



Historical Timeline

Alaska Maritime National Wildlife Refuge

Much of the refuge has been protected as a national wildlife refuge for over a century, and we recognize that refuge lands are the ancestral homelands of Alaska Native people. Development of sophisticated tools and the abundance of coastal and marine wildlife have made it possible for people to thrive here for thousands of years.

So many facets of Alaska's history happened on the lands and waters of the Alaska Maritime Refuge that the Refuge seems like a time-capsule story of the state and the conservation of island wildlife:

- **Pre 1800s** – The first people come to the islands, the Russian voyages of discovery, the beginnings of the fur trade, first rats and fox introduced to islands, Steller sea cow goes extinct.
- **1800s** – Whaling, America buys Alaska, growth of the fox fur industry, beginnings of the refuge.
- **1900 to 1945** – Wildlife Refuge System is born and more land put in the refuge, wildlife protection increases through treaties and legislation, World War II rolls over the refuge, rats and foxes spread to more islands. The Aleutian Islands WWII National Monument designation recognizes some of these significant events and places.
- **1945 to the present** – Cold War bases built on refuge, nuclear bombs on Amchitka, refuge expands and protections increase, Aleutian goose brought back from near extinction, marine mammals in trouble.

Refuge History – Pre – 1800

A World without People

Volcanoes push up from the sea. Ocean levels fluctuate. Animals arrive and adapt to dynamic marine conditions as they find niches along the forming continent's miles of coastline.

10,000 BC to 1,000 BC Coming into the Country

Ancestors of today's Alaska Native peoples settle along the coast, taking advantage of the abundant marine resources. They adapt their traditional customs to the environment in which they live.

1732 First Sighting of Northwest America by Europeans

Rusians Gvozdev and Fedorov in the ship St. Gabriel sail through today's Bering Strait and around the Diomedede and King islands. They seek fur-bearing animals but see none. A King Island Native paddles his kayak out to their ship and in sign language tells of furs on the mainland. It is September, however, and the crew is low on food and the St. Gabriel is leaking, the ship returns to Kamchatka without sighting mainland Alaska. A trip report and map remain unpublished until 1743.

1741 Land to Mother Russia's East

Separated in a storm, both Vitus Bering and Russian expedition partner Aleksei Chirikov sight mainland America within 36 hours of each other – Chirikov first on 15 July in southeast Alaska and then Bering saw the Wrangel-St. Elias mountains from the Gulf of Alaska. The voyage is successful for some and fatal for others.

1741 Wildlife Proves Arrival in New World

Naturalist Georg Steller on Bering's ship is the first to record Alaska's wildlife, confirming that they had indeed arrived in a new country. He documents previously

unknown species, many of which bear his name today – including Steller’s jay and Steller sea lion.

1741–42 Surviving on Sea Cows, Seabirds

Almost home to Kamchatka (Russia), Vitus Bering’s ship wrecks on an island west of the Aleutians. Bering and many of his men die before winter is over. Meat of a gentle manatee (Steller’s sea cow) and seabirds such as spectacled cormorant help remaining crew survive.

1741–42 Return Home with a Wealth of Sea Otter Furs

Expedition survivors and the crew of the partner ship captained by Aleksei Chirikov return to Russia with sea otter pelts – and spark a fur rush similar to later gold rushes.

1745 Bad Blood between Newcomers and Natives

The first wave of Russian fur traders (promyshleniki) lands in the western Aleutian Islands, forcing the Aleut Natives to hunt sea otters for them. On Agattu, Michael Nevodchikov and his crew encounter 100 Aleuts and shoot one Aleut man in the hand. The Russians sail next to Attu where they kill 17 Aleut men. Later explorers are attacked by Aleut to the east in the Rat Island group. These encounters foretell the tense relationship between newcomers and Natives that lasts for more than a century.

1750 Russians Introduce First Foxes

To sweeten the lucrative fur market, Russian trader Andreian Tolstykh captures arctic blue foxes on the Commander Islands of Russia and releases them on Attu – the first of many introductions of non-native land mammals to the remote Aleutian Islands. Foxes feast on the abundant seabirds that evolved without defenses against such voracious predators.

