

# Within Range



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**Pacific Missile Range Facility**

May 2015



**We're Back!! LDSD Returns.**

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## Commanding Officer's Hot Line: Ext. 4435

You can call the Captain with your question/concern. Dial 335-4435 any time, seven days a week! The purpose of the hot line (record-a-phone) is to provide all PMRF military members, families, civil service and contractor employees the opportunity to communicate directly with the CO. Some suggestions are:

- Safety suggestions/violations/unsafe practices, ideas to improve safety and promote safety awareness.
- Ways to improve morale, working or living conditions.
- Suggestions on how to save taxpayer dollars, cut costs, save energy, reduce labor man hours, etc.
- Security violations and/or recommendations for strengthening physical security and safeguarding classified information.
- Any positive things (events, programs, policies, benefits, etc.) that you feel are particularly good.
- Any negative things you feel should have the CO's attention.
- Suggestions for improving disaster preparedness (tsunamis, hurricanes, fires, etc.)

You need not identify yourself to leave a message, but if you would like a staffed response, please do so. If reporting a problem, please try to recommend a workable solution. Some of the questions or problems reported will be answered in the Within Range.

A good point of contact for issues involving Navy families is the PMRF Ombudsman, Victoria Diendorf who can be reached at: Cell 635-5364 or email at [pmrfombudsman@yahoo.com](mailto:pmrfombudsman@yahoo.com).

And, remember the chain of command. Your first step with a suggestion should be to try it out on those you work with or the personal responsible for the department.



*Every junior Sailor knows the saying "Ask the Chief," but few really know what happens when the same question is posed to other Chiefs. Photo by MA2 Michael Jounson*

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## NASA returns to PMRF for second saucer test



*U.S. Navy Explosive Ordnance Disposal team members inspect the test vehicle used in the first flight of NASA's Low density Supersonic Decelerator project. Photo by NASA/JPL-Caltech.*

*By Stefan Alford*

NASA's Jet Propulsion Laboratory plans to test modifications to its Mars landing craft deceleration system from PMRF in June based on analysis of results from last summer's launch here.

The NASA team returns for the follow-up launch and evaluation with an eye toward improving the design of the saucer-shaped landing vehicle to slow its entry into Mars' thinner atmosphere as part of the Low Density Supersonic Deceleration program.

As last year, the test vehicle will be launched from the north end of the base runway using a giant, high-altitude balloon that will carry it to 120,000 feet. From there, the balloon will disengage and rocket boosters will lift the craft another 60,000 feet

before it falls back to Earth and deploys the two landing technologies being tested.

The first is a doughnut-shaped tube called the Supersonic Inflatable Aerodynamic Decelerator (SIAD) that inflates around the test vehicle to increase the lander's surface area to create drag and slow it down as it descends. The design borrows from the same technique used by the Hawaiian pufferfish – the 'o'opu hue – to increase its size without adding mass: rapid inflation.

The second is an enormous parachute (the Supersonic Disk Sail Parachute) to further slow the entry of the craft, ultimately from Mach 3 or more down to subsonic speeds to allow for safe landing on the Red Planet.

NASA officials say that cur-

rent technology for decelerating from the high speed of atmospheric entry to landing on Mars dates back to the space program's Viking series, which put two landers on Mars in 1976. The basic Viking parachute has been used ever since, including in 2012 to deliver the Curiosity rover to Mars.

However, officials emphasize that to conduct advanced exploration missions and safely land heavier spacecraft on Mars, they need to advance the technology of decelerating large payloads in the thin atmosphere. The new drag devices being launched and tested from PMRF are one of the first steps to potentially landing humans, habitats and their return rockets safely on Mars.

# PMRF hosts Earth Day for local students

By Stefan Alford

More than 250 students from two local schools participated in a variety of environmental awareness activities here in celebration of Earth Day, April 22.

Students from among Ke Kula Niihau o Kekaha, a Hawaiian language charter school in Kekaha, and Waimea Canyon Middle School joined PMRF Sailors in a beach cleanup, as well as rotating through a dozen educational stations set up by various government agencies and non-profit partner organizations.

