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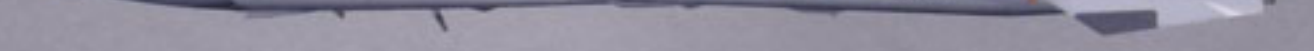

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Oregon Defenders

Part 3: Oregon Army National Guard

The history and tradition of the Oregon National Guard is grounded in its mission statement: "A ready force equipped and trained to respond to any contingency. When we are needed, we are there." Officially created in 1961, the Oregon Military Department oversees Oregon's Army and Air National Guard units and is responsible for administering, equipping and training this 'ready force' of citizen soldiers founded by local settlers in 1843. The Guard supports the state's governor helping fellow Oregonians in times of civil strife or natural disaster. Equally it serves as a reserve force for the United States Air Force and United States Army. Since 11 September 2001, the Oregon National Guard has fielded over 7,000 soldiers and airmen in support of more than 24 deployments, and the Army Aviation element has frequently deployed to various war zones.

Army Aviation in Oregon has been resourced with some of the finest equipment the US Army has had to offer. In the past the Oregon Army National Guard (ORANG) has operated UH-1 Hueys, OH-58 Kiowas, OV-1 Mohawks, U-8 Seminoles and U-21 Utes. It was the last Guard unit to operate Mohawks, which served in Oregon for a lengthy period before being turned over to the active-duty component in 1993 to serve at Camp Humphries in South Korea. Today, the ORANG is equipped with latest-standard UH-60L Blackhawks and CH-47D Chinooks, along with older types like the C-23 Sherpa, OH-58 Kiowa and C-12 Huron now scheduled for replacement.

Today's citizen soldiers and their aviation components are based at three Oregon locations. The largest is the Army Aviation Support Facility (AASF) at McNary Field, some 45 miles south of Portland, which is close to the Guard's headquarters in the State's capital city of Salem. During the eighties, the helicopter unit based at McNary Field formed the aviation element of 41 Infantry Brigade – Enhanced, which flew a mix of UH-1 Hueys and OH-58 Kiowas. In addition, there existed a small cavalry section at Salem. Headquartered at La Grande, the 3/116 Cavalry Squadron operated a section of OH-58 Kiowas.

All were transitioned initially into one air assault company flying Hueys, designated B-Company 1/108 and later B-Company 1/135. The only Kiowas retained at that time were two examples (subsequently three) operated in the counter-drug role. However, the unit assumed the Medevac mission and became the 1042nd Medical Company (Air Ambulance) in March 1995. Briefly, it continued to fly the Huey until these were replaced with 15 new UH-60L Blackhawks, on a one-to-one basis.

More commonly known as the 'Coyotes', the 1042nd took its Blackhawks to the Joint Readiness Training Centre (JRTC) at Ft. Polk in 1998, to undertake its first practice strategic deployment.The following year a team with helicopters was sent to Turkey in support of the Marine Expeditionary Force. The first real deployment came in March 2000 when six UH-60L Blackhawks and 59 personnel were sent to Bosnia as part of Stabilization Force (SFOR) 7. The mission lasted 270 days, ending in October.

The helicopters did not receive any particular modifications before being flown to Corpus Christi where they were disassembled and loaded aboard ships for the journey to Croatia. Prior to their deployment however, personnel had to undertake qualification courses provided by the 5th Army. During a three-week period, soldiers did a so-called basic validation course that embodied Theater-specific Individual Readiness Training (TSIRT) at the Armed Forces Training Facility at Camp Rilea in northern Oregon. It was esssential everyone had a full understanding of all relevant aspects of the upcoming mission, from occupying an assembly area to reacting to a nine-line Medevac request. The latter is the way an army soldier typically calls for a medical evacuation, either by radio or on paper, providing the unit with nine specific lines of pick-up information including location, call-signs, frequencies, number of ambulatory patients, special equipment needed and landing zone markings.

Within 18 months the unit was again called for duty, this time to reinforce the efforts of the 44th Medical Command at Fort Bragg, North

Carolina. The initial group was activated on 18 March 2002 and comprised 20 personnel and three helicopters. In April the rest of the 1042nd Medical Company (Air Ambulance) was called to deploy to Afghanistan in support of Operation Enduring Freedom (OEF) 2, as well as to Kuwait and Saudi Arabia. Commonly referred to as the 'Big Deployment', 12 helicopters were sent in all leaving just three at the Salem base. Once certified for combat operations, the crews of the 1042nd took up positions in Afghanistan with three Blackhawks deployed to Kandahar Airfield and another three to Bagram Air Base, while personnel operated two Blackhawks out of Camp Doha in Kuwait and two more from Prince Sultan Air Base in Saudi Arabia.

In nearly a year of operations in Afghanistan, the 1042nd undertook more than 90 missions to transport more than 130 patients that comprised both coalition personnel as well as local civilians. As the unit's commander Maj. Dave Strayer explained:

"With the Guard bearing the brunt in Afghanistan of evacuating military and civilians in need, the first thing that comes to mind was the exceptional teamwork between the Guard and active-duty components. Escort was always provided by AH-64 Apaches and we were worried about the [length of] time the Apaches needed to get off the ground [to get their weapon systems spool up and aligned]. Their commitment went so far that the Apache ground crews would drive out to the helicopters and initiate the weapons systems while crews were still in their briefings. Although this is not in line with the standard manual, valuable time was saved and the teams could get off the ground in the minimum of time, thereby increasing our chances to save lives. All truly embraced the rescue mission".

The unit maintained an operational readiness rate of 97 percent during the entire deployment, with all medics qualified and certified for Basic Trauma Life Support (BTLS) and Advanced Cardio Life Support (ACLS). The team worked closely with the Combined Joint Special Operations Task Force (CJSOTF) to provide fast and qualified medical support to all Special Forces Operational Detachment A teams (SFODA). In Kuwait, the team flew the majority of missions during this deployment, undertaking more than 200 itself and attending to 280 patients as Operation Desert Spring (ODS) and Operation Iraqi Freedom (OIF) unfolded on their 'watch'. In Saudi Arabia, the team flew force protection missions, keeping its helicopters 100 percent fully mission capable' throughout the deployment.

At the time however, the unit's activities were not confined to Afghanistan, Kuwait and Saudi Arabia. A team from the 1042nd equipped with two Blackhawks took part in scores of airborne operations, flying around-the-clock Medevac training missions for units at Fort Bragg, Fort Stewart, Fort Cambell, Fort Knox, Eglin Air Force Base and Ranger Camp in Dahlonaga, Georgia.

On 25 April 2003, the first troops and thee

Opposite page and this page: The 'Coyotes' of the 1042nd were the first to operate the Blackhawk 'Lima' model with its improved engines and transmission. The extra output from its powerplants makes the UH-60L more suitable for high-altitude work.

Above and below: Training for both state and federal missions is intense to ensure personnel can handle the wide array of missions, from fire-fighting and rescues at the local level to battlefield medical evacuation under enemy fire during deployments to combat theatres like Afghanistan.

helicopters belonging to the 1042nd Medical Company (Air Ambulance) returned from a successful tour of duty in support of OEF, ODS and OIF. That same month, the Army Aviation Association of America named it 'National Guard Aviation Unit of the Year' for 2002; an honour richly deserved in light of the 'Coyotes' record of maintaining their aircraft at close to 97 percent servicability and flying more than 2,500 accident/incident-free flight-hours. In addition, the unit had maintained a 98 percent servicability rate for its ground vehicles. Official demobilization took place on 12 July in a ceremony officially recognising the unit's achievements. Immediately thereafter it was returned to Oregon state control.