1768 Extinction is Forever

The 25-foot-long Steller's sea cow (*Hydrodamalis gigas*) disappears from the earth, wiped out by Russian mariners a mere 27 years after its discovery by the Bering expedition. Naturalist Georg Steller provides the only written account of this cousin to the manatee: "They munch along the shore just like land animals with slow, steady movement forward."

The newcomers took 100 years to wipe out another Bering Sea species described by Steller, the flightless spectacled cormorant.

1778 Cook's Voyage

Captain James Cook and crew explore Alaska's coastline as far as the Bering Strait in search of the elusive Northwest Passage. Other explorers follow over the next several decades, braving harsh climate and racing ahead of treacherous ice conditions of the Arctic. Many coastal features bear the names of explorers, naturalists, traders, and their sponsors – Chirikof and Chamisso islands, and Cook Inlet.

1780 Rats!

Rats escape from a sinking Japanese fishing boat on the western Aleutian Island later named "Rat Island." This incident begins a series of "rat spills" that proved more deadly than oil spills to island-nesting birds – rats crawl into nesting burrows and along narrow cliff ledges, stealing eggs and killing chicks and adults. Rats continue to plague refuge bird life today.

1786 Fur Seal Nursery Invaded

Gavrill Pribylov, Russian navigator, discovers a treasure chest of new furs – the pupping beaches of millions of northern fur seals. He names the pair of seal islands for the ships that first land on each, St. George and St. Paul.

1786–87 Slaves of the Harvest

Wanting to cash in on this new fur source, Pribylov relocates 137 Aleuts from Atka and Unalaska to the uninhabited "Pribilof Islands" to harvest the fur seals by the

thousands "for the glory of Russia." This begins two centuries of slavery for these uprooted Alaska Natives.

Back in the Aleutians, the local Aleut/Unangan have declined in population from an estimated 16,000 when the Russians first arrived to less than 1,900. The newcomers had yet to spread their influence to Tlingit, Haida, Inupiat and Yup'ik peoples.

1787 Mapping Islands in Southeast Alaska

In 1787 George Dixon, who earlier sailed with Captain James Cook, returned to Southeast Alaska on a trading voyage and mapped the islands he passed. What would become the farthest south island in the refuge, visited by local Kaigani Haida people for collecting seabird eggs, Dixon called Forrester after his ship's steward. The mist-filled air along the coast probably suggested the name Hazy that Dixon gave to the sheer pinnacle he saw in Tlingit territory farther north, now also part of the refuge.

1791 An Island of White Bears!

The first recorded expedition to stop at remote St. Matthew and Hall islands see several polar bears in mid-July. They "swam round the ship while we were at anchor, and three of them made many attempts to get up the ship's side" wrote the expedition historian.

1796 An Island is Born

A glowing ash cloud obscures the horizon as the ground quakes in the eastern Aleutians. When the cloud clears, Natives see a new island "shaped like a black pointed cap." Twice the volcano hurls rocks as far as Umnak Island – 30 miles. The island continues to grow. When Native hunters visit the new island – Bogoslof – eight years later, they find the water warm and the ground still too hot for walking.

1798 Fur Tally

Since their arrival, Russian fur traders have exported a total of more than 400,000 fur seals, 96,000 sea otters, and 102,000 fox pelts from the Pribilof and Aleutian islands and Kodiak.

1799 First Monopoly

Russia grants the Russian America Company the first of several consecutive charters for a 20 year monopoly to manage the trading business and settlements in what is now Alaska.

Refuge History - 1800s

1805 Conserving Seals

The Russians ban taking of seals on their breeding islands in the Pribilofs as a conservation measure as the animals become fewer. The ban is lifted in 1808.

1807-11 Names Keep Changing

An island in Tlingit territory in Southeast Alaska, that would later become part of the refuge, is renamed "Saint Lazaria" by navigator and mapmaker Ivan Filipovich Vasilev who lived nearby in Sitka, capital of Russian America.

1811 When Foxes Come, Birds Go

20 years after Russian fur promoters introduced arctic foxes on Atka Island in the central Aleutians, local Aleuts complain that foxes have driven away birds and now they must travel to other islands for feathers and bird skins to make their traditional clothing. On Attu, site of the first known introduction of foxes in the Aleutians, the Aleuts turn to making clothing from fish skins.