“This was a great opportunity to provide our keiki with a better understanding of the cultural and natural resources where they live,” said PMRF Earth Day 2015 organizer and the base’s Community Planning and Liaison Officer, Roland Sagum. “We are the host in being able to offer the settings and facilities in which learning can take place. The field activities focus on some of the environmental initiatives that PMRF has in place. However, we would not be able to provide such a wide scope of educational programs to our Westside youth without the amazing support and partnership of the many community organizations involved.”

“This Earth Day event promotes awareness of resources, conservation, pono behavior, and teaches students how to care for their health and



*A Waimea Canyon Middle School student makes a barbless fish hook at one of various educational stations during an Earth Day event at PMRF. Photo by MA2 Michael Johnson.*

the health of the environment,” added event planner Jean Souza, National Oceanic Atmospheric Administration (NOAA) Kauai Programs Coordinator and Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS) Volunteer Coordinator.

“At PMRF, where there have been a number of notable environmental initiatives and where natural and cultural resources abound, this is an ideal setting for learning in an outdoor, shoreline setting,” she explained.

The nearby DLNR-managed (Department of Land and Natural Resources) waterbird wetlands sanctuary was also one of the stops where students were able to observe endangered birds in a natural habitat under guidance of Division of Forestry and Wildlife specialists.

All of the students rotated

through the education stations set up at Major’s Bay recreation area and participated in one of four field activities: beach cleanup, work at the Kawaiie Waterbird Sanctuary, seabird education at the base’s protected wedgetail shearwater colony, and learning about the seasonal changes affecting sand deposits on Kauai beaches and particularly at Majors Bay with earth scientist and sedimentary geologist, Dr. Chuck Blay.

In addition to Navy natural resources biologists and environmental specialists, NOAA, HIHWNMS, and DLNR, other organizations supporting the event with representatives providing hands-on learning included the Kauai Invasive Species Committee, Coalition for a Tobacco-Free Hawaii,

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**Earth Day, continued from Page 4**

*John Burger, PMRF range sustainment coordinator, shows middle school students participating in the PMRF Earth Day events various marine debris. Photo by Stefan Alford.*

Papahānaumokuākea Marine National Monument, Kokee Resource Conservation Program, and the Alu Like native Hawaiian awareness organization.

The education stations featured programs and activities on pono fishing, barbless fish-hooks, opihi studies, fishing regulations, impact of marine debris on wildlife, stop smoking, ahupuaa and moku education, weather and climate change, boats, native forests and plants, invasive species, and careers related to these fields.

County of Kauai Mayor Bernard Carvalho Jr. made an appearance to tour the stations and talk to the students about the importance of caring for

the island's cultural and natural resources – emphasizing that environmental stewardship is everybody's "kuleana" and starts with them. Or, as PMRF Commanding Officer Capt. Bruce Hay remarked in his welcome to the students –

"Today we observe Earth Day, but really, every day should be Earth Day."

Lunch off the grill for the students and volunteers was donated by Sailors with PMRF's Military Support Organization.



*MA1 Sigfredo Collazo (left) and ACCS Kenny Thompson cook hot dogs for students and volunteers during Earth Day. Photo by MA2 Michael Johnson.*

# Plain White T's play free public show at PMRF



Guests of PMRF sit and enjoy a sunset and music from grammy nominated Plain White T's during a free concert. Photo by MA2 Michael Johnson.

The "Plain White T's" played a free concert May 13 at Pacific Missile Range Facility on the beach near Shenanigans restaurant. The event was open to the public and more than 2,500 were estimated in attendance.

The American pop band is best known for their 2007 grammy-nominated, number one song "Hey There Delilah" and follow-up hits "1234" and "Rhythm of Love."

"We wanted the Kauai community to enjoy the experience of a great free show on the base and to realize that we appreciate all of the support we get from our community ohana," said PMRF Morale, Welfare and Recreation Director, Chip Kreisman. "This will be just one of more big-named entertainers that we hope to bring to our base and share with our neighbors."

The band stopped at PMRF on their way back from Japan during a tour of Navy bases in Asia, in coordination with the Navy

Entertainment program. The Kauai show was the last stop on their current tour.

