass through Maynard Mountain for 13,300 feet (2.5 miles) and is the longest combined rail and highway tunnel in North America. There are vehicle turnout areas along the length of the tunnel with safehouses, a public announcement system, and a telephone to the management in case of emergency.

1998 This year saw the first launch of a rocket from the Kodiak Launch Complex at Kodiak Island. The Kodiak Launch Complex became the Nation's first commercial spaceport not collocated on a federal range. Located about 44 road miles south of the City of Kodiak at Narrow Cape on Kodiak Island, the spaceport is a state-of-the-industry and AAC strives to keep it that way. Vigilance, regularly scheduled maintenance, and periodic upgrades govern day-to-day activity. It is situated on 3,717 acres of State-owned land, and exercises authority during launch missions to limit public access to an additional 7,000 acres to assure public safety and security. It is the Nation's only high latitude full service spaceport, and features all indoor, all weather, processing and was designed specifically to provide optimal support for space launches to low earth orbit, sun synchronous orbit, polar orbit, and highly elliptical orbits such as Molniya and Tundra orbits. It offers unrestricted



down range launch azimuths ranging from 110 to 220 degrees, and is the only US facility that can launch high inclination (63.4 degrees) missions without land over-flight and the requirement to resort to energy consuming dog-leg flight segments. The spaceport, like all US west coast facilities, sits on the seismically active Pacific Rim, and all structures and components are designed to exceed applicable design criteria for seismically active zones.

1999

Mike Rogers, F.SAME, Chief of the Alaska District United States Army Corps of Engineers Construction and Operations Division led the first



Annual "Celebrate Safety" Award Ceremony. The Celebrate Safety program conceived at the Alaska District recognized and rewarded the superior safety efforts made by contractors and District team members, building upon the partnering spirit to improve safety trends in the perhaps the most difficult environment in the Corps to conduct work. Over the next 15 years, many Anchorage Post Sustaining and individual members were honored for their efforts. An array of guest speakers including an Alaskan bear attack victim, USACE Commanding General, Comedian Red Green, Contractor and District leaders, OSHA officials, and others provided safety focused motivational presentations and the Corps Safety Office rounded out with the details of the program statistics. The District program was very a popular one among contractors and their people. Winners over the years included Construction firms, Design Builders, Environmental Restoration and Compliance firms, Dredging Contractors, Alaska District personnel, and Prime and subcontractors based on safety performance and safety innovation. The awards were presented by the Resident Engineers, the CONOPs Chiefs, and the District Commanders. The program was so successful, that USACE Awarded the coveted Commander's Safety Award multiple years to the Alaska District. Millions of hours of accident free projects came about due to the program cultivating a safety environment that grew and prospered.

1999

The Joint Venture Medical Treatment Facility, between the USAF and the US Department of Veterans Affairs, was dedicated after many years of design and construction by the USACE. This \$163 million, 430,000 square foot combination hospital and medical treatment facility was designed to the most rigorous seismic criteria used in Alaska and incorporated the advanced techniques of Integrated Building Systems including the innovative use of interstitial space for efficient handling of the complex suite of medical and building mechanical systems. For the structural systems, a lightweight concrete slab over steel members was employed. The whole intent to have a safe and flexible facility was ultimately achieved. The Composite Medical Facility was the recipient of the USAF Merit Award for Concept Design/Build.



1999 ARR/ADOT Whittier Access Tunnel opens to vehicular traffic and becomes the only rail/vehicle shared tunnel in the United States. Railroad ceases to operate the Whittier rail shuttle between Portage and Whittier after 55 years of service. Jerry George, P.E. was ADOT Project Manager for the widening and upgrading the tunnel for bimodal operation.

1999 The Anchorage Post added another annual element to its program of mentoring to establish and fund the first ever Alaskan High School Student Robotics team to compete at the National level.

1999 In September, Colonel Patrick Coullahan, 11th Air Force Civil Engineer, provided a presentation on the War in Kosovo from the Civil Engineer perspective, covering the massive Air Campaign and beddown of Allied forces, and the Humanitarian Crisis of refugees fleeing Kosovo for Albania.

1999 Heritage Park at Elmendorf AFB, directly adjacent to the 3rd Wing headquarters, is dedicated to the men and women of the 3rd Wing who have made the mission possible, regardless of where the wing has been located. At the center of the park are several of the significant aircraft flown by wings assigned to Elmendorf Air Force Base and Joint Base Elmendorf-Richardson: the F-4 Phantom II, F-102 Delta Dagger, F-89 Scorpion, T-33 Shooting Star, F-15 Eagle and the C-130 Hercules. The Wall of Heroes is adjacent to the YUKLA 27 Memorial. It honors those members of the 3rd Wing who have been prisoners of war and missing in action. The wall has service stars for each campaign the 3rd Wing has been involved in, as well as the words, "You are not forgotten." The center of the Wall of Heroes is dedicated to all the men and women of the wing, highlighted by 12 individuals who distinguished themselves throughout their careers. The model on display in the center is a De Havilland DH-4 biplane flown by the 3rd Attack Group in the early 1920s. Also sited there is the Eagle Aviary, and a vintage P-38G Lightning dedicated to the memory of a former Alaskan Command commander, Air Force Lt. Gen. David McCloud. The Air Force and a team of volunteers recovered and restored a vintage World War II P-38G Lightning from Attu Island and returned it to Elmendorf. The memorial featuring the plane



McDonnell F-4 Phantom F-4C 63-7628 (marked as 66-0723) at Joint Base Elmendorf-Richardson's Heritage Park. Photo: Locoscoutla, via Wikipedia.



was the culmination of the project, made possible by McCloud before his tragic death in a private aircraft accident July 26, 1998.

2000 to 2020 The surge of military construction during the past two decades has been at a scale previously only seen in the State to support World War II and the Cold War. However, today's engineers understand construction in the Arctic far better than their predecessors, who only could forge their knowledge through trial-and-error and a pioneer spirit. The systems supported by modern-era construction are far more complex. For example, the Low Observable Component Repair Facility at Joint Base Elmendorf-Richardson provides a year-round, climate-controlled repair structure for stealth materials used on F-22 aircraft. Meanwhile, the Large Frame Aircraft Maintenance Facility and Dual Bay C-17 hangars at Elmendorf-Richardson provide aircraft maintainers with facilities that will handle the important needs of all assigned and transient aircraft, and were halted, taken out of service, redesigned and repaired following apparent structural failures of the steel frames.

2000 George P. Wuerch, F.SAME and former Anchorage SAME Post President began a 3-year term as Mayor of Anchorage. Before this, Wuerch was chair of the Anchorage Assembly and chair of the Anchorage Chamber of Commerce Board of Directors. Mayor Wuerch was a retired US Marine Corps officer with 21 years of service, Wuerch also was governmental affairs manager for the Northwest Alaskan Gasline (ANGTS), and the founder and president of Fluor Daniel Alaska Engineering, and the vice president of corporate affairs for the Alyeska Pipeline Service Company.



*Anchorage Mayor
George Wuerch*

2000 On 22 January, the Anchorage Post held their Annual Post banquet at Elmendorf AFB Officer's Club. The guest speaker was Libby Riddles, the first woman to win the Iditarod Sled Dog Race.

2000 This era saw the Ground Based Midcourse Defense of the Missile Defense Agency (MDA) come to Alaska. DoD's top initiative was the force bed down of the Ground Based Midcourse Defense system to include kinetic kill vehicles and interceptor rockets, support, communications, and mission facilities at Fort Greely; and improved intercontinental ballistic missile surveillance and communications at Eareckson and Clear air stations. As a result, MDA fielded a state-of-the-art platform that the USACE, Alaska District and Huntsville Center helped to design, construct, and improve since 2001.



- 2000** In honor of Alaska's Senior US Senator, the Anchorage International Airport is renamed the Ted Stevens Anchorage International Airport (TSAIA). The airport began the multiyear construction on the new 463,227 square foot C Concourse. Construction continued through the summer of 2004. The grand opening of this world-class terminal was celebrated on 30 June 2004.
- 2000** Major General Earnest O. Robbins II, F.SAME, USAF, President of the Society of America Military Engineers visited Alaskan Military locations including Eareckson AS, King Salmon, Indian Mountain, Elmendorf AFB, and Eielson AFB. He spoke with many SAME groups along the way.
- 2001** Retired Air Force General Patrick K. Gamble was named the new CEO and President of the Alaska Railroad Corporation.
- 2001** The Whittier Access tunnel awarded 23 national awards for excellence including ASCE 2001 Outstanding Civil Engineering Achievement Award. Jerry George, P.E. was overall project manager for Alaska Department of Transportation (ADOT).
- 2001** On 1 May President George W. Bush announced plans to reduce the nuclear arsenal and increase missile defense by establishing a land-based system that would enable the United States to intercept ballistic missiles in mid-course. Alaska became the prime location for basing of the anti-ballistic missiles. MDA quickly issued a Record of Decision allowing the Alaskan work to commence. Eareckson Air Station on Shemya Island was chosen to be the initial site of the national Missile Defense system for bedding down the powerful new tracking X-Band Radar.
- 2001** The Clear AN/FPS Solid State Phased Array Radar System came online. The radar housing is a distinctive triangular structure with 11 stories and two radiating faces, each featuring 1,792 active elements. The radar system has two faces that cover a 240-degree-wide, 3,000-mile-deep sector of atmosphere and space, bounded by the Arctic Ocean, the Pacific Ocean, and the west coast of the United States.
- 2001** On 11 September, terrorists flew three hijacked planes into the World Trade Center in New York City and into the Pentagon. A fourth aircraft crashed in Pennsylvania. Lt General Norton Schwartz, Commander, Alaskan Command, ordered the skies over Alaska cleared of all aircraft except those responding military mission aircraft. A problem soon arose. Korean Air Flight 85 was in route to TSAIA, when information about the attacks was relayed to the crew. The pilot responded with a message, which included the letters "HJK", a prompt interpreted as a distress signal indicating that the flight had been hijacked. When ordered to



squawk a "hijack" code, the pilot complied, despite miscommunication that implied he would disregard the instruction. Flight 85 was ordered to divert to Whitehorse International Airport in Canada's Yukon Territory, the airliner pilots complied, and the Boeing 747 landed safely in Whitehorse escorted by US F-15 military jets. Lt Gen Schwartz, in his role as Alaska NORAD Region Commander, indicated he had authorized the shutdown of the airliner by USAF fighters if the plane ultimately failed to heed instructions to land at Whitehorse.