1816-17 Flowers Tell a Story

Adelbert von Chamisso, naturalist with Otto von Kotzebue's second round-the-world voyage, collects plants at every Alaska landfall. For more than 100 years the herbarium he compiled from the voyage is the principal source of knowledge about the flora of Alaska and the Aleutian Islands. An island named for Chamisso is part of the Alaska Maritime Refuge.

1824 Missionaries at Work

Father Ioann Veniaminof arrives in the Aleutian Islands to spread the Word of God through the Russian Orthodox Church. He remains in Unalaska for 20 years,

ministering to the local Aleut/Unangan people, ordaining Native priests, and creating an alphabet to preserve the Unangan language.

1824 United States and Britain Sign on for Trade

Russia signs two conventions with the United States and Britain allowing foreign ships to trade in Russian territory including Alaska. This opens the door for fierce competition by other traders such as the Hudson's Bay Company, halting further expansion by Russians into North America.

1843 Thar She Blows!

Bowhead whales, rich in oil and plates of baleen, are first harvested by newcomers to the North Pacific and Arctic waters. In the next few years, more than 500 New England whaling ships set sail for these new whaling grounds. The slow-moving docile beasts are easily captured, rendering 100 barrels of oil per whale. The most prosperous whaling year is 1852 with 2,682 bowhead whales harvested. By 1855 bowheads are near extinction.

1865 Last shots of Civil War fired here

In the Bering Strait between Alaska and Russia on June 22 through 29, the Confederate Navy raider CSS Shenandoah captures and burns 25 Yankee whaling ships in the last offensive action of the Civil War - two and a half months after Lee's surrender at Appomattox.

1867 Russians Sell Alaska

Alaska changes hands. Historian Hubert Howe Bancroft wrote "... this vast area of land, belonging by right to neither, was transferred from one European race to the offshoot of another."

Russia sells its claims on the land of Russian America and the vessels of the Russian American Company to the United States of America for \$7,200,000. The territory is named Alaska, based on a derivative of the Unangan term Alaxaxaq meaning "land east of the Aleutians." American traders, fishers, trappers, and prospectors become the next wave of settlers.

1869 First Wildlife Reservation in USA

Congress creates the Pribilof Islands Reservation (including St. Paul, St. George, Walrus and Otter islands) to protect fur seals on their main breeding grounds. The American government will use these animals as a cash crop until 1983.

1871-72 Reporting on Wildlife Resources

Scientist William Healy Dall surveys the Aleutians and observes that on islands such as Attu and Atka where foxes had been introduced, birds nest on offshore rocks and islets and only in inaccessible locations. On fox-free islands, those same kinds of birds nest on banks and hillsides of the main islands and avoid the offshore inlets. Birds are "bold and fearless" on fox-free islands.

1874 Studying Fur Seals and Polar Bears

Henry Wood Elliott, scientist studying northern fur seals on the Pribilof Islands, took a special sailing trip north 230 miles to view the polar bears that live year-round on St. Matthew Island. Earlier reports "did not cause us to be equal to the sight we saw, for we met bears, yea hundreds of them." Elliott and his party surveyed the island for nine days and were never out of sight of bears. He estimated 250 to 300 bears.

1881 A Struggling Culture

After nearly a century and a half under foreign control, a combination of disputes, forced labor, and disease reduce the Unangan to only two traditional settlements in

the western and central Aleutians – Chichagof Harbor on Attu Island and Nazan Bay on Atka Island.

1882 Bogoslof Volcano Awakens Again

Fire Island (“new Bogoslof”) rose from the depths of the Bering Sea and remained steaming for about 10 years. It was periodically joined to Bogoslof by sandy spits and changed shape from cone to table top by 1895.

1891 No More Walrus on Walrus Island

The last walrus that used Walrus Island in the Pribilof Islands is shot. After decimating the whales, foreign traders harvest other marine mammals including walruses. The ice-laden waters of the Chukchi Sea provide some safety for remaining walruses and seals.

1892 One Small Conservation Step

President Harrison proclaims Afognak Island and surrounding waters a Forest and Fish Culture Reservation to protect salmon, other fish and wildlife, and forest resources. Those offshore islets and waters are part of today’s Alaska Maritime National Wildlife Refuge, one of the few refuges that includes marine waters.