Two years later the Coyotes were again called to duty in Afghanistan, undertaking a six-month rotation in support of OEF. The primary mission was medical evacuation and transportation of injured coalition forces. The mobilization ceremony was held on 19 July 2005 at the Army Aviation Flight Facility. Shortly thereafter, six flight medics headed to Fort Sam Houston in Texas for specialized training. Led by then unit commander, Maj. Mark A. Ulvin, the remaining 29 members left on 25 July for Fort Sill in Oklahoma to undertake their training. Fourteen personnel ferried the four Blackhawks to the facility and the rest of the group made its way there using commercial carriers.

In early September, the 35-strong contingent set up base at Bagram Air Base, following two 30-hour airlifts from Fort Sill. Equipped with four of their own helicopters and another four less-advanced UH-60As belonging to active-duty units already positioned at Bagram, the guardsmen undertook their first rescue mission on 14 September.

The composite active/Guard unit deployed two helicopters each to FOBs to the northeast near Jalalabad and to the southeast in the direction of Khowst (better known as 'Salerno'). Both areas are 'hotbeds' of militant activity. The remaining helicopters were kept at Bagram in a battle-scarred, concrete hangar originally built by the Russians.

On 18 September 2005, parliamentary elections were held in Afghanistan. Anti-government attacks that day caused the 'Coyotes' to fly their first mass-casualty evacuation of the tour. Escorted by an active-duty 'slick' Blackhawk (with door armament but no red crosses) and two Apache gunships, medics operating from their FOB at Jalalabad were called to evacuate six Afghan soldiers wounded during a fierce fire-fight northwest of Naray. Upon arrival they discovered they needed to extract nine wounded soldiers plus another killed in the action. The Medevac helicopter took three of the most critical patients aboard while the two medics and crew chief loaded the other casualties onto the armed Blackhawk. All were airlifted to the US Army hospital at distant Bagram. That same day the detachment at 'Salerno' also saw its share of action and launched twice. The first mission, to pick up an American soldier and two Afghan soldiers wounded in a night-fight near Khowst began at 2:30 AM. Three hours later, a second morning rescue was launched to collect four casualties, including an 11 year-old boy wounded during an enemy assault on an isolated Special Forces base further north, which had been under fire all night. More rescues followed.

In October, the active-duty units returned to Hawaii, Alaska and Germany, leaving behind their less-powerful 'Alfa-model' Blackhawks for new units to operate in the theatre.

While based at Bagram Airfield near Kabul and at Jalalabad Airfield bordering Pakistan, the 'Coyotes' logged more than 1,000 incident-free flight-hours in some of the most challenging conditions, operating over rugged mountain and desert terrain. Not only did the crews return safely from each mission, so did the many US and coalition personnel they lifted to safety.

In Afghanistan, the unit remained on-call 24 hours a day to perform mass-casualty pick-ups, improvised explosive device (IED) casualty pick-ups and patient transfers. In all, the 'Coyotes' completed more than 290 medical evacuations, about half of which involved transporting Afghans. Many of the patients were children wounded by landmines. Oregon's governor, Theodore R. Kulongoski, said the following at the unit's homecoming ceremony:

"You are absolutely the best that Oregon has to give, we could not be more proud of what you've accomplished or be more grateful to have you back home and safe".

Oregon state senate president, Peter Courtney, also used the occasion to express his pride:

"This group of men and women not only put themselves in harm's way and had to leave their loved ones, they did so to help other people in a far off place that were struggling".

Oregon's adjutant general, Maj. General Raymond F. Rees commended the returning soldiers for their courage and commitment to both their mission and each other with these words:

"It took all of you who deployed; maintainers, pilots, engineers and medics, a total team effort; to give our troops the best care they could hope for. Every patient you evacuated out of harm's way and cared for will forever remember the 1042nd, who with commitment and courage braved the battle to save them".

Deployments represent just one element of the work undertaken by a Guard unit such as this. Each year, SAR operations and forest fires have to be tackled as well, and training conducted with emergency first-responders throughout the state. Such missions fall into one of two categories. Military Assistance to Safety and Traffic (MAST) is the programme that sees military assets used to provide support when civil medical emergencies arise. The concept dates back to the time when 'ambulance aviators' returned from Vietnam. In those days there were very few commercial helicopter ambulance companies so the Army took on the role, which had the effect of keeping the veterans 'current'. MAST support is launched when no other airborne SAR partner is available within a critical time period or when specific equipment is required. Only the Army and Coast Guard operate dedicated military helicopters for civil operations and although four or five private air ambulance companies exist in Oregon, the 1042nd was regularly called upon to respond in the past.

During the 'Big Deployment' of 2002, the facility commander at Salem initiated the Military Air Rescue Team (MART) mission, which is unique within the Air National Guard. Whereas other states have medical evacuation helicopters on stand-by, ready to go out and perform rescues, Oregon is the only one to have set up a specific programme with SAR sheriffs in local communities, in order to streamline coordination of such missions. The civil air ambulance companies remain prioritised under MART but the equipment aboard many Blackhawks, like heavy-duty 250-ft line hoists, de-icing and night-flying systems, means they are regularly 'scrambled' for more difficult rescues. In order to be prepared for SAR missions, members of the MART Team within the ORANG train year-round in mountainous stretches of Oregon and southwest Washington.

Of particular note, three of the 15 new-build UH-60Ls were fitted with the AN/AAQ-22 SAFIR-II Forward-looking Infra-red (FLIR) system. This came about as a result of the 304 Rescue Squadron switching its mission in 2001, which resulted in it giving up its FLIR-equipped HH-60 Pavehawk's for KC-135R Stratotankers. The benefits afforded by the FLIR were well recognised. In practice, the system is employed mainly in search mode rather than as an aid to flying the way it is in the Pavehawk community, which typically flies at low level under cover of darkness.

Redesignation

As part of the Army's Transformation programme, the ORANG re-designated the 1042nd Medical Company (Air Ambulance) in a formal re-flagging ceremony at the Army Aviation Support Facility on 6 January 2007. Charlie Company, 7-158 General Support Aviation Battalion (GSAB) was officially activated at that time. While the unit retained its aero-medical mission, reorganisation brought with it a number of changes including a downsizing in the number of personnel from 140 to around 100. The 40 servicemen shed from its ranks were primarily maintainers who were reassigned to the battalion. Whereas the unit was entirely self-sufficient in its previous form, it is now part of a larger organisation and has lost its aviation maintenance platoon. Before the change, the unit was itself a 'mini battalion" having a flight platoon, aviation maintenance platoon and headquarters platoon. Like the other aviation companies falling under the 641 Medical Battalion, the unit now receives support from the higher-level battalion, which effectively runs the aviation maintenance elements. A change of command for the unit was also recognised at the ceremony, with Maj. David A. Strayer assuming command of the aviation company from Maj. Mark A. Ulvin who became facility commander at McNary Field.

An Army-wide reduction in 'Lima-model' unit strength, from 15 to 12 helicopters, has resulted in the 'Coyotes' giving up three of their Medevac helicopters.

Annual training

US Army standards mandate that pilots and co-pilots maintain 48 hours of flight time every six months. For a crew chief and flight-medic the requirement is 12 hours over the same period. In addition, all soldiers are required to attend two-weeks of annual training that can either take the form of a Field Training Exercise (FTX) or training hosted at their home base.