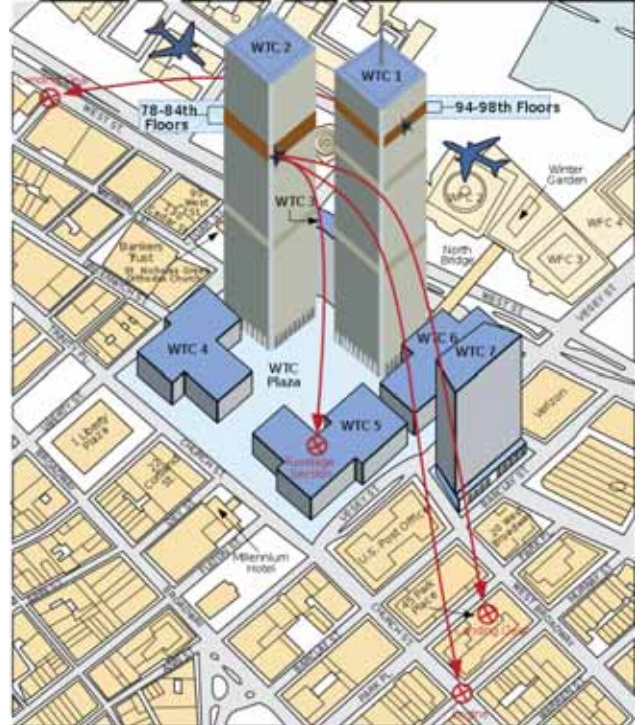


Diagram showing the attacks on the World Trade Center. Photo: FEMA

2001

On 11 September, the Anchorage Post began the Pacific and Northwest Regional Conference. Since the majority of attendees from outside Alaska were present for the conference and could not leave Alaska due to the moratorium on flying it was determined it was



continued to be held in the atmosphere of all the outrageous terrorist activity that day. The conference theme was "2001: A Pacific Odyssey", and was co-chaired by John K. Magee, F.SAME and Chris Turletes, F.SAME. The conferees were welcomed by Anchorage Mayor George Wuerch, F. SAME. About one third of the planned attendees could not participate as they were called to work or were unable to travel due to FAA grounding of all aircraft. The planned entertainment for the banquet was trapped in Seattle, so a local Irish Dance Troupe stepped with passion closing with a memorable performance of "Amazing Grace".

2001

The 31 September date marked the first orbital launch from the Kodiak Launch Complex—which was an Athena I rocket, which carried out the Kodiak Star mission for NASA and the Space Test Program, launching Starshine 3, Sapphire, PCSat, and PICOSatS.

2001

The Anchorage Post's December meeting featured Dick Weldon of Weldon Construction discussing the role engineering and construction firms must take in mentoring fledgling small business engineering and construction startups.



- 2002** The Anchorage Post membership was 332 individual and 52 sustaining members at the start of the year.
- 2002** On 2 January, Secretary of Defense Donald Rumsfeld signed a memorandum on Missile Defense Program Direction. In the memorandum, he established a single program to develop an integrated system under a newly titled MDA. He wanted to assign the best and brightest people to this work; apply a capability-based requirement process for missile defense. Rumsfeld directed MDA to develop the missile defense system and baseline the capability and configuration of its elements and the military departments to procure and provide for operational support. Ballistic missile defense has been an urgent DoD priority ever since the Bush Administration came to power in early 2001. Under President Bush, Washington withdrew from the 1972 Anti-Ballistic Missile Treaty, effective June 2002. Among that pact's constraints was a prohibition on defending one's entire national territory from missile attack. The intent was to fortify Soviet-American mutual deterrence by eliminating any chance that one side might attack first and use defenses to ward off a weakened counterstrike. Following the 11 September 2001 terrorist attacks in the US, it became a defining event for the nation's missile defense project. President Bush made the decision to place the BMDS on alert by December 2004, consistent with the National Missile Defense Act of 1999 that made it US policy to deploy a system "as soon as is technologically possible."
- 2002** In January the Anchorage Post established a relationship to support UAA's Engineering Department's Senior Design Course to help mentor students in their Capstone effort towards receiving an engineering degree.
- 2002** The February Anchorage Post meeting feature BG Johnson, Pacific Ocean Division Commander on the role of the US Army Corps of Engineers in the Pacific theater. Ted Trueblood, F.SAME was presented the Regional Merit Medal and Colonel Everett Mabry, F.SAME was presented a Certificate of Outstanding Services rendered.
- 2002** In March, the Anchorage Post presented two local high school teachers with \$1,000 stipends for their outstanding work in STEM education. The meeting the Post held that month included a presentation by University of Alaska Anchorage Professor Herb Schroeder discussing the Alaska Native Science and Engineering Program (ANSEP). This was the first of many ANSEP presentations made to the Anchorage Post over the years about the ins and outs of this extraordinarily successful program, which readies Native Alaskan students for the rigors of college engineering curriculum.





2002 MDA selected Fort Greely as one of the locations to deploy the ground-based missile defense system, and the BRAC closure process there was stopped. The US Army Space and Missile Defense Command put Fort Greely back up as an active installation while also continuing with the installation restoration process. Fort Greely's extensive ranges were transferred to Fort Wainwright as part of the BRAC realignment reducing Fort Greely from 640,000 acres to 7,000 acres.

2002 On 15 June, a Groundbreaking Ceremony was held at Fort Greely to acknowledge the commencement of construction of the significant number of large, complex, state-of-the-art facilities for the Ground Based Midcourse Defense mission at that location.

2002 In September, MDA shelved earlier plans to build the X-Band Radar System at Shemya, and instead awarded a contract to Boeing to begin development of a Sea Based X-Band Radar to be homeported in Adak.

2002 The Swan Lake-Lake Tye Intertie construction began. The project scope was a 57-mile-long 138 kv (69 kv initially) hydroelectric transmission line connecting the Four Dam Pool Power Agency owned hydroelectric projects at Swan Lake on the Upper Carroll Inlet and Lake Tye on the Bradfield Canal. The route crosses primarily federal land with a small portion crossing State land and State tidelands.

2002 On 4 November, the 7.9 Magnitude Denali Fault Earthquake hit Alaska causing some significant damages. Hardest hit by the quake were the villages of Mentasta and Northway, and there was significant damage to transportation systems (roads and airfields) in central Alaska. Fort Greely benchmarks moved several inches due to this earthquake. The Trans-Alaska Pipeline suffered some damage, but no oil was spilled—the pipeline seismic support designed partly by former Alaska District design engineer Erwin Long worked exactly as anticipated. This earthquake was felt in Washington States, caused ripples and waves in lakes as far away as Louisiana, and was the strongest one in Alaska since the Rat Island 8.7 magnitude earthquake in 1965.



*The Tok Cut-Off was offset 23 feet (7 m)
Photo: U.S. Geological Survey - U.S.
Geological Survey. Public Domain.*



- 2002** On 17 December, President Bush said “September 11, 2001, underscored that our nation faces unprecedented threats, in a world that has changed greatly since the Cold War,” said in a statement explaining his decision.
- 2003** The Anchorage Post planned, selected, and sent its first camper to the newly established SAME Engineering and Construction Camps. Kamron Gastineau, from Dimond High School, attended the USAF Academy Camp, and before departing the Post presented her with a hard hat and other protective work gear. Later that year made a terrific luncheon presentation to the Anchorage Post on her experiences there.
- 2003** In January Karen Padgett was sworn in as SAME Anchorage Post President. She said she had worked much harder as Secretary and Vice President in the years leading up to her term as president. She recalled 2001, when Anchorage hosted the SAME Regional Conference that unsuspectingly began on September 11, certainly a day of infamy. She and others had their work cut out for them as many participants from around the Pacific were stranded in Anchorage at the conference hotel. Karen recalled that we proceeded with the conference, with heavy hearts and a constant eye on news broadcasts. The year she was became our Post President she had her first child, and Bill Kontess, as Post Vice President, did the lion’s share of the work that year. She to joked that, because we held the Post board meetings at 6:30am, her newborn son may have not been the only attendee occasionally dozing off during discussions. Her Commander’s Intent that year focused on increasing membership. And she loved saying that, to belong to SAME, you did not need to be American, in the Military, nor an Engineer.
- 2003** The Anchorage Post revamped the Operation Fast Start Plan to be one that is user friendly and described how architectural, engineering, and construction firms, materials suppliers, and others can better interact with military and government engineering and construction agencies in the greater Anchorage area and Alaska.
- 2003** In February, the Anchorage Post began to support the University of Alaska Anchorage in their Senior Design Course, the Capstone of the Senior Engineer design classes.
- 2003** In May Toshiba and the City of Galena began discussing the implementation of a nuclear reactor power plant to provide the islanded community of Galena with cheap and reliable energy. Galena, located 270 miles west of Fairbanks on the Yukon River and a population of approximately 600. Electricity is currently produced by a diesel powerhouse, and since the City is off the road system, diesel and all other supplies are shipped by barge traffic limited to a small window of opportunity in Summer when the river is navigable. This project has been tabled



Original costs of the reactor would have been minimal, had Toshiba donated the reactor. However, the permitting costs with new nuclear technology could be as high as \$600 million. The city of Galena did receive a \$500,000 from the state legislature in 2005 for meetings with the Nuclear Regulatory Commission to develop documents on preliminary site proposals. The technology was described for using Toshiba's 4S unit as super-safe, small, and simple. It could have been fielded in two capacities, 10 MW and 50 MW. This is a liquid-metal fast neutron reactor which uses sodium as a coolant allows the reactor to run at hotter temperatures that would vaporize water and build pressure that would cause the system to be under high pressure. Sodium boils at higher temperatures, allowing the reactor to be unpressurized. This reactor is designed to be encased in concrete and be 30 meters underground, with no direct access to the reactor and its uranium-zircon fuel rods. The operator and the steam turbines will be in a separate building, located above ground. This reactor is configured to be fully operational for thirty years before it requires being refueled.

2003 The Anchorage Post was recognized as Distinguished Post and Grand Slam winner, one of only 16 posts Nationwide to receive this honor, and Anchorage Post Vice President Major Bill Kontess, F. SAME accepted the Grand Slam Award from outgoing SAME National President LTG R. Flowers, USA.

2003 In May, Colonel Timothy Gallagher assumed command of the USACE Alaska District and oversaw the largest military construction program in Alaska since WWII. The program included the \$400 million dollar construction of the Missile Defense System both at Fort Greely and Shemya Island, the facilities associated with the stationing of an Airborne Brigade at Fort Richardson, a Stryker and Aviation Brigade at Fort Wainwright, C-17 and F-22 bed-down facilities at Elmendorf AFB. Facilities included education centers, dormitories, barracks, deployment facilities, mess halls, and family housing to name just a few. In addition, one of the most significant landmark permitting actions was decided to advance the tailings facility at the Kensington Mine, in Juneau. This decision was litigated and upheld in the Supreme Court. Colonel Gallagher served as the President of the SAME Anchorage Post from 2009 - 2010 when the scholarship program doubled in size with the Talley Fund Endowment to the Post.



*Arrival of C-17 in Alaska. Photo: U.S. Air Force
photo by Tech. Sgt. Keith Brown*

2003 On 3 August, Alaska Governor Frank H. Murkowski named former Anchorage Mayor George Wuerch, F.SAME, as Chair of the Knik Arm Bridge and Toll Authority. KABATA was charged with designing, constructing, and operating a toll



bridge and its facilities between Anchorage and Point MacKenzie. Planning the project has proceeded intermittently for the past 16 years.