1892 Americans Stock Islands with Foxes

Americans escalate the introduction of foxes to Alaskan islands to establish fox farming businesses. From now until the 1930s blue arctic and red foxes are released to fend for themselves on more than 450 islands from the Aleutians to Southeast Alaska. Foxes survive on ground-nesting native birds until those bird populations are devastated.

1899 Unique Island Polar Bears Gone

Eager to see and hunt the polar bears that live year-round on St. Matthew Island, the Harriman Expedition, with John Muir aboard, lands there. No bears are found, only their deep-worn trails and bones. Polar bears are never again seen there in summer.

In 1909 St. Matthew and neighboring Hall and Pinnacle islands will be named among the first wildlife refuges in Alaska by President Theodore Roosevelt and are now part of Alaska Maritime National Wildlife Refuge.

Refuge History – 1900–1945

1900 First Law to Protect Wildlife

Passage of the Lacey Act sets the stage for a new century of safeguarding wildlife. The national law prohibits commercial hunting of birds and animals to sell as meat, feathers, or skins – a widespread practice in the 1800s.

1903 National Wildlife Refuge System is Born

President Roosevelt names tiny Pelican Island on Florida’s east coast as the nation’s first bird sanctuary. This marks the beginning of what would become our National Wildlife Refuge System.

1909 Wildlife Reserves for Alaska

Even in the frontier of Alaska, Roosevelt recognizes the need to protect habitat for wildlife. He establishes the first reservations for seabirds on St. Matthew and Bogoslof islands (Bering Sea), Chisik and Duck islands in Tuxedni Bay (Cook Inlet), Walrus and Otter islands in the Pribilofs, and St. Lazaria Island in Southeast Alaska. These lands are now part of today’s Alaska Maritime National Wildlife Refuge.

1909–10 Window on the Past

Archaeologist Waldemar Jochelson is the first to study the prehistoric Aleut village sites in the Aleutian Islands.

1911 First International Wildlife Treaty Protects Fur Seals and Sea Otters

After intense commercial hunting of fur seals and sea otters since the mid-1700s, relief came for the animals that remained.

The international Treaty for the Protection and Preservation of Fur Seals halted pelagic (at sea) hunting of both the fur seal and sea otter. A government harvest of fur seals, with profits shared by the treaty nations, would continue on Alaska’s Pribilof

Islands until 1985. Today, the Pribilof Aleuts take a few hundred seals annually for food.

1912 Three More Seabird Areas Protected

President Taft establishes three new reservations for the protection of native birds: Forrester Island and Hazy Islands in Southeast Alaska, and Chamisso Island in northwest Alaska. All are part of today's Alaska Maritime Refuge.

1913 Aleutian Islands - For the Birds!

The entire Aleutian Chain from Unimak west to Attu becomes a national reservation for native birds, fur farming, reindeer herding, and development of the fisheries.

1918 Birds Know No Borders

The U.S. Congress passes the Migratory Bird Treaty Act that regulates bird hunting under the 1916 Convention for the Protection of Migratory Birds between the United States and Canada [signed by Great Britain]. Mexico, Russia and Japan join later, thereby protecting all the birds that we share.

1918 Mice

Fur farmers purposely drops off mice on Chankliut Island to serve as winter food for their free-roaming foxes.

1924 Sheep

Sheep were put ashore on Unalaska and Unimak and grazing leases were requested.

1930-1932 For Sea Animals, Not Fox Farming

President Hoover adds Amak Island (northwest of Cold Bay) and nearby islets to the Aleutian Islands Reservation after biologist Olaus Murie recommends that the

islands' habitat for birds, sea lions, walruses and sea otters be protected, not leased for fox farming. Hoover also designates the Semidi Islands Reservation that includes surrounding marine waters. These units will become part of the Alaska Maritime Refuge.

1932 Plants Show Connection to Siberia

Swedish botanist Eric Hultén arrives in Unalaska to begin what would become the definitive collection and description of plants of the Aleutian Islands. He was the first to see similarities to plants he found in Siberia and in 1937 named Beringia, the Ice Age land connection between North America and Siberia. Hultén's monumental botanical works are a legacy still relied on by researchers in the Alaska Maritime Refuge today.