In 2007, the unit's annual training was undertaken at McNary Field, beginning 2 June. Typically, the exercise is constructed around the kinds of engagements the unit is likely to experience during the upcoming three years. The three-year plan is broken down into annual segments that allow a yearly calendar of mission-essential tasks to be formulated. This 'building block' approach ensures aircrews, flight medics, crew chiefs, refuellers and maintenance crews are fully mission-capable for what lies ahead. Blackhawk crew chiefs, for instance, must be able to fulfill a varied array of tasks, from maintaining the aircraft, to calculating fuel consumption and operating the hoist when a medic has to be lowered to reach a patient.

For such training, the battalion commander lays down the overall requirements and the unit commander organises the scenarios to be addressed. These are based on the unit's level of progress and next-step training objectives. Evaluations are made throughout this training

Left: Whether at home or on deployment Guard units like 'Charlie' Company are kept busy. The unit typically flies between 2,500 and 3,500 hours per year and depending on requirements the policy is to support four flights daily in addition to MAST and MART missions. In May and June, the focus of the unit's training shifts to fire-fighting, to ensure the necessary skills are honed for the upcoming fire season. For aircrews, this is usually accomplished with one or two hours of practicing emergency procedures and drops.

Below: The Bambi bucket is slung beneath the Blackhawk. The rate at which the water is released over a fire zone can becontrolled from the helicopter by any one of the crewmen.

period and the overall plan is divided into 'red', 'amber' and 'green' cycles. Red concentrates on administration and personnel issues. Amber deals with logistics set-up whereas Green is organised around scenarios that involve launching aircraft and response to simulated incidents. The main objective for the unit in 2007 was to ensure 12 full crews, comprising two pilots, one crew chief and one flight-medic each, would be fully 'up to speed' by the end of that year, with the emphasis on fire-fighting skills.

Aside from unit-organised training cycles the Oregon Regional Training Institute (RTI) also plays an important role. This is located at the Western Oregon University campus in Monmouth, Oregon, and has the distinction of offering the only Army-approved maintenance course covering the high-performance rescue hoist fitted to most Medevac aircraft. After the ORANG was assigned its new medical evacuation mission in 1995, the need for a qualified rescue-hoist maintenance programme became paramount. The RTI teaches a curriculum endorsed by Army Aviation and Missile Command as well as the Army Medical Department. Since the first course was conducted in 2000, the school has graduated hundreds of students; some from as far away as Korea, Central America and Germany. USAF, Coast Guard, Marine Corps and civilian rescue teams also come for seven days of unit-level and intermediate-level maintenance training that encompasses complete disassembly and reassembly of a working hoist.

Fire-fighting

Wildfires are common occurrences in Oregon, particularly during the dry summer and autumn/fall. Forest brush and dead wood provide ample fuel should a lightning strike or human negligence spark a fire. It is estimated that as many as 240,000 homes are at risk to fires within the state. With around 1,100 reported annually within the 16 million acres of private and public land that come under the protection of the Oregon Department of Forestry (ODF), it comes as no surprise that Oregon attaches a high level of importance to the availability of fire-fighting helicopters. The state's OPLAN SMOKEY lays out in considerable detail how fire events are to be tackled; from the qualifications aircrews must hold to personnel logistics, equipment needs and ground support levels necessary for specific events once a 'helibase' has been established within the area of the fire.

Officially, the wildfire season begins on 1 June and runs through 1 November, during which the ORANG maintains a high number of soldiers on active duty in support of fire-fighting operations to work alongside other units, the Bureau of Land Management, the US Forestry Service, the Bureau of Indian Affairs, the ODF and other state and federal agencies. The ORANG keeps its aircraft at one of two readiness levels, RL1 or RL2, during this period. These levels reflect the liklihood the Guard's services will be called upon should commercial operators contracted by the state be unable to fully meet the challenge. ORANG helicopters are used for just the daytime VFR operations for which crews have been trained and for which the aircraft are properly equipped. The missions vary from transporting personnel and cargo (C-12, C-23, OH-58, UH-60L, CH-47D), to reconnaissance (OH-58, UH-60L), water/retardant delivery (CH-47D, UH-60L, UH-60 Firehawk), SAR (OH-58, UH-60L, CH-47D), Medevac (UH-60L, CH-47D), command and control (OH-58, UH-60L) and other tasks approved by the state aviation officer. As indicated, however, for its fire-fighting support Oregon relies first on commercial aviation companies like Evergreen Aviation and Erickson

Skycrane, which bear the brunt of the work in the Pacific Northwest.

Each Guard aircraft has its own Fire Support Package (FSP) that essentially comprises an aircrew, ground crew and mission equipment. The default status is RL2 but this is raised to RL1 when the chance of fires is high or when several fires are already underway. RL1 can be triggered also when significant thunderstorm activity is forecasted and the threat of lightning strikes is high. However, a series of events is necessary in order for RL1 to be declared. The state governor must first sign an executive order, which thereby authorises the ODF and State Emergency Management Office to make a request through the Emergency Operations Centre (EOC) for one or more aircraft. This happens only after all civilian-contracted and call-when-needed assets have been committed. Furthermore, training for the mission at hand must have been completed. Accordingly, unit commanders review OPLAN SMOKEY ahead of the start of the wildfire season and identify crews needing the necessary training. The US Forestry Service may even conduct check-rides. Thereafter, a list of trained and authorised aircrews is sent to the State Army Aviation Officer (SAAO), ODF, US Forestry Service and Military Support to Civil Authorities (MSCA). Meanwhile, at least one aircraft of each type must be configured with the required radios and water buckets, and vehicles and other mission equipment must be serviceable.

After the 'Declaration of Emergency' has been issued, Oregon's Aviation Task Force Commander (AFTC) receives the Wildfire Mission Order calling for the helicopters and their support personnel and equipment to deploy to the designated location. Aircraft remain under the control of the ATFC until their arrival. On scene, the aircrews are met by their support and refuelling personnel along with aviation mechanics from the unit responsible for getting the 'support package' in place. The Air Mission Commander (AMC) will report to the ATFC when all personnel and equipment are in place and the Air Operations Branch Director (AOBD), under the command and control of the ODF/USFS incident commander, then assigns the helicopter missions.

Pre-flight briefings inform crews the part they will play in the mission and to whom they will report. An aviation manager oversees all ground-operations, while an air attack manager directs air operations. The latter provides coordinates for 'dip sites' from which crews are to fill their water buckets, and drop sites where the water is to be dumped. The helicopters shuttle back and forth between their assigned dip and drop sites until directed to go to a new location, or until they need to refuel. Normal operations start in the early morning and continue until 8 pm. Since flight operations take place only during the day, aerial fire-fighting efforts have to cease before nightfall. Most aircrew work a 'six-on, one-off' rotation until directed to go elsewhere or report back to their home base. This typically happens after two weeks although all crews on rotation must be in constant readiness throughout the entire fire season. This was well illustrated in 2006 when the 1042 Medical Company and Detachment 1, Delta Company, 113th Aviation spent 48 consecutive days in the field after Oregon's governor declared a state of

The Guard is reimbursed for its fire-fighting services by the Oregon Department of Forestry. This is based on the number of aircraft hours flown plus an hourly rate for the use of water buckets and a daily rate for the use of ground equipment. The Guard is also paid for the number of personnel involved an operation, both in the field and at the aviation support facility. The forestry department classifies the UH-60 Blackhawk and CH-47 Chinook as Type-1 aircraft, which recognises these helicopters are capable of carrying and delivering more than 700 US gal (2650 lit) of water.

emergency on July 21, which led to the longest single mission ever.