- 2003** In the September-October issue of **"The Military Engineer"** an article written by Larry Opperman, M.S.A.M.E. titled "Air Force Makes a Clean Sweep". This article explains the program merits of demolition and environmental remediation programming, funding, and project execution being accomplished concurrently. This avoids multiple costly mobilizations and demobilizations to accomplish the missions. The program at the time was estimated to cost \$123,5 million to address requirements at abandoned or minimally manned radar sites of the old DEWline.
- 2003** The Alaska Railroad purchased the Seward Coal Terminal facility in 2003 and performed a variety of upgrades including an ongoing expansion of the coal storage areas in anticipation of increased coal exports from Alaska.
- 2004** In March, the Anchorage Post provided detailed updates and training material on the USACE's mandated use of the Design Review and Checking System (DrChecks).
- 2004** On 5 March, the Anchorage Post in conjunction with URS Alaska conducted a hugely successful and very well attended one day Seminar on "Managing and Resolving Construction Delay, Acceleration, and Productivity Issues".
- 2004** In April, the Anchorage Post provided a detailed update on the USAF Alaska Geobase program featuring the vision at Elmendorf AFB for one installation, one map.
- 2004** In May, the Anchorage Post started an annual program to support Habitat for Humanity. It has turned out to be a phenomenally successful community support endeavor.
- 2004** In May, Captain Rob Wolfenden of the 611th Civil Engineer Squadron gave a well-received presentation on the 25-person civil engineer deployment to Baghdad International Airport in Support of Operation IRAQI FREEDOM from October 2003 to March 2004.



2004 On 3 July, the Ground-based Midcourse Defense System (GMD) in Alaska was pronounced ready to deploy. Such a fast delivery was a remarkable achievement for such a new and complex, missile intercept system with myriad support and operational requirements. The program team composed of engineers, planners, construction, logistics, and management professionals worked together tirelessly and with great flexibility and expertise to make this happen. The tough tasks and deadlines were challenges that everyone in Alaska and beyond met professionally and completely at places like Fort Greely and Eareckson AFS on Shemya Island.

DoD's top initiative was GMD as established by SecDef Donald Rumsfeld who monitored onsite activities daily and paved the way for priority contracting and year-round construction support. Boeing and Fluor were the main contractors, but nearly all experienced Alaskan construction firms, personnel, engineers, and logisticians played an important part in the masterful project completion. In summary, the force beddown of the GBM Defense System at Fort Greely, and Eareckson and Clear air stations saw over 40 facilities built or modified, and utilities upgraded or constructed. These facilities included buildings and systems to store the components of the highly reactive Hypergolic fuels for the Exoatmospheric Kill Vehicles (EKV); a Missile Assembly/Exoatmospheric Kill Vehicle/Interceptor Integration building; a Command and Control building; multiple Defense Satellite Communications System (DSCS) with large Radome enclosure; the In Flight-Interceptor Communication Systems Data Terminal (IDT) Sites; an Entry Control Facility; and Power Plants. The critical mission facilities and utilities were all High-Altitude Electromagnetic Pulse (HEMP) shielded. For the Fort Greely Missile Fields, Silo Interface Vaults (SIV) and Interceptor Silos were installed and hooked to essential and dedicated utilities. As a result of the enormous team effort, technical competence, personal commitment, and sacrifice, MDA fielded a state-of-the-art platform that USACE has helped to construct and improve since 2001. The system went from groundbreaking in 2002 to ready to deploy by July 2004. The major change in postponing the X-Band Radar facility construction and Operation at Shemya Island was offset by the fielding of



A Ground-Based Interceptor loaded into a silo at Fort Greely, Alaska in July 2004. Photo: MDA.mil



the Sea Based X-Band Platform. Overall, such a fast delivery was a remarkable achievement of National significance for this entirely new and complex missile intercept system with myriad support and operational requirements.

2004 On 23 September, Lieutenant Colonel Jay Smith, Chief of Staff for the GMD Site Activation Command of the MDA provided an update on the MDA's GMD program in Alaska. He discussed innovative engineering management approaches and construction techniques used to facilitate rapid progress at the program sites at Fort Greely and Eareckson Air Station. He stressed the key roles many individual and sustaining members of the Anchorage Post that were involved in this challenging, fast track, three-year, multimillion-dollar project at geographically dispersed locations.

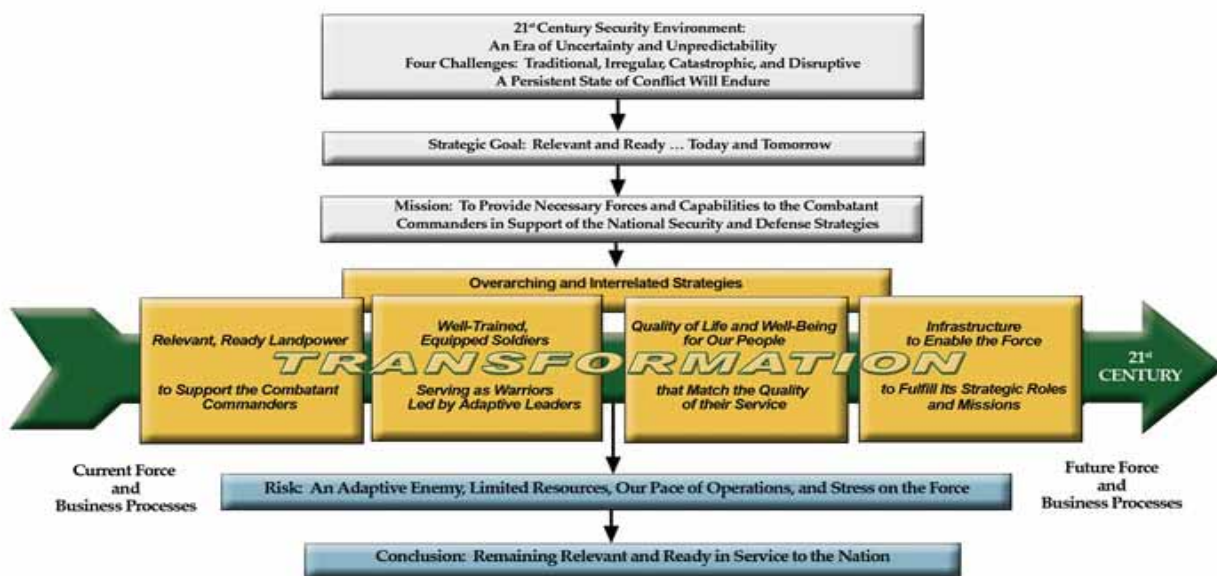
2004 In October the SAME Anchorage Post "Northwinds" newsletter contained an exclusive article by Bill Kontess, F.SAME covering his interview with SAME National President and Air Force Civil Engineer Major General L. Dean Fox. In it, Maj Gen Fox said, "My motto is and has always been... 'People should come to work with a smile and go home with a smile...tired...but smiling.' He said, 'you need to take pride in and enjoy what you do', but 'understanding the impact that we have on supporting the Air Force mission gives one a sense of pride and accomplishment'". Maj Gen Fox concluded by saying, "I take every opportunity I can to reiterate this to all levels of Air Force Civil Engineers, as well as challenge people to continually 'make it better.'"



*SAME National President
and Air Force Civil Engineer
Major General L. Dean Fox*

2004 On 28 October, the Anchorage Post and the Anchorage Chapter of the Professional Engineers in Private Practice jointly sponsored a panel presentation on professional registration for engineers and architects. The presentation highlighted the importance and value of professional registration, as well as outlining the requirements to become a registered Professional Engineer (PE) or Architect in Alaska. The panel featured Craig Freas, PE, Willy VanHemert, PE, Jon Kumin, AIA, and Ted Trueblood, PE, F.SAME.

2005 The US Army was undergoing major changes in Alaska. Growing and modernizing its forces with the posting of Stryker, Airborne and Aviation Task Force Brigades have been mainstays of the US Army on the "Last Frontier". The "Grow the Army" program led to another surge in construction of hangars and maintenance and training facilities, barracks and military family housing at Fort Wainwright and Fort Richardson, a new military hospital at Fort Wainwright, as well as huge improvements on the Alaskan Training Ranges. These multiyear programs were wrapped up by 2014.



Graphic legend of Army Transformation

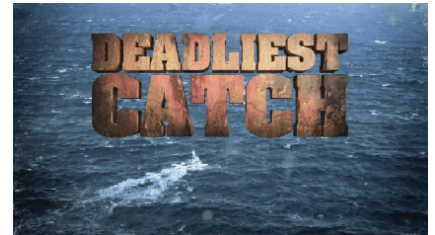
2005 The USAF added to its arsenal of aircraft based in Alaska with C-17 Transports and F-22 Fighters joining C-130 Tactical Airlifts, KC-135 Tankers, F-16 Fighters and E-3 Airborne Warning and Control Systems. All have been aided by the USACE with associated facilities and infrastructure built to make Alaska home to one of the most potent combinations of US military forces based anywhere on the globe. An added benefit is access to an Alaskan training space that is as varied as it is huge. Furthermore, housing, support, and medical facilities were upgraded by 2013 at Elmendorf AFB and Eielson AFB.

2005 In March, the Alaska Railroad Corporation briefed the planned "Line Extension—Eielson AFB to Fort Greely/Delta Junction". The scope was to extend mainline track 80 miles from Moose Creek/Richardson Highway crossing to Delta Junction area/Fort Greely. It would build a 15-mile spur from Flag Hill to Blair Lakes Military Training Area, and the design would support track for 79 mph. Track speed will be supported by Centralized Traffic Control (CTC) Signalization. The stated purposes would be to provide responsive range support for Stryker training needs; "Port-to-Rail-to-Range" service could enhance Alaska as a world-class joint/combined training location; enable commuter/freight service for US Army requirements between Fairbanks and Delta Junction area; and support long-term opportunity for economic development in the Delta Junction area. It would have to conquer the subarctic climate, permafrost, major river crossings, a floodplain, material availability, and remote project site access.



2005 In April, the USACE Alaska District begins conducting a Baseline Erosion Assessment funded by Congress to provide a technical report intended to help Federal, State, Tribal, and Local stakeholders develop strategies and plans for addressing erosion issues in Alaska.

2005 Season 1, Episode 1 of Deadliest Catch airs on 12 April. This is a documentary series chronicling the real-life high-sea adventures of the Alaskan crab fishermen. This is described as the most-deadliest profession in the world. Starring Sig Hansen, Keith Colburn, the episode narrated by Mike Rowe is described "Fifteen hundred fishermen have converged on Dutch Harbor, Alaska, for the beginning of the Alaskan King Crab season. Each man is here to stake his claim on the 14,267,000 pounds of crab and the chance to earn a year's wages in just one week." Over 250 episodes will follow, as this began a trend to have realty TV series filmed in Alaska.



2005 On 3 October Anchorage Post member BG George J. Canelos, (USAFG, retired) was appointed the Federal co-chair of the Denali Commission by the US Secretary of Commerce. The Denali Commission was established in 1998 as an innovative Federal-State partnership to provide critical utilities, infrastructure, and economic support throughout Alaska.