"It's always such an incredible experience to play for our military and their families," said guitarist Tim Lopez prior to the PMRF performance. "They are such an inspiration and being able to give back to those who serve is fulfilling as an artist."

The band members were also very pleased to see the local, non-military community invited to the show on base, and singer/guitarist Tom Higgenson called it a "unique aspect" to their current tour which has been solely for ID card holders at the other venues. He said it impressed him as showing the strong relationship on Kauai between PMRF and the community.

"The meet-and-greet we do with our fans after playing is even more fun than the show itself to be honest with you," Higgenson added, and true to that the members spoke with, took photos with and signed autographs for nearly as

long as their 90-minute set for those that stayed after the concert.

"The process of bringing named branded entertainment starts with Navy Entertainment," said Kreisman. "They cut deals for a variety of entertainers to travel and entertain our troops. We'll look very closely at tours that are being booked for Asia, because we would be a natural stop-over. Our goal is to bring more high quality entertainment to our island for our Sailors and our community. We intend to work very hard for more concerts and other events that we can share."

As such, Kreisman was pleased to announce that the headliner for this year's Independence Day celebration July 3 will be the band Dishwalla, whose hit "Counting Blue Cars" was a U.S. number one single on the alternative rock chart in 1996.

**Concert, continued on Page 10**

## Secretary of the Navy visits PMRF, meets Sailors



*The Honorable Ray Mabus, Secretary of the Navy, meets with PMRF Sailors during a brief stop at the base April 2. The Navy's senior leader addressed Sailors at an All-Hands Call in the base hangar and emphasized his focus on the "Four P's" – Personnel, Platforms, Partnership and Power. The SECNAV received a mission brief and tour of base facilities from Commanding Officer Capt. Bruce Hay, to include stops at the Range Operations Center and the Aegis Ashore Missile Defense Test Complex. (U.S. Navy Photo by MC1 Mathew Diendorf)*

## Hawaii Legislature Recognizes PMRF Environmental Programs



*PMRF Commanding Officer Capt. Bruce Hay holds a certificate from the Hawaii State Legislature after the base was recognized by the Hawaii House of Representatives at the Capitol Building in Honolulu March 25. Also attending were the Commander, Navy Region Hawaii, Rear Adm. Richard L. Williams, and PMRF members representing the base for environmental programs: Lt. Cmdr. Robert Rutherford, director of Public Works; John Burger, range sustainment coordinator; and Tom Savre, natural resource biologist. PMRF was recognized by House Resolution No. 167 for its environmental and cultural resources successes and awards and applauded for "stewardship of the land and strong community involvement." PMRF was noted for receiving the 2014 Secretary of the Navy award for Natural Resources Conservation and the 2015 Chief of Naval Operations award for Cultural Resources Management. (Courtesy Photo, U.S. Navy)*

## The beginnings of Barking Sands training and test range

*Editor's note: The following is the second of the two-part series authored by PMRF Meteorologist Rich Cappellino entitled "The West-Westside Story: How World War II Transformed a Small Grassy Airstrip into the World's Largest Missile Test Complex."*