Firehawk

The General Support Aviation Battalion at McNary Field currently has two standard 700-US gal (2650-lit) Bambi buckets plus another equipped with a power-fill. Additionally, the battalion operates the unique UH-60L Firehawk, first tested by the Army at Ft. Eustis, Virginia, and also by the Los Angeles County Fire Department which had the aircraft on loan from the ORANG. Through a cooperative agreement between Sikorsky, Aero Union and the ORANG, one UH-60L Blackhawk was returned to Sikorsky for the company and Aero Union to develop and test a belly-tank and snorkel system, to transform the helicopter into an even more effective fire-fighting tool.

Modifications included adding spacers to extend the main landing gear, adding one 1,000-gal (3,785-lit) removable belly-tank plus four belly-tank and four landing-gear attachment lugs, new steps for the crew, and electrical wiring for the dedicated cockpit control panel and civil-band radios. The tank has two hydraulically actuated doors which open at a rate selected by the pilot and an emergency release allows the crew to jettison the entire load within two seconds. The tank has its own computer to manage weight- balance and the entire system uses internal hydraulic systems that run off power bled from the helicopter's electrical generators; two of three of which are in operation at all times. After finalising the evaluation of the prototype in the autumn/fall of 1998, the aircraft was delivered back to the ORANG for operational use. Two pilots attended a three-hour qualification course at Fort Eustis undertaken by the test pilots involved in developing the system. This covered operation of the new variant and its emergency procedures. However valuable such instruction is, it remains true that ninety-five percent of the learning process is acquired on the job.

Training typically is conducted at specific lakes and ponds in the Silver Creek Falls training area in the nearby hills, some 3,000-4,000 ft (900-1200 m) above sea level. This altitude is representative of that at which the Firehawk typically fights fires. Unlike the Blackhawk, the Firehawk requires a crew of three instead of two for its mission and while the pilot, co-pilot and crew chief are authorised to make water drops or jettison the water load in case of an emergency, the crewchief is responsible for safeguarding the snorkel. He must prevent it from nutating (dancing in the air) during flight, which can damage both the system and the aircraft. Furthermore, when it is in use he must monitor the entire process. If the snorkel should get ensnared in the water, it is his job to cut it loose and thereby free the helicopter.

A fire-fighting helicopter's effectiveness can be measured in terms of the volume of water or foam it can deliver, its delivery accuracy, its speed to and from the drop zone, the time taken to refuel the helicopter, and its operating costs. Using its snorkel, the Firehawk can take on a full water load in about a minute. However, when flying over mountainous terrain at a typical 30-minute range approximately 800 US gal (3028 lit) are usually carried. It is essential that pilots keep a constant eye on the Turbine Gas Temperature (TGT) during lifting operations as one powerplant typically runs hotter than the other. Crews stop pumping water in the event the TGT reaches 850° F (454° C) in one or other engine; a precaution has allowed Oregon's Firehawk to continue flying with the original engines.

All UH-60L Blackhawks can carry the Bambi bucket attached to the external load hook. While this is a simple and effective way to tackle forest fires, in this configuration the helicopters are not allowed to fly over buildings nor can they carry passengers. As the load is under-slung, speed limitations must be adhered to as well, and use of the bucket necessitates a deep-water source capable of allowing the entire bucket to be submerged. The Firehawk brings several obvious advantages over the bucket system in that its snorkel system employs a powerful pump to rapidly suck up water that can be drawn from a shallow water source. The belly-tank system also allows the Firehawk to make its initial 'attack' on the fire at maximum airspeed. However, the approach is normally made at around 120 kt with a full water load (100 kt if the snorkel is down). The nature of the fire, temperature, wind conditions and terrain influence the nature of the 'attack' employed. The pilot determines the angle and airspeed at which the fire is to be approached as well as the setting of the hydraulically actuated tank doors that will bring about the most effective drop rate. Often, the emergency water jettison switch is used to release all 800-1,000 gal in a couple of seconds. This maximises the density of water molecules in the air and starves the fire of oxygen.

War on drugs

In 1989, the US Congress mandated the ANG would become a 'player' in the fight against illegal drugs, and would aid federal, state and local law enforcement agencies in this endeavour. In 1992, the Army National Guard Bureau responded by creating Reconnaissance and Aerial Interdiction Detachments (RAID), initially

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establishing special aviation units in 31 states equipped with 76 specially modified OH-58A Kiowas. These helicopters assumed the reconnaissance and interdiction role, flying many of their missions at night. The Counter Drug RAID Program's success led to its expansion to 37 states and territories by 2006, by which time 125 OH-58A+ Kiowas were supporting the effort. In addition, a dedicated training unit at the Western Army Aviation Training Site (WAATS) in Marana, Arizona, was established.

Also known as Counter Drug Army Aviation Detachments, not every state has a RAID unit but today the National Guard Counter Drug Program operates in all states and territories providing the mandated support. It is very much a total-force approach with the civil community working in partnership with the Guard. Close to 2,500 soldiers and airmen are involved in a variety of missions that support three core signature programmes: 'Drug Demand Reduction', 'Decision Superiority' and 'Combatant Commanders'. Among the missions filled by the full-time pilots and mechanics assigned are Area Surveillance and Reconnaissance, Tracking of Suspect Vehicles/Vessels, RAID Sweeps and Clandestine Airfields.

To support these missions effectively, the Kiowas were modified with either the older FLIR- (Forward Looking Infra-Red) 2000 with a day-and-night 120º off-the-nose capability, or the more modern stabilised FLIR-7500, which brings 360º day, low-light TV, daytime camera and FLIR capabilities. These images are normally recorded aboard the helicopter and when required can be relayed in real time to a mobile ground station and beyond. By law, on each mission a law-enforcement agent must be present. He brings aboard the blank recording media, places it inside the recording device, records the flight imagery and removes and maintains custody of the evidence after the mission. The Kiowas have also been fitted with a 30-million candlepower S/X-16 NITE-SUN searchlight, night-vision system capabilities, high skid gear, GPS, LORAN and Global Wulfsberg radio with secure voice encrypting P-25 trunking capability.

In Oregon, the Guard has been supporting the state's marijuana eradication efforts since 1979 but today's Oregon National Guard Counter Drug Support Program (ORCDSP) began in 1987. The 1989 National Defense Authorization Act formally recognised its effectiveness and congress authorised the defence secretary to provide funding to the state to expand the Guard's role. This was in addition to the normal funding provided for the Guard to train for its normal federal missions. Oregon's earliest support involved military intelligence analyst personnel assigned to work with law-enforcement officials in their anti-drug efforts. For this, the ORANG provided 'mission response teams' equipped with high-tech military assets that included night-vision devices, thermal infra-red sensing equipment and FLIR-equipped helicopters fitted with state of the art communications equipment. Operating two Kiowas from McNary Airfield initially (subsequently four), it brought Oregon law enforcement access to aerial reconnaissance and photographic support.

However, as part of the Army's aviation transformation programme, the ANG began restructuring its counter-drug RAID detachments and expanding their role to support Homeland Security and Homeland Defense operations. Six of these Aviation Security & Support (S&S) battalions were officially activated on 1 October 2005, positioned at bases within states from which they could readily respond. Each S&S battalion essentially draws together the ANG's counter-drug expertise and its RAID experience, and additional missions now include counter-terrorism, search operations, command and control, additional reconnaissance and security tasks, even casualty evacuation when required. Thus, the units are now involved in the 'war on terror' and are assisting with border patrol. The batallions act as a quick reaction force, integrating their efforts with civil authorities.