2005 In October 2005 Alaska U.S. Senator Ted Stevens opposed diverting Alaska's funding for the Gravina and Knik Arm Bridge funds to Louisiana to repair bridge damage in Hurricane Katrina. In his speech on the senate floor, Stevens threatened to quit Congress if the funds were removed from his State. Republicans in Congress dropped the specific allocation for the two bridges, allowing Alaska to apply the money to current transportation projects. Governor Frank Murkowski planned to fully-fund both bridges: "I am proposing we spend the maximum allowed."

2006 On 13 January, Mount Augustine erupted disrupting air travel for several days.

2006 Sarah Palin becomes the first female Governor of Alaska, as well as the youngest Governor of the State.



2006

In February, Anchorage Post volunteers conduct the Floatable Moatable Competition again at the University of Alaska. Teams of kids from first through twelfth grades made floating vessels and a marble-loading device out of a lunch sized sack of goodies. The winner being the one who could float the most marbles in a 5-minute load. The winner floated an astounding 406 marbles.



2006

The Anchorage Post’s November meeting featured Bill Knight, a physical scientist and watch stander for the West Coast/Alaska Tsunami Warning Center operated by the Alaska Region of the National Weather Service a part of NOAA.



2007

On 4 January, the USAF Civil Engineer announced that the winner of the SAME Curtin Award for the Air Force Civil Engineer Large Outstanding Unit was the 3rd Civil Engineer Squadron, Elmendorf AFB. The squadron commanded by Colonel James Hodges—who was also the Anchorage Post’s President-elect—exclaimed, “I could tell from day one that this was a special team...eight flights with nearly 700 people doing amazing things daily”. The squadron also received the USAF’s Balchen-Post Award for the outstanding snow and ice removal team, among many other sub-unit and individual awards above wing/base level. The unit also won Department of Defense level awards for environmental stewardship and energy savings. The 3rd CES masterfully managed a construction program of over \$500,000,000 to beddown F-22s, C-17s, Kulis Air National Guard Base relocation, and other Joint Basing preparations, such as garnering approval to re-designate the squadron as a Civil Engineer Group to support Joint Basing with Fort Richardson. Remarkably, the 3rd Civil Engineer Squadron 200 members deployed during this timeframe, including the deployment of Colonel Hodges for six months to Iraq as the Commander of the 407th Expeditionary Civil Engineer Squadron.



Post volunteers at E-Week’s Floatable Moatable Competitions. T-B: Dave and Kathy Gardner, Alan Quesnel and Thomas Fenoseff, and Keith Guyer.

2007

On 25 and 26 February, the Anchorage SAME Post in conjunction with the International Facilities Management Association (IFMA) offered a course for the Certified Facilities Manager (CFM) professional certification. Twelve SAME members tested and received their new CFM designation on 27 February.

2007

On 26 February SAME member Jon Zufelt, PE, was named as the 2006 Alaska Engineer of the Year at the annual Engineers Week Awards Banquet in Anchorage.



2007 From 27 February through 2 March, the Anchorage Post hosted Joint Regional Training Conference. The Co-conference chairs Bill Kontess, F.SAME, and Patrick Coullahan, F.SAME, worked the theme of “Spanning the Pacific, From Tropics to Tundra” and featured guest speakers including retired General Barry McCaffrey and Libbey Riddles, famous Alaska musher. The Regional Conference attendees including members of posts and businesses from across the Pacific Rim, to include Korea, Japan, and other locations outside the continental United States.

2007 On 20 April, the Anchorage Post sponsored a seminar on “Emergency Alaska”. The seminar looked at disaster response, DoD response to emergencies, including Anti-Terrorism/Force Protection, State Department of Homeland Security, and Municipality of Anchorage Response. Featured speakers included COL Tim Gallagher, Alaska District Engineer; John Madden, State Director of Homeland Security and Emergency Management; LTC Bobby Stone, Headquarters, Alaskan Command Engineer; and Dennis LeBlanc, Anchorage Municipality Manager. Former Alaskan Governor and Secretary of the Interior, Walter J. Hickel provided a keynote address and challenge to the participants.



2007 The Chukchi Sea adjacent to Cape Lisburne Long Range Radar Station begins to threaten access by air due to erosion of the runway.

2007 On 11 June, Elmendorf AFB officially received its first C-17 Globemaster III Airlifter, name the “Spirit of Denali”. To support these aircraft, facilities on Elmendorf were built, upgraded, or are being built. These include a large-frame aircraft hangar; a state-of-the-art flight simulator; a dual-bay hangar; survival equipment shop; squadron operations buildings and hangars; egress; battery shops; and life support offices. There was also construction planned at Fort Greely's Allen Army Airfield to upgrade the assault landing zone there. The C-17 mission is operated and maintained by the active duty USAF and Alaska Air National Guard (ANG). The C-17 replaced the C-130 Hercules in the 517th Airlift Squadron and is a new platform for the Alaska ANG.

2007 Opening of the Barrow Global Climate Research Facility- successor to the Arctic Research Laboratory established in 1947, the new facilities include modern laboratories, storage, internet access, local accommodations, and cafeteria or self-catering facilities. The new facilities support a vast number of atmospheric,



biological, oceanic, and terrestrial research activities. Harley H. Hightower, AIA, M.SAME and Urbahn Medalist (2014) was Project and Principal Architect,

2007 On 8 August, the USAF celebrated the arrival of the first F-22A Raptor stealth fighter assigned to Elmendorf AFB while in the throw of a complex Military Construction program conducted by the USAF and the USACE. New facilities included maintenance and AGE shops, multiple hangars, and shelters, including state of the art low observable corrosion control capability.



F-22 Raptor

2007 Construction of the Skagway Ore Terminal Reactivation Improvements began in February 2007. The building “In Service” date was 1 October 2007. The first ship was loaded with ore concentrates 24 October 2007. Substantial completion was achieved 18 January 2008. AIDEA’s Board approved negotiation of an amendment to the User Agreement with Minto/Capstone to provide additional storage capacity on 7 October 2008. The building extension (14,000 SF) was substantially complete mid-December 2008. Minto/ Capstone ships approximately 60,000 dry metric tons of copper concentrate through the terminal per year.

2008 On 10-11 January more than 125 representatives from local, state and federal government agencies, private transportation businesses and tribal entities responded to an invitation from the U.S. Army Corps of Engineers-Alaska District to look together at the future of Alaska's ports and harbors during a conference in Anchorage.

2008 On 12 March, the Anchorage Post leadership were notified by the SAME National and the Pacific Regional Vice President that the **Anchorage Post was named The Society of American Military Engineers Top Large Post for 2007** among SAME’s 34 large posts and also took all Streamers with distinction. During this time frame the Post leadership garnered all available streamers and designation as a Distinguished Post under the leadership of Colonel James Hodges.



Banner proudly displayed at the Annual Banquet.



- 2008** The National SAME Urbahn Medal named in honor of Max O. Urbahn, American Institute of Architects (AIA), was awarded to Steve Bettis, AIA, Principal of Koonce, Pfeffer Bettis, Anchorage. The medal recognizes distinguished performance in the field of architecture by a SAME member and was first awarded in 1997.
- 2008** Reality TV comes to Alaska as Mike Rowe's Series "Dirty Jobs" airs its first Alaskan Episode "Floating Fish Factory". The episode is described: "Mike goes to Alaska to try out the jobs on a fishing boat that doubles as a fish processing factory. To top it off Mike and Dave sample a buffet of assorted fish parts served up by the ship's cook. Since he's in Alaska Mike wanders out on the tundra to learn to operate a poop burner because you can't dig a hole for an outhouse in the frozen ground."
- 2008** The site of the proposed Pebble Mine near Lake Iliamna was estimated to be the second-largest ore deposit of its type in the world in terms of the value of the contained metal. Estimates have grown throughout the history of the project. The Pebble prospect is in a remote, wild, and generally uninhabited part near the Bristol Bay watershed. The nearest communities, about 20 miles away, are the villages of Nondalton, Newhalen, and Iliamna. The site is 200 miles southwest of Anchorage.
- 2008** When oil prices rose to then record highs, the resultant rising price of electricity in Alaska caused a revival of interest in the Susitna Dam proposal.
- 2008** On 4 September, Governor Sarah Palin became the Vice President running mate of Senator John McCain. She became the first Republican female to do so. In November McCain and Palin lost the election.
- 2008** The Anchorage Post membership reached 384, and for the first time numbered 60 sustaining member firms.
- 2009** In March the USACE Alaska District baseline study on Coastal Erosion in Alaska is completed. Through a process of stakeholder meetings, review of previous reports, and extensive correspondence with communities, 178 Alaska communities were found to have reported erosion problems. After subsequent investigation, the Corps designated 26 communities "Priority Action Communities"—indicating that they should be considered for immediate action by either initiating an evaluation of potential solutions or continuing with ongoing efforts to manage erosion. Sixty-nine communities where erosion





problems are present but not significant enough to require immediate action were designated "Monitor Conditions Communities." Eighty-three communities where minimal erosion-related damages were reported or would not be expected in the foreseeable future were designated "Minimal Erosion Communities." Additionally, The Corps' authority to construct solutions for erosion control in Alaska has been modified by the repeal in March 2009 of Section 117 of the 2005 Energy and Water Development Appropriations Act. Section 117 had allowed projects constructed under that authority to be funded at full Federal expense and did not require that those projects be justified by using the traditional benefit-cost ratio test. Under Section 117, the Corps had been able to initiate construction at Kivalina, Newtok, Shishmaref, and Unalakleet. Because of the repeal of Section 117, it was unknown at the time whether these projects can be completed as planned.

2009 On 13 May, the J.W. Morris Sustaining member award was presented to the URS Corporation at the JETC in Salt Lake City, Utah.

2009 On 17 June, the Alaska District ConOps Division hosted the Anchorage Design-Build Quality Forum with Jim Beresson, SES, PE, Pacific Ocean Division Regional Business Director providing opening remarks. This well attended seminar covered Merits of Design Build, D-B Challenges, Risk Management, and Claims/Disputes Under D-B. It featured several Anchorage Post members from the Government and Private Sectors as panelists and speakers.

2009 In July, Governor Palin announced her resignation as governor citing ethics complaints, financially draining lawsuits, and her desire to not be a lame duck Governor. The Lieutenant Governor, Sean Parnell became Governor for the remainder of the term, and was elected to a full term as Governor in 2010.

2010 Under the base unification procedure, which began finalization in the summer of 2010, Elmendorf AFB and Fort Richardson were consolidated because of decisions made by the 2005 Base Realignment and Closure (BRAC) Commission. The combined base became known as Joint Base Elmendorf-Richardson (JBER).

2010 On 28 July, a C-17 Globemaster III transport plane of the USAF crashed at Elmendorf Field, while practicing for a flight display at the upcoming Arctic Thunder Air Show. All four crew members on board were killed. It was the first fatal accident of a C-17 aircraft. The subsequent investigation blamed pilot error for the low-altitude stall that led to the aircraft impacting the ground. The C-17 crash was 100 yards away from the site of the 1995 AWACS call sign Yukla 27 crash.