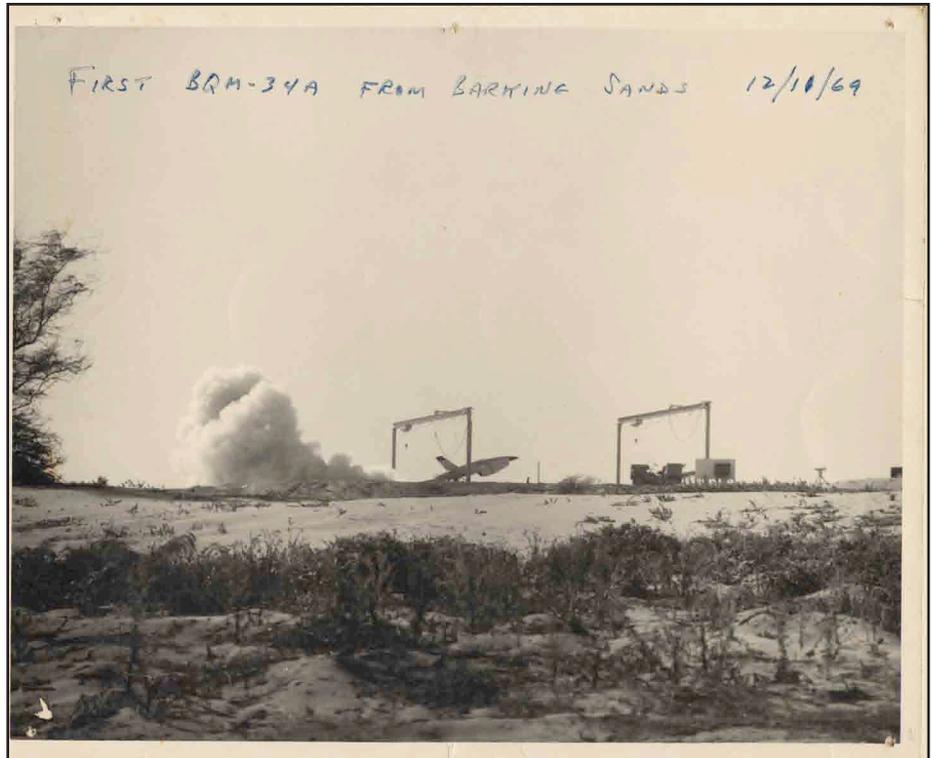
*By Richard Cappellino*

The emergence of the Cold War created a new strategic mission for the United States. Even so, Barking Sands Air Force Base remained inactivated and under the care of a custodian until the mid-1950's.

In 1953, it was ceremoniously renamed Bonham Air Force Base in honor of Major Carlos W. Bonham, Commander of the 199<sup>th</sup> Fighter Squadron who perished in a midair collision near the island of Ni'ihau the year prior. As the race between Capitalism and Communism heated up, the U.S. Department of Defense chose to breathe new life into the deteriorating military installation.

In 1956, the U.S. Navy initiated a 5-year lease on 37 acres of Bonham AFB intending to establish a training site for the Regulus Cruise Missile Program. Because of its oceanic expanse and mostly uninhabited terrain, the site was determined ideal to conduct missile testing.

The Regulus Assault Missile (RAM) was a guided turbojet-powered cruise missile capable of conveying explosives from an array of launch locations, including shipboard, submarine, and land-based. Once airborne, escort aircraft



*PMRF historical archives.*

would remotely guide the rocket into a target, then maneuver away prior to weapon detonation. When Regulus first arrived in 1956, the base was still in its primitive, post-World War II state. The program's initial operators, a team of seven Sailors attached to Guided Missile Group One, literally had nothing; to the extent that lunch was flown in daily from Barbers Point Naval Air Station on Oahu. Eventually, the compliment grew to over 50 as testing amplified.

When the project ended in 1965, more than 900 Regulus missiles had been flown at Barking Sands. At that time, the installation was transferred from the Air Force to the Navy, and in 1966 was renamed the Pacific Missile Range Facility (PMRF). The inception of Regulus testing on Kauai is behind the vanguard

of success that PMRF bestows today, but it should not overshadow what ultimately forged Barking Sands into the world's largest instrumented multi-dimensional training and test range.

In the early 1960's, the Kauai Test Facility (KTF) was established at PMRF to house the Sandia National Laboratory. Then, with the growing demand for antisubmarine warfare training, an underwater testing range was furnished in the mid 1960's throughout the northwestern waters off Kauai. Designated as Barking Sands Tactical Underwater Range (BARS-TUR) and Barking Sands Underwater Range Expansion (BSURE), the operating area

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was fitted with 60 seafloor-mounted hydrophones to cover 1,000 square-miles of ocean. Furthermore, in 1970, a multi-faceted electronics compound was constructed on nearby Makaha Ridge as an extension of the base. This site included several tracking and surveillance radars, a telemetry station, and communications annex. Altogether, these additions shaped PMRF into a central Pacific hub for both sub-surface and atmospheric specialized support.