As a consequence, Oregon's counter-drug RAID unit was transformed in October 2006, to become Detachment 1, C Company, 1st Battalion 112th Aviation. However, the Counter Drug Army Aviation Detachment remains, having its own chain of command and it continues to receive its own funding. Its pilots are separate from the S&S unit but essentially both share the same four helicopters and maintenance personnel.

The states of Washington, Oregon, California, Hawaii, Kentucky, Tennessee and West Virginia are those experiencing the highest levels of drug trafficking. Fourth highest on the list is Oregon, which is used primarily as a transit point although Mexican cartels are actively growing significant quantities of marihuana within the state, as well. Consequently, the state has increased the number of helicopters supporting its anti-drug efforts. Marihuana eradication missions take place each year from June

through October with the mission equipment normally removed from the helicopters because the operating altitude (700-800 ft / 213-244 m) above the mountainous terrain), temperature and high winds push the Kiowa closer to its maximum gross weight than any other type in the inventory. Furthermore, the mission does not require any special equipment, as the law enforcement agent on board is the authorised spotter handling aerial reconnaissance from the left-hand seat. If a second spotter is on board, they are seated behind on the right-hand side.

Led by ORCDSP's state counter-drug coordinator, the helicopter unit has three full-time pilots assigned. Collectively, they are budgeted for 750 hours flying time each year although the actual number of flight-hours has averaged 1,300-1,500 in recent times; the additional hours being funded primarily by maintenance depots around the country. Although the unit is never present for an actual drug bust because by law the helicopters are not allowed to land in harm's way and risk coming under fire, many of the arrests and seizures would not have been possible without the surveillance, detection and coordination orchestrated from the Kiowas. Should additional help be needed, the ORCDSP can call for assistance from Air Force C-26s to conduct high-altitude photo-mapping missions, for instance.

Helicopter support can be requested by any law enforcement agency within Oregon. If the mission is drug-related then there is no cost to the requesting agency. For other missions, like SAR, reimbursement must be made. Before the S&S detachment was formed, some 90 percent of the RAID unit's time was spent on actual counter-drug missions and the remaining ten percent was spent on training. Since creation of the new unit, counter-drug missions have been accounting for 70 percent of flying time, with ten percent going to S&S missions and 20 percent to training. The increase in the latter is directly attributable to the additional missions being flown and to the increased number of aircrews assigned to the S&S detachment.

The ARNG's four Generating Force Air Ambulance companies further complement the Homeland Defense and civil support capabilities of the six S&S battalions, and in 2009 the Army National Guard will start replacing its OH-58s with new-build UH-72A Lakotas, assigning 144 of the aircraft to units in 41 states and territories. The Oregon unit is expected to trade in its four Kiowas for the Lakota in 2013 or 2014. While its primary and secondary missions are to support law enforcement agencies throughout the state in the counter-drug role and in homeland defence, respectively, the unit's alternate mission of SAR should not be overlooked. Onboard mission equipment like radios and FLIR make it an obvious choice, and the unit frequently works alongside the UH-60s from the medical company when emergencies arise. Tasked for this on a '24/7' basis, typically the unit is called upon four or five times each year to perform this MART mission at the behest of the state aviation officer. However, the detachment's real success lies with its counter-drug mission. While preserving the anonymity of the personnel, it is worth noting that in 2006 alone the efforts of the three pilots assigned to the detachment were directly related to one billion dollars' worth of seizures in the state.

Above: When OH-58 crews assumed Homeland Security and Homeland Defense missions, training covering flying and legal issues was first provided by instructors from the local Counter Drug Army Aviation Detachment, pending establishment of a formal S&S syllabus.

Below: Today, each S&S is a self-supporting in terms of handling its own helicopter maintenance up to depot level.

Pendleton

In 1941, the US Army Corps of Engineers constructed Pendleton Field and several other military bases in the Pacific Northwest, in readiness for probable American involvement in World War II. It took the Corps six months to expand Pendleton's municipal airport and construct new runways, hangars and other buildings to serve the 2,500 personnel that ultimately would be stationed there.

In June 1941, the USAAF's 17th Bombardment Group (Medium) was transferred to Pendleton, and after the 7 December attack on Pearl Harbor it began flying anti-submarine patrols to protect shipping lanes along the coasts of Oregon and Washington. Nine Japanese submarines were operating off the West Coast by late that year, making attacks on numerous vessels. The submarines also shelled Fort Stevens near Astoria in June 1942, the first foreign attack on the continental United States since the war of

1812, and also launched an incendiary attack near Bandon in September 1942.

Members of Pendleton's 17th BG participated in one of the most famous missions of World War II, the Doolittle Raid on Tokyo. Conducted in April 1942 in response to the attack on Pearl Harbor, the raid represented the first bombardment of Japan by American forces. Lt. Col. James Doolittle earned the Congressional Medal of Honor for leading the attack and the crewmen, five of whom were Oregonians, received the Distinguished Flying Cross. After the 17th BG was transferred to South Carolina in February 1942, Pendleton served as a training post for fighter and bomber pilots. Other bombardment groups (heavy) temporarily based or passing through Pendleton were the 34th, 94th, 95th, 99th, 100th, 303rd and 452nd flying B-17 Flying Fortress training missions in preparation for duties overseas. Another well-known unit based at Pendleton for awhile was the 555th Parachute Infantry Battalion, an all-negro unit. It arrived on 12 May 1945, assigned to Headquarters Ninth Service Command, Fort Douglas, Utah.

When the war ended in August 1945 the field reverted to civilian control and is known today as Eastern Oregon Regional Airport. More than 40 years later, Pendleton was again home to certain army aviation assets when, in 1989, a six-ship UH-1 Huey detachment arrived from Salem. This geneneral support unit was designated Detachment 1, Bravo Company, 1/108 Aviation.

In 1996 the unit was re-designated Detachment 1, Echo Company, 168th Aviation when it became a heavy-lift helicopter unit flying eight CH-47D Chinooks. Five of the helicopters came from the active-duty component at Fort Campbell, Kentucky, and the other three from the California ARNG following the breakup of a company into detachments. The unit was later known as Detachment 1, Delta Company, 113th Aviation with the Nevada ARNG and received the moniker 'Dust Devils'. In September 2006, it was transformed yet again and became Detachment 1, Bravo Company, 1/168 Aviation, returning to the Washington ARNG once more.

The switch to a heavy-lift unit, with the primary mission of moving materiel and personnel to forward operating lines, took effect with transition training in 1994. The unit started sending pilots either to Fort Rucker in Alabama, or Fort Indiantown Gap in Pennsylvania where the ARNG's Eastern Army Aviation Training Site (EAATS) is located. The first two crewmen to transition were CW4 Douglas Walker (now a test pilot at Pendleton) and Col. Todd Farmer (state aviation officer). By 1996, the full complement of Chinooks was up and running and the following year the last two UH-1 Hueys left Pendleton by road, headed to Salem.

The unit was first located in the old WWII buildings close to the airport terminal, but subsequently moved to the other end of the airfield when the new Army Aviation Support Facility was completed. The last four Chinooks also arrived in 1997. The facilities are very modern and took just one year to complete. The hangar has enough space for three Chinooks with their blades fitted, or five with their blades removed. Typically, five of the helicopters sit on the ramp and three are parked inside the hangar but during 2007 the unit was operating with just five examples. Three were deployed and one was undergoing a rebuild at Corpus Christi in Texas. The latter came from the California ARNG and scored so low on its maintenance inspections it had to be rebuilt. The aircraft had to be stripped down so the airframe could be thoroughly inspected. The aircraft also received new wiring, new structural aluminum sections and a repaint before rejoining the unit about a year later.