2010 Two plus years after initially meeting in Anchorage to discuss the future of Alaska's Ports and Harbors, more than 150 stakeholders from across the state met on 18 November to discuss agency process, review findings of the 2010 Alaska Regional Ports Study and develop criteria for a statewide investment approach for Alaska's ports and harbors at a conference.



Screen capture from video of the C-17 crash at Elmendorf AFB, Alaska. Photo: USAF.

2010 On 16 November, a Lockheed Martin F-22 Raptor from Elmendorf Field crashed about 100 miles north of Anchorage near the town of Cantwell, killing the pilot, and launching a significant response and recovery program involving base civil engineer and USACE personnel and contractors.

2010 KABATA completed the final Environmental Impact Statement (EIS) for the Knik Arm Crossing and obtained a "build" Record of Decision from the Federal Highway Administration. The project consists of a 1.74-mile bridge with 18 miles of connector roads, including on and off ramps, and a \$50 million cut and cover tunnel under Government Hill. Cost estimates were between \$700 and \$800 million.

2011 On 18 February Virginia Morsey Wheeler Talley died exactly 92 years to the day she was born. She was Board Trustee Emeritus of the Talley Board of Trustees, active with the Anchorage Post, and a leader and doer. The Talleys were longtime friends of the Alaska District and Anchorage Post of SAME, often driving from Anchor Point to Anchorage to attend events at both organizations. The only woman in her law class, Talley graduated as valedictorian with a bachelor's degree and a law degree from Washington University in St. Louis in 1942. Besides earning two degrees, she served as the first female editor of the school's student-run academic journal. Upon graduation, as a fourth-generation lawyer in her family, she became an attorney for the Rural Electrification Administration. Virginia Talley remembered for adventurous life. Virginia Talley's husband, retired Brig. Gen. Benjamin B. Talley, was honored a fellow by the Society of American Military Engineers during the Alaska District's 50th anniversary celebration in 1996. The presenting officer was the late Colonel Peter Topp, Alaska District commander at that time. For five years she traveled throughout the United States helping to establish rural electric cooperatives,



Virginia Morsey Wheeler Talley



mediating disputes, and negotiating electrical facility purchases. Next, she worked 12 years for the World Bank, mostly in water resources development. She was their first woman to conduct business overseas. She was married to Lt Gen Raymond A. "Speck" Wheeler, the 36th Chief of Engineers from 1945-1949, before Talley. She married both generals after they were widowed and retired from the military, but she shared many active civilian service years with them. After she married Wheeler, they served as consultants to the World Bank and the United Nations. They traveled to Australia, China, Congo, Egypt, India, Japan, Jordan, Kuwait, Lebanon, Pakistan, Saudi Arabia, and Southeast Asia from 1959-1974. After Lt Gen Wheeler died, she married Talley. They shared 23 years of marriage. She teamed with Brig Gen Talley in making "Alaska at War," a documentary film about World War II in the Aleutian Islands, premiering in 1986.

2011 On 4 March, the Anchorage Post held a one-day seminar titled "Total Building Commissioning", with welcoming by James C. Dalton, SES, PE, Chief of the ACOE Engineering and Construction Division, and former PM Chief at the Alaska District. This well attended seminar addressed commissioning concerns, methods, and opportunities head on with the perspectives of guidelines, designers, constructors, and customers.

2011 The Alaska Veterans Museum, opened on 17 April on Fourth Avenue in Anchorage. It tells the stories of individual service members through uniforms, artifacts, memorabilia, photos, and posters that cover the walls, hang from the ceiling or rest protected behind glass cases. Recorded historical accounts from Alaska veterans are also played on a monitor. Visitors can gaze at a hand-crafted 13-foot-long model of the aircraft carrier USS Essex filled with miniature model sailors, aircraft and other equipment, and view displays about the Japanese invasion of the Aleutians and the Allied Forces counterattack. Alaska's role as a surveillance post and Nike missile base during the Cold War also is highlighted. The museum's creation is an achievement that was started and nurtured by the patriotic passion of Forest Brooks, project formulator in the Engineering Division's Civil Works Branch at the U.S. Army Corps of Engineers-Alaska District.



*Visit the Alaska Veterans Museum
at 338W 4th Avenue, Anchorage.*

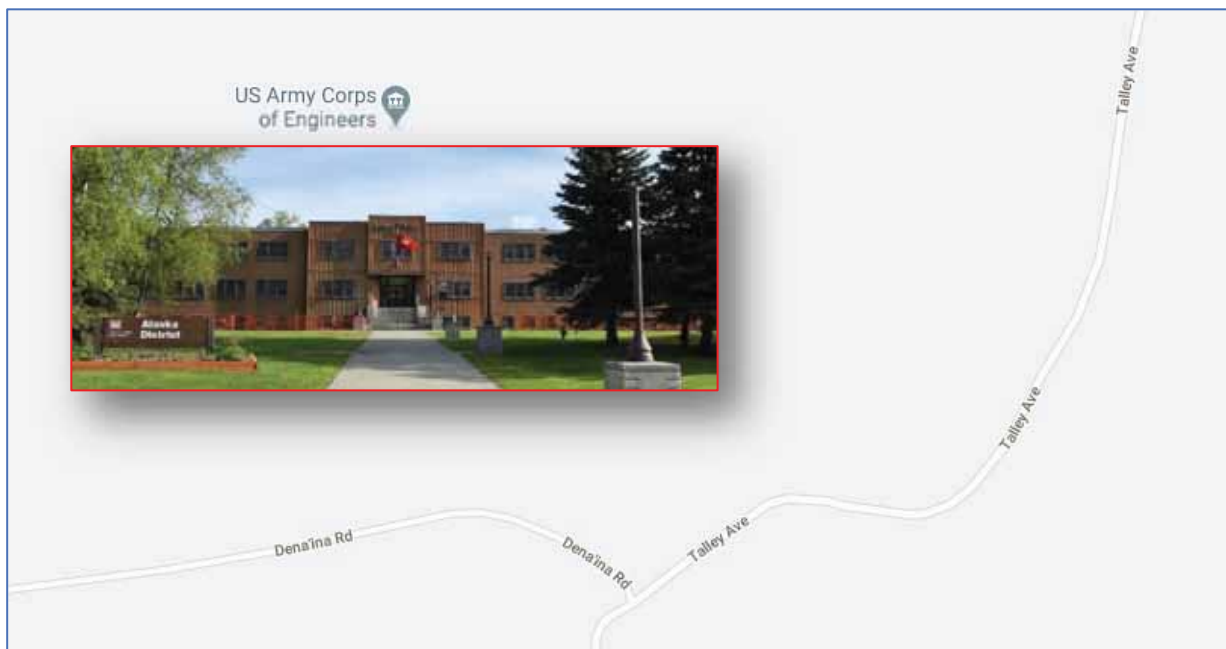
2011 Taking the next step in determining the future of Alaska's Ports and Harbors, the U.S. Army Corps of Engineers Alaska District and Alaska Department of



Transportation and Public Facilities hosted an Arctic Deep-Draft Ports Planning Charrette 16-17 May. The goal of the meeting was to start the process of joint planning for U.S. Arctic ports in Alaska, responding to the opportunity of study funding through the state of Alaska.

2011 In September the ARRC hosted a groundbreaking ceremony for the Tanana River Crossing (Northern Rail Extension - Phase 1) in Salcha, Alaska. The \$188 million capital project will allow for year-round access by the military to the largest military training grounds in the country.

2011 On 24 October JBER renamed the street the USACE Alaska District resided on to “Talley Avenue” in honor of BG B. B. Talley’s outstanding career and deep association with the inception of the then Elmendorf AFB. The new “Talley Avenue” sign was unveiled jointly by the Alaska District Commander, Colonel Reinhard W. Koenig, and base civil engineer, Colonel Russ Hula, who was also the Anchorage Post President.



2011 An article titled “Engineering in the Arctic: Forged by the Past, Fostered Through the Present” by Patrick M. Coullahan, P.E., PMP, CFM, F.SAME, was published in **The Military Engineer** On-Line. The article covered the early military involvement in Alaska through the current set of undertakings in Alaska at the time of publication.



2011 The people of Nome were running out of fuel in a very cold winter because a massive winter storm had thwarted a fuel barge from carrying the last regularly scheduled fuel delivery. The barge was carrying 1.6 million gallons of gasoline, diesel fuel and heating fuel and because it failed to reach the port of Nome because of bad weather and sea-ice chunks blown into the harbor by hurricane-force winds in a November storm considered the strongest in western Alaska since 1974. As a result, the Sitnasuak Native Corporation said it had signed a contract to have a vessel owned by the Russian company RIMSCO deliver 1.5 million gallons of fuel to Nome by year's end. It also set into motion an emergency response involving Federal, State, Local, Tribal, and private sector stakeholders.

2011 At the end of the year, the Anchorage Post had 390 members and 54 sustaining members.

2012 On 13 January the Russian Tanker "Renda" reached Nome with the 1.3-million-gallon emergency supply of fuel the city needed to make it through the winter after a 10 day voyage through ice-clogged seas with the assistance of the USCG Ice Breaker "Healy". Ice was two feet thick, and the Coast Guard's use of their only functioning icebreaker was critical to the success of this mission, and avoided the need to use costly air resupply of fuel to Nome if the team of Renda and Healy did not triumph. It underscored the need to be better prepared for a changing Arctic, new sea routes, and shortfalls of ice breakers.



The Russian tanker Renda transits toward the port of Nome, Alaska, Jan. 13, 2012. Renda was assisted by the U.S. Coast Guard cutter Healy (WAGB 20) since the vessels left Dutch Harbor, Alaska, to deliver fuel to the city of Nome.

2012 On 16 March, the Anchorage Post presented a one-day seminar titled "Succeeding on Construction Projects". The seminar provided insight to and from owners, engineers, consultants, and construction professionals. It covered commissioning final inspections, dispute resolution, and other closeout activities. It reviewed navigating the environmental minefield; project controls, managing expenses, schedule, and quality; and started with preconstruction activities. It was well received, and attendees earned six PDHs.

2012 In April, Colonel Reinhard Koenig, Alaska District Engineer summarized some important work being undertaken by the District. He said we "have seen an explosion of opportunity and execution of work for the U.S. Pacific Command, U.S. Agency for International Development and Air Force Material Command in the areas of humanitarian assistance, foreign military sales and agency support throughout the Asian mainland in Bangladesh, Cambodia, India, Laos, Nepal,



Palau, Philippines, Sri Lanka, Vietnam and other countries. All this shows that the district is making a positive difference in the security of the United States and the lives of all Americans.”

2012 The Fire Island Wind project began delivering energy to Anchorage. Eleven generators providing 17.6 megawatts on Fire Island, three miles off the coast of Anchorage. A Phase II project is planned there in the future.