1932 Tiny New Fern Seen

W J Eyerdam, assistant to Eric Hultén, spots a tiny fern on Atka Island in the central Aleutians that was new to the world's botanists. The Aleutian shield fern is now an official endangered species and only found on Adak Island to the west of Atka.

1932 More Sea Otters

Botanist Eric Hultén reports seeing a growing number of sea otters in the western Aleutian Islands after their near extermination there during fur trading days. The 1911 international treaty protecting them seems to be working.

1936 Flowers in the Snow

Isobel Wylie Hutchison, explorer and botanist from Scotland, rides the Coast Guard Cutter Chelan throughout the Aleutians, stopping to make botanical collections at key islands. Hutchison also studied plants on Kodiak and the Pribilof Islands. Her herbarium specimens, deposited in the British Museum, provide more data for Eric Hultén's descriptions of the flora of the region.

1936–38 First Inventory of Aleutian's Wild Treasures

Olaus Murie begins his two-year expedition to all islands in the Aleutian bird reserve. He makes the first inventory of its wildlife. Victor Scheffer joins Murie in 1937 and continues an inventory of fishes in 1938. Together they write the North American Fauna report on the Aleutian Islands.

1936–37 A Warning

While inventorying Aleutian wildlife Olaus Murie sees the folly of trying to protect seabirds while promoting fox farming – the original purposes of the Aleutian Island Reservation.

He warns that the Aleutian Canada goose and many other native birds would soon disappear, eaten by the free-roaming, non-native foxes. He noted that the wily fox was "extremely clever, being able to seize diving seabirds in the water, as much as a foot below the surface...and to leap as far as ten feet across to a pinnacle after eiders."

1936–38 Smithsonian Archaeological Expedition

Ales Hrdlicka leads a Smithsonian Aleutian expedition for three field seasons. Team members Bill Laughlin and Paul Guggenheim return to the island many times to bring the Aleut past to light. Guggenheim mapped additional prehistoric sites during World War II while stationed in the Aleutians as a medical doctor.

1940 Japanese Withdraw from Treaty

The 1911 treaty to protect fur seals and sea otters from at-sea hunting loses Japanese cooperation. Japanese ships roam the Bering Sea and along the Aleutian Islands.

1940 New Name, New Emphasis

The Aleutian Islands Reservation is renamed the Aleutian Islands National Wildlife Refuge. Management begins in earnest as game wardens are stationed on Amchitka Island to discourage Japanese fishing crews from poaching sea otters. The Refuge's

114-foot (35 m) M/V Brown Bear patrols the Aleutians year-round. Then-Secretary of the Interior Ickes acts on Olaus Murie's warnings and approves regulations that end fox farming on some islands in favor of protecting birds.

1942 WAR

World War II rolls with unstoppable force over the Refuge islands, uprooting the First People in the Aleutians and Pribilofs, and leaving a trail of bomb craters, harbors, runways, bases, and outposts.

3-4 June 1942 Japan Invades Alaska

The Japanese drop bombs on Unalaska /Dutch Harbor in the eastern Aleutian Islands of Alaska.

7 June 1942 Prisoners

Japanese seize the Refuge islands of Attu and Kiska. They take the 42 Aleut residents of Attu prisoners and eventually all 11 men of the remote Kiska Weather Detachment. The violent Aleutian weather will be friend and foe to both sides before the war ends.

11 June 1942 Bombs Away

The first bombs are dropped on the Japanese occupying Kiska. Planes and a dozen men are lost. "Weather permitting" air crews will fly reconnaissance and bombing missions to Kiska and Attu islands from air fields almost a thousand miles east on Umnak Island and Cold Bay on the Alaska Peninsula until a closer air field can be constructed in September.

12 June 1942 Evacuation

The American military begins to evacuate Aleuts from Aleutians and Pribilofs. A demolition crew from the USS Gillis burns the Aleuts' homes on Atka, with all their personal possessions still in them.