In FY07 (October 2006 to September 2007), the unit was allocated 700 flight-hours across all four airframes, a relatively low number. More usual would be 800-900 but the unit always exceeds it budgeted programme and, in any event, flies around 1,000 hours. Like other army aviation assets in the state, Pendleton's Chinooks are tasked with fire-fighting during the fire season, which increases overall flight-hours. Furthermore, of the 700 hours allocated for FY07, another 80 were spent supporting the Reserve Officer Training Corps (ROTC) course at Fort Lewis, Washington. This support mission took place during the middle of the year to provide commissioned-officers-in-training with experience of air assaults. The cost of these and the flight-hours spent fighting fires is reimbursed over and above the regular budget, and helps explain why the unit flies substantially more flight-hours than called for by the programme.

Chinooks at War

The first Pendleton unit to go to war was Detachment 2, Lima Company, 151 Aviation Maintenance Company. Fourteen maintenance personnel deployed for Operation Iraqi Freedom 2 after mobilising in December 2004. The unit headed to Fort Knox in Kentucky for mobilisation training the following month, joined by personnel from Montana, South Carolina, Texas, Ohio and Iowa. From there the soldiers first forward-deployed to Kuwait and then to Balad South-East Air Base in Iraq [also known as Logistical Support Area (LSA)

Above: caption needed

Below: The latest patch worn by the Chinook-equipped 'Dust Devils'.

Within the group deploying to Afghanistan in 2005, only the Nevada contingent was familiar with dismantling Chinooks for such a trip. Assistance was provided by the 160th Aviation Batallion from Savannah, Georgia. As one C-17 Globemaster III can accommodate a single Chinook plus its crew and support personnel, 13 of the transporters were needed to complete the task.

Anaconda], arriving on 29 February 2005 and falling under the 1-142nd AVIM Battalion from New York, the 185th Aviation Group from Mississippi and 3rd Corps.

This particular deployment did not involve the unit's helicopters, as its personnel were tasked only with maintenance support for each type of rotary-wing aircraft in theatre, including the UH-60 Blackhawk, CH-47 Chinook, OH-58 Warrior and AH-64 Apache. During its time at the base the detachment retrieved and repaired three battle-damaged UH-60s and completed more than 20,000 work orders in all, despatching repair teams out to Mosul, Babylon, Baghdad and Talil to assist other detachments. The only unit personnel to actually fly in Iraq were the maintenance test pilots who supported other units in theater like Golf Company 185 and the Mississippi and Michigan ARNG. In early February 2006, the unit returned to Ft. Bragg, and then to Pendleton on 24 February.

The first deployment involving Oregon's Chinooks resulted in Detachment 1, Delta Company, 113th Aviation Battalion receiving mobilisation orders on 3 January 2005 at Pendleton's AASF 2. Capt. David Doran, the detachment's commander, was instructed to take 92 personnel and the CH-47s for a year-long deployment to Afghanistan in support of Operation Enduring Freedom.

When Delta Company was put on alert back in June 2004, the 'Dust Devils' unit was split between the Nevada and Oregon ARNG. Using the call-sign 'Mustang', both elements began training for the mission together, focusing in particular on operating in sandy and dusty conditions similar to those they would encounter in Afghanistan, and practising ridge and pinnacle operations. Of particular importance was honing power management skills. By late February 2005, they were fully trained and ready for the deployment. Before leaving, however, the Chinooks were fitted with more powerful engines, M-130 chaff/flare dispensers and pre-wired to receive the Blue Force Tracker (BFT) system. This technology enhances battle command, improves over-the-horizon communications, and assists with airspace de-confliction. It proved its worth in the vast expanses of Afghanistan, assisting the commander in terms of situational awareness and command and control. All deployed aircraft were equipped with the mounting and wiring ('A kits') and operations personnel, along with crew chiefs, received initial training on the system.

Below: caption needed... left example worn during the deployment?

Arriving at Lawton-Fort Sill Regional Airport on 25 February, the Pendleton contingent was joined by the Nevada ARNG contingent; some 125 guardsmen assigned to the 113th Aviation in Reno. Here they trained together for another six weeks. The entire deployment included 226 Guardsmen from these two states plus Washington, along with 12 CH-47D heavy-lifters. The following day, mechanics began disassembling the Chinooks for transportation to Afghanistan.

'B kits', comprising the computer and antenna elements, were installed into Chinooks when they reached Afghanistan, and personnel within the task force underwent additional training from on-site contractors. They were also equipped with a TOC ground station to aid in mission planning and monitoring. In the absence of AWACS, Blue Force Tracking-Aviation allows the commander to know where his aircraft are and provides another way over-the-horizon communications can be maintained. For self-defense, the Chinooks were equipped with an AN/APR-39(v)1 radar warning receiver, AN/ARR-47 passive missile warning system and AN/ALQ-156 missile approach sensor.

The unit reached Kandahar in March 2005 and refuelers soon moved on to forward operating bases (FOB). Within three weeks of touching down in Afghanistan, 'Mustang' Company replaced Georgia and Alabama Guard elements within 'Task Force Storm', and thereby assumed all of the heavy-lift operations necessary to sustain FOBs throughout southern and western Afghanistan, ahead of schedule. The task force also included 16 Blackhawk utility and Medevac helicopters, plus ten AH-64 Apache gunships from the active-duty 12th Aviation Brigade, based in Germany. Arrival of the 'Mustangs' coincided with a US-led coalition spring offensive aimed at weakening the Taliban and Al-Qaeda insurgency.

The fast pace with which the 'Mustangs' assumed their mission set the tone for the rest of the deployment, continuing to operate at a high tempo. As part of the quick reaction force they were on-call 24 hours a day to perform a wide range of aviation missions covering standard re-supply, downed aircraft recovery, forward-area re-fuelling and casualty evacuation. Delta Company's most dangerous duty was serving as the primary air assault platform for the 173rd Airborne, and 3rd and 7th Special Forces Groups. The Chinook crews undertook more than 100 missions inserting combat troops directly into battle, the most notable being those on 21 June as part of 'Operation Catania'. More than 150 of the enemy were killed and many captured during the operation which, at the time, represented the largest single engagement of OEF. The 'Mustangs' rapidly moved troops across the battlefield and four of the helicopters sustained battle damage from enemy fire, forcing two to crash land. However, all four were recovered and repaired within 24 hours. In August and September, the unit played an integral role in shaping operations leading up to Afghanistan's national parliamentary elections held on 18 September. The 113th supplied six mission crews each day to ensure conditions were secure for the elections.

By mid-September, half of the unit's Chinooks had sustained enemy fire serving on the battlefield while providing an indespensible link between the soldiers closing in to destroy the

enemy, and troops and materiel furhter back. On the ever-changing battlefield, the Chinooks stayed busy inserting infantry troops and Special Forces into positions that allowed the coalition to maximise its tactical advantage. Needless to say, this made the Chinook vulnerable to ground-fire. On 25 September, worst fears were realised when 'Mustang 22' was shot down during an infiltration mission approximately five miles (8 km) north of Deh Chopan in southeast Zabul Province. An enemy rocket-propelled grenade hit the lead Chinook after it had delivered Afghan troops into the designated landing zone. The helicopter was engulfed in flames and crashed. All five crewmen aboard lost their lives, two of whom, were Oregon guardsmen. The unit had little chance to pause and grieve however, as its services remained in high demand.