2012 In May, Patrick M. Coullahan, PE, PMP, CFM, F.SAME, Chief, Construction and Operations Division, Alaska District, USACE, and a past Anchorage Post President, was awarded the 2011 SAME US Army Wheeler Medal at the SAME JETC. The Wheeler Medal is named in honor of Lt. Gen. Raymond A. Wheeler, USA, first awarded in 1955, and is presented for outstanding contribution to military engineering by a civilian or military member of the US Army.



2012 The Chena River Lakes Flood Control Project in North Pole saw major improvements. The U.S. Army Corps of Engineers Alaska District was both customer and manager of a \$5.4 million project funded by the American Recovery and Reinvestment Act of 2009, at this location. It improved the existing office space, kitchen, restrooms, and a conference room and provided an emergency response bay, entrance foyer, meeting area, guest reception area and interpretive exhibits. Construction of the \$256 million Chena Lakes Flood Control Project began in 1973. Since becoming operational in 1981, it has controlled flows of the Chena River over 20 times to either regulate floodwater or divert it to the Tanana River to protect lands in the floodplain downstream of the dam. Total flood damages prevented by 2012 are estimated to be \$259 million.

2012 On 9 June, the crew of an Alaska ANG helicopter on a training mission noticed a large yellow survival raft on the surface of the Colony Glacier above Inner Lake George. They had discovered the C-124 that crashed into Mount Gannett in 1952. The site was nearly 14 miles downslope from the 1952 crash location. The ANG sent a team on foot to examine the site and they retrieved items that were identified as being from the crashed C-124. On 13 June, Deputy Chief Rick Stone, J-2 Intelligence Directorate at the Joint POW/MIA Accounting Command, was assigned to investigate the wreckage. On 18 June, the US military announced the discovery of the wreckage. The recovery operation was then taken over by the



Joint POW/MIA Accounting Command, whose primary role is to search for US military personnel missing overseas.

2012

In August, the Alaska District Commander, Colonel Reinhard Koenig presented a Ceremonial Key to the National Oceanic and Atmospheric Administration's Command and Data Acquisition Station newly constructed 20,000 square foot Operations Center in Fox. The \$11.9 million project was made possible with \$9 million influx from the American Recovery and Reinvestment Act of 2009. The station collects data from 26 spacecraft operated by NOAA, NASA, Department of Defense, Europe, France, Japan, and Taiwan. Because it is farther north than any other satellite communications facility in North America, it receives more environmental data than any other station. From its seven onsite antennas and two antennas in Barrow, the station makes nearly 60,000 contacts annually.




2013

From 27 February through 1 March the Anchorage Post hosted a SAME Joint Regional Training Conference. The Co-conference chairs Alan Quesnel, F.SAME, and Tim Gould, F.SAME, worked the theme of "Rendezvous on the Tundra From Across the Pacific" and featured guest speakers including Dan Sullivan, Mayor of Anchorage, Fran Ulmer, Chair of U.S. Arctic Research Commission, and Larry Persily, Federal Coordinator for an Alaska North Slope Natural Gas Pipeline. To avoid threats of cancellation of the symposium, the Post provided a work-around to the newly published DOD policy restrictions on active duty and federal employee travel to non-DOD conferences which prevented several military engineer leaders attending as guest speakers. Post personnel devised an innovative audio-visual capability through a DOD network allowing virtual participation of the DOD speakers from Hawaii, the Pacific Northwest, San Antonio and Washington D.C. for communication of vital engineering issues to the regional SAME symposium attendees, called one of the best ever Regionals by nearly all who attended.

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2013

In January, the JBER Landfill Gas Waste to Energy Plant began operations, generating more than 25 percent of JBER's electrical load. The Anchorage Post toured the plant shortly after operations began.

*SAME Joint Regional Training Conference 2013.
Graphics by Maria Talasz*



2013 Through various Air Force civil engineer career field transformations and reorganizations, the Alaska AFCEE office has supported customers to include the US Army, US Navy, and Alaskan Command and project locations have spanned the PACAF theater of operations, from throughout Alaska to Hawaii, Guam, Wake Island, Johnston Atoll, Japan, Korea, Diego Garcia, and elsewhere. Originally focused on environmental restoration, the Alaska office became a full-service provider with projects spanning the spectrum -- environmental compliance, planning, engineering, and construction (MILCON and O&M funded) -- and at one point had personnel and offices in Hawaii, Japan and Korea.

2014 On 25 January, Colonel Brian P. Duffy, Commander, JBER and the 673rd Air Base Wing, addressed the Anchorage Post Banquet attendees. The Anchorage Post Engineer of the Year was Allan D. Lucht, PE, and a total of \$16,750 in scholarships were awarded to 16 students from the Talley Fund.



Colonel Brian P. Duffy

2014 In February, a large, all-encompassing capstone exercise "Alaska Shield" took place in Alaska and served as the National Emergency Readiness Response scenario for FEMA and all responding government agencies. That exercise included a major earthquake scenario in which the state and federal participants assessed community, state, and federal response and long-term recovery. It was the culmination of recent tabletop exercises under the "Alaska Shield" mantra, incorporating much of what we know from the 1964 Good Friday Earthquake and others since.

2014 Long time Anchorage SAME Post Treasurer, Kathy Jacobson, M.SAME summarized that since the year 2000, a whopping 192 Scholarships were awarded by the Anchorage SAME Post to the tune of over \$217,000 thanks to the Talley Fund, and the generosity of SAME Anchorage Post individual and sustaining members.

Year	Number of Scholarships	Total Amount
2000	192	\$217,000

2014 On 18 June, after two seasons of operations on the glacier, DoD announced the remains of 17 of the victims from the C-124 crash on Mount Gannett had been identified and would be returned to their families for burial.

2014 After a launch failure at the Kodiak Launch Site in August damaged the launch tower, payload processing facility and integrated processing facility, Alaska Aerospace made plans to repair and upgrade the facilities to support larger rockets, but Governor Bill Walker stopped work in December 2014 as part of an



order to address a state budget shortfall. Repairs to the facility were funded by state insurance at a cost of \$26 to \$29 million.

2014 In March, “Good Friday, 1964: The Great Alaskan Earthquake” by Patrick Coullahan and Allan Lucht, was published in “**The Military Engineer**” (TME) On-Line. The article was described by the editor of TME as the most downloaded



article ever from the Website: <http://sameneews.org/good-friday-1964-the-great-alaskan-earthquake/> Now used by NORTHCOM as key Readiness preparedness training reference material and used in The Alaska Shield 2014 exercise, sponsored by the State of Alaska to commemorate the 50th anniversary of the 1964 Great Alaskan Earthquake in the Nation’s Capstone Exercise 2014. It was cited in Henry Fountain’s Book, “The Great Quake”, as a suggestion for further reading.

2014 In August, the Tanana River Bridge over the Tanana River was completed. The bridge is 3,300 feet long and is the longest bridge in Alaska. It was initially conceived as a combined road and railroad bridge, but the first years of use it will be a road bridge only, as the planned 80-mile extension of Alaska Railroad from Eielson AFB to Fort Greely near Delta Junction had not been resourced. More than half of the funding came from the DoD to connect the military facilities and ranges on the west side of the river.



The contractor working on the Alaska Railroad’s Tanana River bridge at Salcha has nearly completed work on the structure, shown here in an earlier stage of construction. Photo: Alaska Railroad



2015 In February, Patrick M. Coullahan, P.E., was selected by the Alaska Engineering Societies as the Alaska Engineer of the Year for 2014. He was recognized for his work with the Society of American Military Engineers and the National Society of Professional Engineers and was awarded during National Engineers Week. He was chosen for outstanding professional leadership, technical excellence, and dedicated community service.



Patrick M. Coullahan, P.E. EotY

2015 Harley H. Hightower, FAIA, and Anchorage Post member, was awarded the National SAME 2014 Urbahn Medal for eminent and notable contributions in the field of architecture on 21 May.

2015 During efforts to repair the failed launch that damaged Kodiak Space Launch facilities, the spaceport was formally renamed to "Pacific Spaceport Complex—Alaska" in an announcement made on 14 April.

2015 On 21 May Allan Lucht, PE, 673rd Civil Engineer Group Deputy, JBER, and past Anchorage Post President was awarded the USAF SAME 2014 Newman Medal for outstanding contributions to military engineering. The Newman Medal is named in honor of Maj. Gen. James B. Newman, Jr., USAF, and is given for outstanding contribution to military engineering by a civilian or military member of the USAF. This medal was first awarded in 1955.

2015 A \$47 million multiyear project was awarded by the Alaska District of the Corps of Engineers to reconstruct the seawall protecting Cape Lisburne Long Range Radar Station. The Air Force said the purpose of repairing the seawall was to allow for safe aircraft operating conditions during takeoff and landing. Up to 160,000 cubic yards of fill material was permitted to use below mean high water during the seawall reinforcement at this vital but remote airstrip.

2015 On 9 October The Alaska Railroad becomes the first railroad in the United States to be granted approval from the Federal Railroad Administration (FRA) to transport liquefied natural gas (LNG) by rail.

2016 On 30 January the Anchorage Post presented \$22,375 in college scholarships. Alaskan dog musher, DeeDee Jonrowe, top ten finisher sixteen times with a second place in the 1998 Iditarod provided an outstanding presentation on battling cancer and fundraising.



Alaskan dog musher, DeeDee Jonrowe. Photo MaryLee Hayes.



2016 In the January-February issue of “**The Military Engineer**”, an article by Colonel David F. Maune, Ph.D., CP, CFM, PSM, PS, GS, SP, USA (Ret), titled “Mapping Alaska—America’s Last Frontier” was published. In it he wrote “With insufficient maps and no statewide digital orthophotos, Alaskans have long been challenged to manage the state’s natural resources and infrastructure. Military and civilian pilots also face perilous conditions in navigating through mountainous areas. Now, a statewide digital mapping initiative is using interferometric synthetic aperture radar (IFSAR) to create new maps and enhance safety and preparedness throughout America’s Last Frontier.”

2016 On 3 March the Anchorage Post organized a highly successful seminar and programs briefing. Attendees participated in focused mini-workshops and discussed how well Government specs align with the design and construction conditions common in Alaska. The briefing discussed funding and projects of importance for the construction years ahead.



2016 On 25 May the “Elephant Cage” Flare-9 system built in 1966 was shut down after operating for 50 years. Conservation efforts are underway.

2016 On 29 June Alaska's Governor Bill Walker vetoed the construction of the long studied and a potentially very efficient Susitna Hydroelectric dam, citing some environmental and economic reasons to thwart the project.



- 2016** The newly named Pacific Spaceport Complex—Alaska facility was formally re-dedicated on 13 August to celebrate the completion of repairs to previously damaged facilities during a launch.
- 2016** On 21 September the Anchorage Post’s monthly meeting covered Alaskan Coastal Erosion and was presented by BEM Systems, Inc.
- 2016** On 27 October the Anchorage SAME Post in conjunction with the American Society of Civil Engineers (ASCE) Anchorage Chapter held a Joint Meeting on “Dalton Highway/Sag River Severe Flooding”.