Throughout the early 1980's, PMRF's primary mission was fleet training and exercises. Following the introduction of the 1983 Strategic Defense Initiative (SDI) by President Ronald Reagan, Barking Sands became aligned once again with missile testing. By 1990, the workforce at PMRF had reached nearly 1,000 as SDI testing expanded. Between 1993 and 1996, four Strategic Targeting System (STARS) vehicles were launched from the Kauai Test Facility. The evaluation was initially expected to push into the millennium, but by 1995 the STARS project was phased-out. At this time, PMRF became a focal point for Missile Defense Agency testing.

The MDA is principally responsible for development and testing of conceptual Ballistic Missile Defense systems. In the late 1990's, under direction of MDA, the U.S. Navy



tasked PMRF engineers with a new assignment – cooperative engagement compatibility...or the tracking of a target before it breaks horizon. The first project, dubbed "Mountain Top," assessed early detection radar systems, primarily for an upgrade of the E2-C Hawkeye aircraft. Following that, PMRF progressed toward what would become its crowning achievement: enemy missile intercept.

Beginning in 2000, PMRF began to collaborate with the U.S. Navy on its AEGIS Combat System. AEGIS is a multi-warfare weapons control system that uses sophisticated radars to control, track, and direct weapons into enemy targets. The objective was to effectively track a test vehicle for intercept with the SM-3 missile.

Since 2001, PMRF and the U.S. Navy have conducted more than 30 flight test missions with greater than 90% success. In 2002, MDA made a keystone

decision to stage the Terminal High Altitude Area Defense (THAAD) program (the U.S. Army's anti-missile defense system) on Kauai. THAAD boasted seven successful missions prior to withdrawing in 2010. And finally, in 2009, the Pentagon announced the implementation of the Navy's newest project in missile deterrence, AEGIS Ashore, a land-based version of the AEGIS weapons control system, to operate out of Barking Sands.

The AEGIS Ashore complex was completed in 2013, and is now being evaluated at PMRF for deployment in Europe as part of the President's approach for Ballistic Missile Defense abroad.

From a small grassy airstrip grew the world's largest versatile proving ground for the United States Defense Department. Had it not been for

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**Concert, continued from Page 10****History, continued from Page 9**

the military buildup of World War II, the Mana Plain might look vastly different at present; likely lined with hotels and shopping centers. Within the last decade alone, countless government-funded projects, including those of the Defense Advanced Research Projects Agency (DARPA), NASA, the Central Intelligence Agency (CIA), and Office of Naval Intelligence (ONI) have made the trek to Barking Sands for testing and evaluation. And, with newly emerging technologies, so does the Pacific Missile Range Facility continue to evolve its support capabilities to meet the demands of the future.

(Top) Master-at-Arms 2nd Class Shane McCelland grills hamburgers for patrons attending the Plain White T's concert at PMRF. Photo by MA2 Johnson. (Bottom) Plain White T's lead singer, Tom Higgenson, plays their 2007 number one song "Hey there Delilah" during a free concert at PMRF. Roughly 2,300 people gathered for the free concert hosted by Navy Entertainment.



# Be Hurricane prepared

Courtesy of PMRF Emergency Operations Center

Hurricane season runs June 1 - November 30

**Be Informed:** Know likely emergencies. Learn local emergency warnings.

**Have A Plan:** What to do, where to go, whom to call. Share the plan with all family members.

**Make A Kit:** Essential supplies for survival.

Maintain your plan and your kit: Practice and update your plan; check your kit every 6 months.

**Muster:** Once TCCOR #3 is issued, muster via NFAAS. Contact your superior, and/or chain-of-command for information and guidance. If unable to communicate, contact PMRF: Emergency Mgt Office 335-4976 Security Dispatch Office 335-4523

## Emergency Kit [for 5 days]

- Water – MINIMUM 1 gal/person per day
- Food – nonperishable, can opener
- Clothing – shoes, hat, raincoat, jacket
- First aid kit – dust masks, hand sanitizer, sun lotion, insect repellent
- Flashlight (batteries and bulbs)
- Medications – OTC & prescription
- Important documents – waterproof container or on CD
- Infant/child needs – food, medicine, toys, books, games, clothes
- Personal hygiene – soap, toilet paper
- Money – small bills, change
- Shelter – tent, tarps, rope, chair
- Cell phone – charger
- Tools – knife, shovel, work gloves, duct tape, screwdrivers, pliers/cutters, adjustable wrenches, folding saw, insecticide, plastic bags