Shortly thereafter, a devastating 7.6 magnitude earthquake hit the northern part of Pakistan on 8 October. The unit was tasked yet another mission, to provide humanitarian aid. Two of its Chinooks deployed to Pakistan where the crews moved more than 750,000 lb (340,000 kg) of relief supplies, evacuated more than 750 casualties and transported 650 aid workers into the area. To be sure the helicopters were clearly identified for this mission, both had super-sized American flags painted on their fuel tanks, something they proudly carry to this day. Meanwhile in Afghanistan, the unit continued to execute dangerous combat missions and on 4 December almost lost a second crew. Although the CH-47 was completely destroyed, the crew escaped with minor injuries and was soon recovered.

When the citizen soldiers of Detachment 1 returned home on 17 March 2006, they could look back with honor and pride at what had been a long and difficult year. The unit paid the ultimate price with the loss of two of its own, nevertheless it had proved to be one of the most effective and versatile companies within the Army's total force structure. Logging 6,500 flight-hours over challenging terrain, it flew more than 450 combat service support missions and moved more than 45,000 troops and some five thousand tons of materiel. The unit carried soldiers into direct contact with the enemy, flying more than 100 deliberate operations.

Before life at Pendleton could return to normal for Detachment 1, the four Chinooks used so extensively in Afghanistan and Pakistan were taken to Ft. Campbell on their return to undergo what is referred to the the Aviation Reset Program. This involved a full inspection of the aircraft, plus repairs and cleaning before they were returned to Pendleton in mission-capable condition. Thereafter, the tempo at home quickly returned to normal. The detachment pursued its state missions of SAR and fire-fighting, participated in various exercises, continued training flight-crews, and supported missions inside and outside the state. As early as November 2006, for example, Detachment 1 flew two of it Chinooks to Camp Wainwright in Alberta, Canada, to help prepare the 'Princess Patricia' Light Infantry Brigade for its upcoming deployment in Afghanistan. The unit's recent experience in that theatre proved extremely useful to the Canadians particularly as they would be relying on Chinook support once they were on the ground. Further afield, for the coalition training exercise Operation Bright Star held in Egypt in late 2007, two Chinooks were airlifted from Pendleton via C-17s. This delivery method meant the assets were not out of service for a long period as would have been the case with a sea voyage.

Although rescue is not the unit's primary mission, the Chinooks at Pendleton have offered sterling service in several such missions. One involved rescuing a climber injured at 13,000 ft (3962 m) in the mountains near Bishop, California. A medical team had already stabilized the victim ready for him to be hoisted into the helicopter and flown to receive further medical attention. Afterwards, the Chinook returned to the spot to pluck the medical team off the mountain. In December 2006 a Chinook from Pendleton was instrumental in safely retrieving three climbers during a well-documented rescue off Mount Hood. They were stuck on a section of the mountain and successful rescue had to rely on the high-altitude capabilities of the Chinook. A rescue climbing team of nine and its gear was lowered from a Chinook to the top of the mountain to assist the three unfortunates. 'Lima-model' Blackhawks would have had to make numerous trips to achieve the same result.

Among its many out-of-state activities during the recent years, Detachment 1 provided air assault training for the ROTC at Ft. Lewis in 2007, and supports Air Force Reserve para-jumpers from Portland AFB who come to Pendleton each month to practice static-line and 11,000-ft (3350-m) free fall drops. They also conduct water operations, releasing their boats from the Chinook's rear-loading ramp. In addition, the Army Special Forces team from Ft. Lewis comes to Pendleton on a regular basis for paradrop operations, as occasionally does the 75th Ranger Battalion for the same purpose and for sling-load training. This affords the unit more

Right: caption needed

Training for operations in dusty 'brown out' conditions was essential prior to the Chinooks deploying to Afghanistan. The 'D' model has served the Guard well for many years but the latest fielding plan calls for the service to begin receiving the 'glass' cockpit 'Foxtrot' variant at some point in the future.

opportunity to train its younger aviators in a broad spectrum of day and night missions.

While Detachment 1 normally has 12 pilots on strength, the unit has been understaffed at times. This number represents four full crews who can, with proper planning, have four Chinooks airborne at the same time but it leaves no spare crew on hand. Furthermore, four of the 12 pilots are instructors, two are test-pilots and another was recently a pilot-in-training away at Ft. Rucker. As with active-duty component crews, Guard CH-47 pilots must fly a minimum of 90 hours annually to maintain minimum proficiency. In addition, significant time has to be spent using goggles, and on night-time and instrument flying. Accordingly, additional flight-training periods have to be scheduled to meet these standards when required.

As is true for the UH-60 crews, fire training for the CH-47 community begins in March each year under a state mandate, to ensure personnel are fully 'up to speed' when the season starts on 1 June. Detachment 1 practices at the nearby Boardman Bombing Range where a large pond is available for the refilling cycles. Training encompasses use of the fire buckets, flying in civil airspace and coordinating fire-fighting activities with non-military personnel both in the air and on the ground. Typically, a qualified CH-47 pilot requires just one or two training flights before a 'check ride' whereas a new pilot usually needs four to six hours in order to become proficient in using the 2,000-US gal (7571-lit) Bambi Bucket. The unit has four such buckets which, for environmental reasons, have no foam-injection systems installed. The latter would mix soap into the water prior to its release. The unit currently has four crewmen on strength who are qualified as pilots-in-command when buckets are used. Others must fly as co-pilots on this mission. When a crew is assembled to fight a fire, a sizable 'package' in terms of men and equipment is also set in motion on the ground. Two fuel trucks with four drivers, and one Humvee with an operations person and three mechanics are sent to the assigned helibase.

New equipment

Pendleton's Chinooks are slated to receive the same external hoist modification as the Special Forces' MH-47s. Fixed outside the airframe the new arrangement provides a better SAR solution for getting people on and off the helicopter. The present system's drawback is that the hoist operator has limited situational awareness because it must be operated internally through a relatively small hatch in the aircraft's belly. Some additional aircraft survivability equipment is also scheduled to be fielded to provide better threat detection and evasion capabilities that will include flares. When the helicopters returned from their tour in Afghanistan, much of this kind of equipment was left behind to be used by replacement aircraft heading into theatre. Empty flare buckets in flight proved problematic after the Chinooks returned home. Some damage was caused to the buckets themselves and some even detached in flight. The BFT systems were among those that remained in Afghanistan, as it was easy to install and uninstall them in-theatre. In due course, the unit expects to receive its own supply so it can train with the system. In Afghanistan the aircraft flew with SATCOMs and the radios and antennas were removed prior to the return of the helicopters stateside, which remain 'wired' so re-fits can be undertaken.

Within its training regimen the unit does not practice firing either the door or ramp guns as Pendleton does not have a facility to store live armaments, nor a suitable range. The closest military reservations for such shooting practice is Gown Field, 90 minutes to the southeast, and Fort Lewis which is two hours away. No aerial range is currently designated for the unit. Nearby Boardman is operated by the US Navy exclusively as an aerial bombing range.

Fixed-wing Assets

Built by Short Brothers as a commercial airliner, the durable Sherpa is probably the cheapest way known of transporting 20 people by air. The ARNG fields 44 C-23B/B+ Sherpa light cargo aircraft in support of theater aviation, cargo, airdrop and aero-medical evacuation during state and federal missions. The first example entered service in 1985 and to date this multi-role utility aircraft is the only cargo type in Army service. The aircraft serve four theatre aviation companies each having four detachments. These are located in different states and each is normally equipped with two aircraft.