- 2016** In the Fall, Fairbanks Natural Gas and Hitachi High-Tech AW Cryo, Inc. of Japan works with the Alaska Railroad to employ two intermodal cryogenic tank containers (ISO tanks) to demonstrate intermodal transportation of LNG from Anchorage to
- 2017** In June, the State-owned Alaska Gasline Development Corporation signed an agreement with the Korea Gas Corporation, establishing a cooperative framework for the development of Alaska's natural gas infrastructure.



2017 In November, the State of Alaska took another major step toward realizing a long-sought Alaska Gas Pipeline to move natural gas from the North Slope to Asia, siding with interests from China after major oil companies stepped back from the project. The agreement Alaska Governor Bill Walker signed in Beijing with Sinopec, China Investment Corporation and the Bank of China does not guarantee a pipeline will be built, but it gives the lingering liquefied natural gas project a jolt of life. Estimated project construction cost was \$43 billion.

2017 On 24 August, the Anchorage Post meeting covered “Seismic Design, Certification, and Attachment of Mechanical, Electrical, and Non-structural Equipment per UFC and presented by PDC Engineers.

2017



On 14 September, the Anchorage Municipal Light and Power provided Anchorage Post members a tour through their newly built Plant 2 in Anchorage. Plant 2A is one of the most energy-efficient thermal generation plants in the world. Expansion of the 1970s vintage George M. Sullivan Plant 2 uses GE LM6000 combustion turbine technology and produce 120 megawatts in a 2x1 combined-cycle configuration. Total project cost was \$314 million. Because the plant is collocated with the city's water supply, ML&P can achieve additional efficiencies. The collocation has other benefits to the community, including reduced system maintenance costs due to water pipe freeze-ups and significantly reduced emissions. The plant is located on the Glenn Highway East of the city.



2018

For two years in a row the Fur Rondy pins were designed by Maria Talasz, Anchorage Past SAME Post President. The 2018 pins featured a depiction of a cute basket of husky pups and the 2019 design for the pins depicted the "Running of the Reindeer" race. The collector's pins are used to raise funds for a variety of activities and celebrations at the annual Rondy Winter Festival. Funds collected through the "Running of the Reindeer" event go to the Marine's Toys for Tots program. The race is one of the most popular events of the winter festivities around Rondy. Pin designs are selected in a competition format with a deadline in June of every year. The competition designs were a donation by Maria that the SAME Anchorage Post was enormously proud of and celebrated accordingly.



Fur Rondy Pin Designs 2018, 2019 by Maria Talasz, M SAME

2018

On 21 June, SAME President Marv Fisher and his wife, Julie Fisher traveled up to Alaska to join the Anchorage Post for its Annual Golf Tournament and for a special meeting with Post membership. Marv and Julie shared SAME's future strategic



In June, SAME President Col. Marv Fisher, ESAME, USAF (Ret.) (seated, right) traveled to the Anchorage Post, where he attended the Post's monthly meeting and gave a presentation on his theme for this year to increase member participation: "Just One More."

Photo of Marv and Julie's visit with the post was published in the September-October Issue of TME



direction and talked about the SAME Foundation. Marv presented Past Post President Allan Lucht, PE with a shirt made for the 2020 Strategic Plan/Centennial campaign with the slogan "Just One More" a direct link to the movie Hacksaw Ridge. Marv's SAME message was well received, and if we each help doing "just one more" we will get a LOT done for our Society!

2018

At the Annual Golf Tournament held in June, SAME President Marv Fisher presented Past Post President Maria Talasz with the President's Recognition Coin for Outstanding Contributions to the Society.



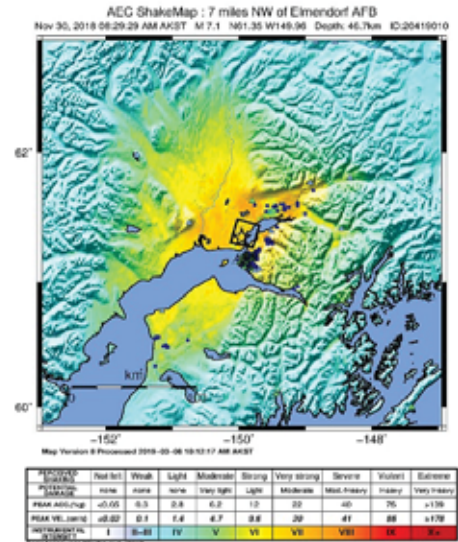
2018

On 30 November Anchorage was struck by a large magnitude earthquake at 8:29 a.m. Alaska Standard Time. The magnitude 7.1 earthquake hit southcentral Alaska, with the earthquake's epicenter near Joint Base Elmendorf Richardson (JBER), about 10 miles north of Anchorage, at a depth of 29 miles. It was followed six minutes later by a magnitude 5.7 aftershock centered 2.5 miles north-northwest of the municipality. The earthquake could be felt as far away as Fairbanks. The National Tsunami Warning Center—located inside the quake zone in Palmer, 42 miles northeast of Anchorage—issued tsunami warnings for nearby coastal areas, including Cook Inlet and the Kenai Peninsula, but they were lifted shortly after. Over 80 aftershocks were recorded that day.

Severe damage to many buildings and a highway overpass was reported, but there were no fatalities. There were 117 injured (mostly minor, broken bones, cuts, and bruises, and one case of smoke inhalation). Major damages were discovered at many other roads, schools in the Anchorage and Matanuska-Susitna Borough school districts, and many homes were damaged or totaled. The Alaska Department of Transportation and Public Facilities moved quickly to inspect



bridges and begin road repairs. Despite not normally paving during winter, area asphalt plants were restarted and within days emergency repairs were made to reopen several heavily damaged roads. Total damages for the earthquake were estimated around \$80 million. President Donald Trump stated on Twitter, "To the Great people of Alaska. You have been hit hard by a 'big one.' Please follow the directions of the highly trained professionals who are there to help you. Your Federal Government will spare no expense. God Bless you ALL!"



USGS ShakeMap for the 2018 Anchorage earthquake

2018



An article titled "Ensuring Alaska's Strong Military Future", by Colonel Patrick M. Coullahan, USAF (ret.), was published in "The Military Engineer", November-December 2018.

The Alaska District of the U.S. Army Corps of Engineers (USACE) continues to build and preserve Alaska's military might, working alongside other Army elements, the U.S. Air Force, and the Missile Defense Agency (MDA) as we entered in to a new era of hostility to the United States and allies around the world. Since Billy Mitchell first led the way, it is certain that Alaska is and always will be one of the greatest strategic places on the globe for conducting critical military operations, ensuring adequate training and deployment capabilities. The current projects and plans reflect that understanding and commitment.

2019

On 26 January Michelle Klouda was sworn in as Anchorage Post President, and she became the first Anchorage post scholarship recipient to ascend to the Post Presidency. Michelle, formerly Michelle Gallagher, is the oldest daughter of past Anchorage Post President Colonel Timothy Gallagher. After joining as a Student Member in 2006 Michelle was the recipient of multiple SAME Anchorage Post scholarships. Upon Graduation with a Bachelor of Architecture from the University of Oregon in 2008 she transitioned back to Alaska and began participating in the SAME Anchorage Post. She also received the SAME Pacific Region Vice President Medal. Michelle began on the Board as Junior Vice-president in 2013 and took on transitioning the Post into an online registration platform for all events starting with the Joint



Michelle receiving SAME Pacific Region Vice President's Medal in 2013 from Dr. Wolff, SAME National Executive Director. She was one of two recipients, together with Maria Talasz of the award for their efforts on building the new event website and its registration capabilities.



Regional Training Conference: “Rendezvous on the Tundra from Across the Pacific”.

2019 On 28 March Doug Moody, Director of Construction Programs at Brice Environmental, made a presentation on the complex and costly endeavor of the environmental cleanup and logistics at remote Wake Island, a designated Pacific Remote Island Marine National Monument and venerated World War II battlefield. Wake Island has been restored from what was an area of legacy solid waste into a new legacy of environmental integrity.

2019 On 25 April retired Maj General Mark Hamilton, USA, from the Pebble Partnership gave a detailed presentation about the plans and status of the Pebble Mine Project in Alaska. His presentation was well attended and directly addressed the issues, concerns, and potential of this mining prospect. He also laid out tentative planning dates for the mine in processing the enormity and sensitivity of environmental studies and permits.

2019 In “**The Military Engineer**” May-June issue, an article appeared titled “Remediation at Historic Fort Rousseau” authored by Timothy Gould, P.E., M.SAME, and Denise Yancey M.SAME. The authors described “popular tourist stop in southeast Alaska is the Sitka National Historic Landmark on Baranof Island. Once a bustling military complex built to protect the lower 48 states from possible attack during World War II, the site closed at the end of the war and much was left behind. The Alaska District of the U.S. Army Corps of Engineers (USACE) recently contracted with Ahtna Engineering Services to address decades of neglect on a series of islands all located off Sitka’s rocky coast. The work: to excavate, transport, and dispose of contaminated soil from Nevski, Rashimosti, Sasedni, and Makhnati Islands; and to excavate, transport, and dispose of contaminated soil and debris from the former landfill on Virublennoi Island.





2019

In the May-June issue of "The Military Engineer" an article titled "Preparing Eielson for the F-35" written by Erik Johnson appeared. The article touts the teamwork of government and private sector personnel including A/E firms and contractors to make it happen. The author stated "There has been notable pride in the collective effort to accomplish such a large amount of work in a short period of time. When the first F-35s arrive at Eielson AFB in April of 2020, the team on the ground plans to be ready."



2019

On 28 June the Anchorage Post held its 30th Annual Scholarship Golf Tournament. This great milestone celebrated the success of the Scholarship Fund, created in 1997 in honor of Brigadier General Benjamin B. Talley, a distinguished engineer popularly known as the father of military engineering in Alaska. Over the years, (1999-2019) the Anchorage Post contributed \$258,500 toward college scholarships for upper-division students in engineering and natural science degree programs.

2019

In June Military and contractor personnel and invited guests celebrated a milestone in the construction of a massive radar facility Tuesday at Clear Air Force Station, near Anderson, topping-off the framework that will support the radar unit, "Topping ceremonies are typically held as the final girder of a structure's frame is put in place. In Tuesday's ceremony, a red, white, and blue-painted girder was riveted into place for a structure that will house the Long-Range Discrimination Radar. The LRDR is an advanced system designed to detect incoming enemy missiles at mid-flight, identify the warhead amid decoys and other countermeasures and then relays that data to missile-defense facilities like the one at

Fort Greely to enable them to lock-on and intercept the missile. Work on the LRDR was scheduled to be completed by 2020 according to a Missile Defense Agency planning documents.



2019 On 30 July the Environmental Protection Agency (EPA) withdrew their preemptive proposed determination to restrict use of the Pebble deposit area as a disposal site, allowing the permitting process to move in accordance with existing rules.