14-15 June 1942 Evacuation, Internment and After

Unangan/Aleut people of the Pribilof are evacuated from their islands with several hours notice and start their journey to internment in abandoned salmon canneries and mines in Southeast Alaska until May 1944. A total of 881 Aleuts were removed from their homes in the Aleutian and Pribilof islands. The camps lack adequate sanitation, heat, and water and many people die. The toll is especially hard on elders and the very young. Some of the federal agents managing the camps are sympathetic and try to gain better conditions and supplies; others do not. The trauma from this chapter reverberates across generations, but through contact with Tlingit and Haida people, the Unangan people of the Pribilofs become more active in speaking up for their basic rights and move towards self-governance.

30 August 1942 Lagoon Becomes Runway

Allies land on Adak Island in the central Aleutians. They drain a saltwater lagoon and build a working runway in 12 days, cutting in half the distance planes need to fly to reach Kiska or Attu. Adak remains a military base until the end of the 1990s.

12 January 1943 Closer and Closer

Allies wade ashore on Amchitka. They build a fighter air strip within 75 miles of Kiska..

11-29 May 1943 Deadly Battle

In snow and freezing temperatures, 11,000 Allied troops land on Attu to retake that refuge island from 2,350 Japanese troops. The Battle of Attu becomes the second deadliest battle in the Pacific war. After the last assault by the Japanese, the American forces capture only 29 prisoners. Allied casualties total 3,829 men - including 549 combat deaths, 1,148 wounded, and 2,132 to accidents and that deadly foe, the Aleutian weather.

28 July 1943 Fog Saves Lives

Under cover of fog, Japanese submarines and surface vessels come to evacuate their 5,000 troops from Kiska.

14 August 1943 Kiska Empty but Deadly

A combined U.S. and Canadian force of 33,000 troops invade Kiska only to find it abandoned by the Japanese. The landing costs 21 lives due to friendly fire and accidents, while a mine in the harbor sinks a destroyer with the loss of 72 men. That ends the action of the Aleutian Campaign.

1945

Allied troops abandon the Aleutians at the end of the Pacific war, but the military keeps a strong presence on many established bases such as Adak.

Refuge History 1945 to Present

1947 Caught in the Middle Again

When the Ice Curtain of the Cold War drops between Alaska and the Soviet Union, the refuge islands were again caught in the middle of warring nations. The U.S. Navy, Army, Air Force, and Coast Guard all maintain bases on refuge islands, some still active today. Nuclear bomb tests would soon rock Amchitka Island and threaten Cape Thompson's First People.

1949 Back to Business

The end of World War II means getting back to the business of managing the refuge. Bob Jones first arrived in the Aleutians as a serviceman and becomes the refuge's first resident manager, based in Cold Bay. Later known as "Sea Otter" Jones for his efforts to recover the depleted sea otter population, he also spearheads a program of removing foxes from the refuge to restore native bird populations.

1950 Sea Otters and Military Secrets

Amchitka Island's sea otters are increasing and offer the best hope for the future of a species nearly extinct 40 years ago. Refuge Manager Bob Jones patrols Amchitka for poachers and finds secret military activities instead, eventually leading to underground atomic testing in the next decade. The refuge receives money to move some sea otters and Jones and associates spend the winter learning how to do that.

1956 Support for Refuges

The Fish and Wildlife Act establishes a comprehensive national fish and wildlife policy and broadens the U.S. Fish and Wildlife Service's ability to acquire and manage national wildlife refuges.

1958 Teller and His Bomb

"We will change the earth's surface to suit us," states the father of the hydrogen bomb, Edward Teller, upon announcing that his proposal to use nuclear blasts for civilian benefit is given the "green light" by the Atomic Energy Commission. The proposal – called Project Chariot – is to detonate three nuclear bombs to blast a harbor out of the tundra at Cape Thompson on lands that are now part of the refuge. This project is scrapped in 1962, but others are underway.

1959 Number 49 in '59

Alaska achieves statehood. Some refuge lands and waters are eventually transferred to state ownership under the Alaska Statehood Act.

1962 It's an Aleutian Goose!

Refuge Manager Jones discovers a remnant group of about 300 Aleutian cackling geese on Buldir Island – after many thought them extinct due to predation by foxes introduced for fur farming. Buldir was too rugged and exposed for such enterprises to succeed, so this small species of cackling goose survived there. Jones returned the next summer to capture goslings for a captive breeding flock in the first step toward returning the geese to their former abundance.