The ORANG added the C-23 Sherpa to its inventory in 1990. Operated by Alpha Company, 249th Theatre Aviation, Oregon's first Sherpa crew literally got their training on the job when the new type was sent to Kuwait and Saudi Arabia for Operation Desert Storm. Headquartered at McNary Field, the company has almost three dozen personnel on strength between Oregon, Washington, South Dakota and Oklahoma. In each state two C-23s are assigned.

When the order was received for the unit to deploy to Iraq on 1 December 2004, a number of modifications were identified as necessary to improve both the C-23's survivability and its crews' safety and situational awareness. Some of these were implemented prior to the deployment. Two key modifications included fitting Kevlar ballistic blankets to protect the cockpits from small arms fire, and countermeasures to defeat surface-to-air missiles and other threats in the form of detectors, IR and radio-frequency jamming devices, plus chaff and flares. Prior to mobilizing therefore, both of the ORANG's aircraft had to be swapped for aircraft with air readiness releases in order for the ASE kit to be fitted.

The detachment from Oregon comprised nine personnel who were joined by three detachments from South Dakota, Oklahoma and Washington. Following training at Fort Bliss in Texas, A Company left for Iraq and quickly settled into the mission providing daily transportation for Multi-National Corps – Iraq. Once in theatre, however, additional measures were taken to safeguard the crew and the aircraft, as CW4 Joseph Mollahan explains:

"Due to the imminent threat of surface-to-air missiles, small-arms and indirect fire, we had to fly in a safety zone barely off the ground, racing along at 200 mph [322 km/h], between 100 and 150 ft [31-46 m] above ground, and occasionally lower. This would leave a potential attacker very little time to respond the moment he heard our Sherpa coming. In Iraq the Sherpas were constantly in high demand, hauling essentials ranging from food, bullets and other ammunition, blood, medical supplies, high-priority non-aviation parts and aviation repair parts. In addition, some C-23s were supporting Special Operation Command; not so much due to its STOL capabilities as most airfields used by the Sherpa in Iraq had at least 8,000 ft (2438 m) of runway, but due more to its rapid turnaround times. During Operation Iraqi Freedom, the aircraft were flown by a crew of four. For instance, unlike a C-130, a Sherpa requires only one person on the ground for loading, fueling and getting the aircraft back out again. The Sherpa and our crews did a tremendous job."

Eight soldiers with Alpha, 249th Aviation

Company returned home on 7 January 2006 after more than a year-long deployment in Iraq. Their performance did not go unnoticed. Alpha Company was selected as Army Aviation Fixed Wing Unit of the year for their outstanding efforts in theatre where it flew more than 1,400 missions, amassed some 5200 flight-hours carrying more than 2,000 passengers and hauling more than two thousand tons (1800 t) of cargo. This was the second such award for the ORANG as its 1042nd Medical Company (Air Ambulance) received this prestigious honour in 2002.

Army National Guard UAS

The Army's transformation plan includes shrinking the divisional structure down to brigade levels by reorganizing units into modular, combined-arms Brigade Combat Teams (BCT). Each transformed BCT will encompass everything it needs to be self-contained, more mobile and more effective in today's battlefield environment. For some ORANG units, the change will be minimal; perhaps a change in its name or relocation to a new armory location. However, the programme will create a new mission. The transformed 41st Brigade Combat Team will consist of two infantry battalions (2-162 Infantry and 1-186 Infantry), one fire battalion (2-218 Field Artillery), the 141st Brigade Support Battalion, the new 41st Brigade Special Troops Battalion and the new 1st Squadron, 82nd Cavalry Reconnaissance, Surveillance and Target Acquisition (RSTA). The latter is to be highly mobile and will operate unmanned air systems (UAS). Its structure will comprise a headquarters troop, a forward support company, two motorized reconnaissance troops and a dismounted reconnaissance troop.

"If you're going to win battles, you have to have good reconnaissance," said Adjutant General Major General Raymond F. Rees of Oregon, during the activation ceremony for A Troop, 1-82 Cavalry (RSTA) in Woodburn on 7 January 2006.

The Shadow tactical unmanned aircraft system is being fielded on an accelerated basis by both the Army's active-duty and ARNG brigade combat teams. This is happening through a joint US Army-US Marine Corps procurement strategy decided upon in mid-2007 that will see retirement of the Pioneer systems and transition to the Shadow. In the footsteps of their sister units in Pennsylvania, Maryland and Minnesota, both Washington and Oregon will be next to receive UAS assets. The plan is for the ORANG to receive four RQ-7B Shadows to be based at Pendleton initially, until they are relocated to nearby Boardman when the necessary facilities are completed.

Above and left: Alpha Company's two modified C-23B+ aircraft remained in Iraq after the unit's 2007 deployment ended, to be used by follow-on units. The unit took delivery of a C-23 loaned by the Pennsylvania Guard and operated the aircraft to fulfill its state missions until its aircraft returned from Iraq.

Alpha Company

Also as part of the Army's transformation programme, Alpha Company, 249th Aviation was renamed Alpha Company, 641st Aviation Battalion in 2007, and moved from McNary Field to the ANG base in Portland where it took over certain facilities previously used by the Air Force Reserve's 939th Air Refueling Wing. On 13 October, the ORANG officially dedicated the base's Hangar 375 to Brig.Gen. (Ret.) Fred M. Rosenbaum with Alpha Company, and also took over Building 374. Its presence was further extended in mid-2008 when it also occupied Building 355. The purpose of the move was to prepare for the entry into service of the Joint Cargo Aircraft (JCA), a programme that will replace Army and Air Force C-23 Sherpas and Air Force C-130s with C-27J Spartans. Ahead of this, both Sherpas were moved to Portland on 20 August 2007. Oregon is third on the fielding list to get the new C-27Js and the unit anticipates receiving four examples in late 2009 or early 2010.

However, the very day Alpha Company's new home was officially inaugurated, 14 servicemen with Alpha 641 Theater Aviation Company were mobilised for deployement to Logistical Support Area (LSA) Anaconda in Iraq, via Kuwait. Being an all-volunteer force, the contingent was joined by some 30 Guard soldiers from Oklahoma, South Dakota and Washington set to spend six months flying Sherpas throughout both countries in support of Operation Iraqi Freedom. In Iraq the unit was attached to the 12th Aviation Brigade, which is the same brigade to which Detachment 1, Delta Company, 113th Aviation and 1042nd Medical Company were attached to during their deployments in Afghanistan.

The Sherpas were modified for their mission, receiving night-vision, upgraded communication and survivability equipment. In the meantime, four full-time crew members and four-part time crews remained in Oregon to undertake state missions. Once the Spartans are operational, the ARNG will have the ability to fly at higher altitudes and use short, austere runways making the C-27J fully operable in Afghanistan, which has not been the case for the Sherpa.

Detachment 47

Last but not least, a single C-12U Huron is operated from McNary Field by State Flight Detachment 47 (Operations Support Airlift Command) and is mainly used in support of the governor's office and Oregon Military District. Commanded by CW5 Marco Frye, the unit's Huron is maintained by civilian contractor Dyncorp and this particular aircraft is scheduled to be taken off charge either in Fiscal Year 2009 or 2010, after which the unit will join Alpha Company 249th Aviation in the FCA unit.

Marnix Sap/MIAS