2019



On 26 August SAME hosted an all-day seminar titled “Design and Engineering for a more Secure World”. This well attended gathering at the Alaska Pacific University Campus had in-depth presentations and panels to include topics of new design and engineering trends and projects in our State that aim to make our infrastructure, buildings, and environment more secure. The seminar included multiple briefings from various branches of the military in Alaska and two keynote presentations, one by Alaska’s US Senator Dan Sullivan, and the second by former Alaska Lt Governor Mead Treadwell.

2019 This year saw 37 cruise ships delivering 1.33 million visitors to Alaska, a new record. The National Geographic Orion offered unique cruises in the Bering Sea while the Roald Amundsen, the world’s first hybrid ship, made its inaugural voyage through the Northwest Passage.

2019 On 5 October United States Mint Chief Administrative Officer Patrick Hernandez announced Elizabeth Peratrovich will appear on the reverse of the 2020 Native American \$1 coin.

2019 In November the Anchorage Post’s monthly luncheon was Port of Alaska updates. The theme was how they are recovering post 2018 earthquake and what lies ahead for modernization efforts. The presentation was by the Port of Anchorage’s head of external affairs, Mr. Jim Jager. The Port is a strategic asset that needs to be upgraded and modernized to serve the needs of Alaska and the United States Military well into the future.

2020 John K. Magee, P.E., F.SAME, a member of the SAME Anchorage Post and a past Post President was recognized as being a 50-year member of the Society of American Military Engineers in the March-April 2020 “**The Military Engineer**” magazine.



2020 AFCEE summarized that special Alaskan projects through the years included the Clean Sweep (demolition and environmental cleanup) of numerous remote radar sites; renewal of Eielson AFB’s Military Family housing through a four phase, \$250M project to demolish 320 family housing units, the construction of 339 units, and the renovation of 99 units; the \$55M design-build replacement of the Eareckson AS power plant; the Environmental Impact Statement and planning for the Joint Pacific Alaska Range Complex; and numerous infrastructure projects throughout the Pacific.

2020 Colonel Brian Duffy, USAF, (ret) was sworn in as the Anchorage Post President in January at the Post’s Annual Banquet. The Banquet introduced our Centennial Celebration of the Society of American Military Engineers. Fifteen scholarships were awarded to deserving College Students, and six SAME military Awards for excellence were presented. Pacific Region RVP Medals were presented to Tom Fenoseff and Lori Kropidlowski. Jason Suslavich, Alaskan U.S. Senator Dan Sullivan’s National Security Advisor provided an excellent presentation. Mr. Suslavich joined Senator Sullivan’s staff in February 2015 and manages the Senator’s Senate Armed Services Committee assignment, including the Senator’s current chairmanship of the Subcommittee of Readiness and Management Support. Senator Sullivan is also a member of the Commerce Committee – chairing the Subcommittee on Oceans, Atmosphere, Fisheries, & Coast Guard – the Environment and Public Works Committee, and the Veterans Affairs Committee.



2020 Novel Corona Virus (COVID-19) strikes Alaska, the United States, and much of the populated Nations of the world. This pandemic which reportedly started in Wuhan China has stricken thousands in the United States and several hundred people in Alaska, and unfortunately, lives have been lost. On 28 January, a chartered plane carrying U.S. consulate personnel and citizens from an area of China at the center of a coronavirus outbreak landed in Anchorage, Alaska, and then proceeded to California, where



State of Alaska DHSS COVID-19 Dashboard



passengers will be tested, officials said. Health officials in Alaska had said all 201 passengers continued to the plane's destination in California after having undergone health screening in Anchorage. Overall, the COVID-19 Virus has been a huge detriment to the way things normally have been done, but ingenuity has come into play, and greater reliance on science and engineering has also come to the forefront. Unfortunately, Schools and Universities have been closed in Alaska, as was done elsewhere in the United States and worldwide. The Corona Virus has hit commerce awfully hard and travel, food services, and businesses have been impacted negatively—causing increased unemployment and losses of revenue. The Cruise industry made massive cancellations and the Alaska Railroad suspended all passenger service. The price of oil has gone down significantly, and production has been cut impacting revenues—impacting Alaska profoundly. Stimulus programs have been initiated and continue to be discussed. Social distancing has become the norm. Hospitals, medical care in general, first responders, and government officials have had their meddle tested to the fullest.

2020 SAME Executive Director, Brigadier General Joe Schroedel, P.E., F.SAME, USA (Ret) announced on 20 April that Colonel Patrick M. Coullahan, P.E., PMP, F.SAME, USAF, (ret), of the Anchorage SAME Post, was elected to the Society of American Military Engineers National Board of Direction as an Elected Director. Later that month SAME National posted this information on their Website.

2020 In April the first F-35A Fighters arrived at Eielson AFB while construction of mission and support facilities by U.S. Army Corps of Engineers contractors under purview of the Alaska District continued.

2020 Brig. Gen. Thomas Tickner, commander of Pacific Ocean Division, U.S. Army Corps of Engineers, toured the completed alternate care facility at the Alaska Airlines Center, praising the team for its collaborative efforts to lower the risk of #COVID-19 and keeping Alaskans safe. Representatives of Providence Alaska Medical Center, UAA: University of Alaska Anchorage and other partner agencies met with the general to show features such as patient pods, the negative pressure system and others that were constructed to facilitate patient care at the arena. The U.S. Army Corps of Engineers nationwide was committed to helping combat the #COVID-19 outbreak alongside federal, state and community partners, and locally, completed this project eight days after awarding the contract and 10 days after receiving the mission assignment.



Brig. Gen. Thomas Tickner, commander of Pacific Ocean Division, U.S. Army Corps of Engineers



2020

SAME National President LTC Buddy Barnes, USA (ret), F.SAME briefed the SAME Anchorage Post Board Virtual meeting on the GoToMeeting site on 6 May. He recognized the outstanding efforts of the Anchorage Post and noted that Pat Coullahan of the Anchorage Post had been elected to the National SAME BOD, and that Al Lucht, previous Anchorage Post President will soon take over the lead of the SAME European Region as their new RVP. Buddy provided detailed updates on the impact of COVID-19 on SAME activities and the virtual world approach we are now using and embracing. The Virtual JETC is a go, and it should provide lots of capability for remote attendance. Brian Duffy led discussions about future Anchorage Post meetings, the golf tournament, and the 2020 Industry Days planned by the Anchorage Post.



SAME National President LTC Buddy Barnes, USA (ret), F.SAME

2020

The Alaska District, U.S. Army Corps of Engineers Moose Creek Dam retained water in late April due to ice jams--marking the 27th time the dam has operated and the first time it stored water for ice conditions since operations began in 1981. As a dry dam, Moose Creek typically impounds water on the Chena River for high water events associated with rainwater or snow melt during the open water season along the Chena, Little Chena, and Tanana rivers. An estimated \$398 million in damages for residents in the Fairbanks North Star Borough has been prevented by the #Chena River Lakes Flood Control Project, of which the Moose Creek Dam is a part of, as of April 2020.

2020

Alaska-based and Native Alaska Owned Ahtna Environmental wins the 2020 SAME Industry Business Award. From the winners: Tim Finnigan *"For 100 years, SAME has been a collaboration among government and industry to develop multi-disciplined solutions to national security infrastructure challenges. Ahtna Environmental is proud to be recognized by SAME for our efforts and will continue to foster this collaboration."* Timothy Gould, Past SAME Anchorage Post President added, *"Ahtna Environmental's selection as the SAME 2020 Small Business of the Year is an incredible honor. Above it all, the true prize is the professional and leadership development, as well as the volunteer opportunities afforded our staff. SAME continues to provide great value to our management and staff, both professionally and personally."*





ANCHORAGE POST FELLOWS

Brigadier General B. B. Talley

Cheryl Stewart

Colonel Everett Mabry, PE

Colonel Patrick M. Coullahan, PE, PMP

Ted Trueblood, PE

John K. Magee, PE

Leo von Scheben, PE, PLS

Lieutenant Colonel Chris Turletes, CFM

Kathy Gardner, PE

Colonel Stu Hartford, PE

Colonel Rich Fryer

Major Bill Kontess, AIA, PMP

Craig Lance, CCM

Alan Quesnel, PE

Colonel Russ Hula

Colonel Andra Clappsaddle

Allan Lucht, PE

Captain John Hickey

Cynthia Lowe

LTC Morgan Benson, PE

Tim Gould, PE



ANCHORAGE POST PRESIDENTS

1941	MAJ B.B. Talley	1981	Col Wayne K. Beckwith
1942	LTC George J. Nold	1982	CAPT Michael D. Mahoney
1943	MAJ Leonard Fuller	1983	Cheryl Stewart
1943	Walter J. Morgan	1984	Cheryl Stewart
1944	COL Maybin Wilson	1985	Cheryl Stewart
1945	Vigil Stone	1986	COL Wilbur T. Gregory
1946	COL Jas D. Long	1987	LTC George Wuerch
1947	John C. Hopper	1988	Bruce Corwin
1948	LTC John R. Parker	1989	COL Bill Kakel
1949	COL William E. Potter	1990	Col Everett Mabry
1950	COL L.E. Seeman	1991	Leo von Scheben
1951	Anton Anderson	1992	Col Patrick Coullahan
1952	COL LeRoy E. Weber	1993	John Magee
1953	COL L.H. Foote	1994	John Magee
1954	Arthur L. Jess	1995	COL Peter Topp
1955	COL Carl Y. Farrell	1996	Col Tom Dodds
1956	Kenneth A. Sheppard	1997	Ted Trueblood
1957	COL Leonard L. Haseman	1998	Col Joel Bradshaw
1957	Wm. J. Donner	1999	COL Bob Wrentmore
1958	Karl A. Hahn	2000	COL Bob Wrentmore
1959	COL Wm. C. Gribble, Jr.	2001	Craig Lance
1960	Thos. L. Gardner	2002	Col Rich Fryer
1961	COL Edwin M. Eads	2003	Karen Padgett
1962	LTC Edward F. McCabe	2004	Maj Bill Kontess
1963	COL Harold C. White	2005	Col Mike Haas
1964	COL Paul W. Stephens	2005	Col Steve Moes
1965	COL Roger A. Barnes	2006	Col Stu Harford
1966	John L. Ceriutti	2007	Lt Col James Hodges
1967	COL Wayne M. Beumeler	2008	COL Kevin Thomas
1968	COL Ernest L. Hardin, Jr.	2009	COL Tim Gallagher
1969	Loran H. Lounsbury	2010	COL Tim Gallagher
1970	Harold F. Abrams	2011	Col Russ Hula
1971	COL Allen P. Richmond	2012	Lt Col Eric Hoversten
1972	DOL A.C. Mathews	2013	Alan Quesnel
1973	COL Edwin W. Eads	2014	Allan Lucht
1974	COL Chas A. Debelius	2015	Tim Gould
1975	LTC Richard W. Cowles	2016	LTC Tom Fenoseff
1976	Col David L. Waldron	2017	Maria Talasz
1977	Col David L. Waldron	2018	Col Mike Staples
1978	Jerome M. Tackes	2019	Michelle Klouda
1979	David Pettet	2020	Col Brian Duffy, USAF (Ret)
1980	Col Wayne K. Beckwith		