1964 Preserving the Wilderness

The Wilderness Act creates a special designation for preserving the wild and untrammled character of lands where people can experience solitude and natural beauty without the scars of development. Wilderness designation was later applied to many refuge islands in 1970 and 1980, adding more than 2.5 million acres to the National Wilderness Preservation System.

1965 Amchitka's First Nuclear Blast

"Long Shot" is the first of three underground nuclear tests exploded beneath Amchitka Island by the Atomic Energy Commission. The eight kiloton blast is "like a firecracker" compared to the later tests, but it still causes local damage to nearby streams and tundra.

1969 Milrow – Nuclear Blast #2

Officials detonate the second underground test "Milrow" under Amchitka Island. At 1.2 megatons, it is 150 times more powerful than the first test.

1971 Cannikin Bomb Rocks Amchitka Island

"Cannikin" is the third and final nuclear test conducted under Amchitka Island. At five megatons—more than four times larger than Milrow—it is the largest underground nuclear blast in U.S. history.

1971 Native Land Claims Settled

The Alaska Native Claims Settlement Act resolves more than a century of land disputes between Native tribes and the government. Several million acres of federal public land are subsequently transferred to tribal ownership. This law also paves the way for construction of the Trans-Alaska Pipeline System, slicing 800 miles down the center of Alaska to transport North Slope oil to the Port of Valdez.

1972 Protecting Marine Mammals

The Marine Mammal Protection Act authorizes regulations to protect marine mammal species, several of which inhabit the refuge, including Steller sea lions, harbor seals, sea otters, walruses, and polar bears. Only Alaska Natives are permitted to carry on traditional subsistence hunting to gather meat for food and hides and ivory for handicrafts.

1973 Geese Declared Endangered

The Endangered Species Act authorizes an unprecedented course of action to save species that are threatened or in danger of becoming extinct. The Aleutian cackling goose (then known as the Aleutian Canada goose) is one of the first species formally listed as Endangered.

1974 Marking Geese to Discover Winter Home

Although endangered Aleutian cackling geese are known to nest on Buldir Island, no one is certain where they fly when they leave the island. Some think Japan. Biologists put bands on some of the nesting geese in hopes of discovering where they spend the winter.

1975 Marked Geese Reveal Their Secret

The first banded Aleutian cackling geese are spotted – in northern California, offshore on a rocky island much like Buldir. Counts of the geese in the area in spring reveal 790 birds. From this baseline, the endangered species recovery team designs a long-term plan to rebuild the population and eventually remove the goose from the Endangered Species List.

1976 We're in the Biosphere

The Aleutian Islands are named an International Biosphere Reserve. These nature preserves form a world-wide network to promote the protection of biological and cultural diversity balanced with sustainable economic development.

1980 The Refuge as We Know It

Signed into law by President Carter, the Alaska National Interest Lands Conservation Act represents the greatest designation of public lands for conservation uses in U.S. history, adding some 54 million acres to the National Wildlife Refuge System and several million more named as National Parks and Forests.

The law forms the Alaska Maritime National Wildlife Refuge by combining 11 existing refuges and adding other lands, making it the world's largest seabird refuge. Totalling 4.9 million acres, the refuge spans a distance equal to that from California to the Carolinas. The law directs the refuge to conserve fish and wildlife, provide opportunities for traditional subsistence activities, fulfill international treaties, ensure water quality and quantity, and manage a national and international marine science research program.

1982-85 Buying Bird Cliffs

The spectacular seabird cliffs on the Pribilof Islands of St. Paul and St. George are purchased by the U.S. Fish and Wildlife Service from the local village corporations and added to the refuge.

1987 Sailing for Science

The M/V Tiglax, a 121-foot (37 m) vessel commissioned by the Alaska Maritime Refuge, begins its first season of work in the North Pacific and Bering Sea. Today its captain and crew navigate some 20,000 miles (32,000 km) every year to visit hundreds of islands in support of refuge biologists and other scientists working throughout the refuge.

1989 Oil Spill Disaster

The Exxon Valdez oil tanker runs aground in Prince William Sound and pours 10.8 million gallons - or 125 Olympic-sized swimming pools - of oil into the ocean.