Imagery courtesy of NASA

- Personal items – sunglasses, eye glasses, contacts, hearing aid, umbrella
  - Eating/cooking utensils, matches
  - Spare keys – house, vehicle
  - Pet supplies – water, food, medicine, cage, collar, leash, ID / photo
  - AM/FM Radio – spare batteries
- Tropical Cyclone Condition of Readiness (TCCOR) (Winds in excess of 50 knots)**
- TCCOR 5: Within 96 hours. Perform general house cleaning.
  - TCCOR 4: Within 72 hours. Identify outside items to be secured.
  - TCCOR 3: Within 48 hours. Secure outside equipment. Activate Emerg Mgt plan.
  - TCCOR 2: Within 24 hours. Safe Havens open. Relocate offices that are at risk. Back up computer hard drives. Fuel vehicles and generators.
  - TCCOR 1: Within 12 hours. Release non-essential personnel. Final preparations/actions by departments.

**NOAA Hurricane Watch:** ETA less than 36 hours.

**NOAA Hurricane Warning:** ETA less than 24 hours.

PMRF Hurricane Safe Havens Mandatory registration for all personnel residing on base (housing, cottages, NGIS) once TCCOR 3 issued. Register at MWR Office, BLDG 1267, across the street from

the Auto Hobby Shop. You will be assigned to a Safe Haven listed below:

- Bldg 384 (Hangar)
- Bldg 300 (Fire Station) – Fire crew and dependants. Contractor Ride-Out crew and dependants.
- Bldg 1318 (Youth Center)
- Bldgs 1261 and 801 (NGIS) – VQ/TQ guests
- Bldg 1264 (Fitness Cntr) – Alt site as req.

If ordered, hurricane evacuation is **MANDATORY**.

**Bring your Emergency Kit.** Pets/animals accommodated in designated/ separate area of your Safe Haven. Pet must be secured in an owner provided carrier/cage. Pet ID required; owner provided food and water; medications. Owners will clean up after their pet.

Kauai County Shelters (West Side): Waimea High School; Waimea Elementary/ Middle School.

Hurricane Information Websites  
[http://www.fema.gov/hazard/hurricane/hu\\_before.shtm](http://www.fema.gov/hazard/hurricane/hu_before.shtm)  
<http://www.usno.navy.mil/JTWC>  
<http://www.prh.noaa.gov/pr/hnl/>  
<http://www.fema.gov/>  
<http://www.scd.state.hi.us/www.nhc.noaa.gov/aboutsshs.html>

## Wish you were here - Photos from the Fleet



FORT MYER, Va. (May 8, 2015) Taya Kyle, wife of fallen Navy SEAL Chris Kyle, delivers remarks after receiving the Gabby Giffords award at the 2015 Military Spouse of the Year awards. The award was founded by Military Spouse magazine and honors military spouses, regardless of service branch, rank and gender. (U.S. Navy photo by Mass Communication Specialist 1st Class Nathan Laird)

GARAPAN, Saipan (May 9, 2015) Explosive Ordnance Disposal Technician 1st Class Anthony Byrne, assigned to Explosive Ordnance Disposal Mobile Unit (EODMU) 5, Detachment Marianas (Det Mari), places thermite grenade clusters onto an unexploded World War II era sea mine while setting up for a render safe procedure. Det Mari's mission is to locate, identify and render safe or dispose of land or water-based ordnance within the Joint Region Marianas area of operations. (U.S. Navy photo by Mass Communication Specialist 2nd Class Joshua Scott)



WASHINGTON (May 13, 2015) Secretary of Defense Ashton Carter announces during a Pentagon press briefing that he has recommended Adm. John M. Richardson as the next Chief of Naval Operations (CNO). (U.S. Navy photo by Mass Communication Specialist 1st Class Nathan Laird)