This spill is the largest crude spill to date in American waters and is widely considered the world's worst in terms of environmental damage. The spill's destruction is far reaching, affecting islands more than 150 miles (240 km) away. Oil is found on refuge beaches in the Pyle and Chiswell islands near Seward, as well as on the Barren Islands near Homer. Sea otters and murre are particularly hard hit.

Oil remains buried under some beaches today, even after four summers of cleanup work and more than 15 years of natural weathering. A more hopeful legacy of the spill is the formation of the Exxon Valdez Oil Spill Trustee Council, which distributes settlement funds for research and monitoring on the refuge and other lands within the oil spill region.

1990s Species in Trouble

The Steller sea lion is officially listed as Threatened under the Endangered Species Act and later elevated to Endangered status as the population continues to

plummet. Most of the world's Steller sea lions breed on refuge islands. No one is certain why they have declined to only 20% of 1960 levels.

Other species in the North Pacific and Bering Sea regions are showing widespread changes as well, with increases in some and decreases in others. Steller's eider and spectacled eider are added to the list of threatened and endangered species. Sea otter populations in the central Aleutian Islands fall to only 10% from what was counted in the 1960s. Northern fur seal numbers are only half of what they were earlier in the century. Scientists are attempting to understand the causes for these changes and develop strategies to halt the demise of troubled species.

1997 Wildlife First and Foremost

The National Wildlife Refuge System Improvement Act strengthens earlier refuge laws and establishes that the conservation of fish, wildlife and plants is the mission of the system. It also gives priority to certain wildlife-dependent recreational uses on refuges – hunting and fishing, wildlife observation and photography, and environmental education and interpretation. Other uses may be allowed when they are compatible with the refuge's purposes and the system's mission.

2001 Bringing Back the Goose

The Aleutian cackling goose becomes one of the few endangered species success stories! It is removed from the Endangered Species List after almost 40 years of effort by the U.S. Fish and Wildlife Service, other agency partners, and the public. Recovery strategies included moving goslings to former nesting islands after alien foxes are removed, raising flocks in captivity to provide more geese for other islands, and adding the winter homes of the geese to the National Wildlife Refuge System.

2003 Bringing the Refuge to the People

Refuge Visitor Center opens at refuge headquarters in Homer, Alaska.

2003 Celebrating a Century of Conservation

Officially designated as the "Year of the Wildlife Refuge," this year marks the centennial of the National Wildlife Refuge System. Happy 100th Birthday!

2004 Shipwreck!

After losing power in a winter storm, the cargo ship Selendang Ayu grounded and broke up on the refuge side of Unalaska Island killing six crew members and spilling oil and soybeans and killing wildlife. The incident brought attention to the dangers of the Great Circle shipping route which takes Asian-West Coast traffic through the refuge in two places - Unimak Pass and near Buldir.

2005 Even Refuges Need Friends

Friends of Alaska National Wildlife Refuges was formed by a dozen refuge lovers in a meeting at the Kenai Refuge. Many of the founding members were former volunteers for the Alaska Maritime Refuge. One of their first projects was a weed pull and invasive plant education at Unalaska Island.

2008 Ridding Rat Island of Rats

First rats taken off of an Alaskan Island. The refuge, along with partners The Nature Conservancy and Island Conservation, removed Norway rats from Rat Island in the central Aleutians. The rats were introduced via a shipwreck in the 1780s and had been altering the native habitat and killing birds ever since.

2008 Hot Times on the Ring of Fire

No one suspected that long dormant Kasatochi Volcano, the site of a refuge annual sea bird monitoring camp, would blow with just a few days warning obliterating life on the island, burying the refuge cabin, the bird cliffs and the sea lion rookery and sending the biologists fleeing for their lives. Okmok Caldera and Mt. Cleveland also erupted during that "hot" summer. Kasatochi provided a perfect research opportunity to study how life returns to a remote island totally engulfed by a cataclysmic eruption.

2009 The Refuge Turns 100!

President Theodore Roosevelt designated the first five units of the refuge – St. Lazaria, Chisik, Bogoslof, St. Matthew and the Pribilof islands of Walrus and Otter as "bird reserves" in 1909. These were among the first refuges in the newly created National Wildlife Refuge System.

2016-17 Bogoslof Doubles in Size

Over a series of eruptions, the dynamic island of Bogoslof doubles in size.