NAVAIR Engineers Leverage Technology
Finding Solutions for Aging Aircraft
Skipper’s Corner:
Command Climate Survey

Last year we asked you to complete the NAVAIR Command Climate Survey.

The purpose of the survey is to provide us insight as to how we are doing in terms of our effectiveness as an organization, and to gauge our equal opportunity policies.

About 800 of you responded to it, and overall, the results were quite similar to what other NAVAIR sites reported. Furthermore, the scores were generally in-line with benchmarks and consistent with results from the 2011 survey.

I am pleased to report that NAVAIR and FRCSW share a favorable climate, and as expected within any organization of our size, there are areas of opportunity to improve.

First, I’d like to share with you some of the responses that were deemed most favorable:

• “I know how my work contributes to the organization’s mission and goals” – 84%
• “My organization’s products and services are designed to meet customer needs and expectations” – 80%
• “I understand my organization’s vision, mission and values” – 79%
• “I know how my work impacts the public” – 79%
• “Employees in my work unit share job knowledge with each other” – 78%

You also rated the command highly in terms of giving extra effort, (90%), liking and being passionate about the work we perform (80% and 84% respectively), producing high quality results (80%) and being proud to work here (76%).

Communication, strategic management and teamwork were also highly rated with all three coming in more than 70% favorable.

Areas of concern included: Employee rewards; resource; flexibility; and ethics.

In response to these four issues, we established a series of focus groups comprised of 240 randomly selected employees to help us identify paths to improvement.

Recommendations offered by the groups include the following:

• Formalized stand up meetings and more tailgates
• Streamlining the travel, order/back rob and check/test processes
• Increasing everyone’s understanding of the CAO/IPT
• Providing supervisors with more training and flexibility on employee awards
• Adding quality work life information to the SYMON boards
• Increasing availability of tooling/parts
• Providing a parking spot to the Employee of the Quarter

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Some of these suggestions will take time to implement as they flow through the vetting and approval process.

The bottom line is I want you to know that your inputs, both positive and negative, were received and we are addressing those which demand our attention and action. Our goal is to make your job and the time you spend here as satisfying as possible.

This survey, and our response to it, is just one tool to help us ensure that the FRCSW workforce remains the most innovative, experienced and reliable within the naval aviation MRO enterprise.

Our warfighters should expect nothing less.

Capt. Craig Owen
Captains, U.S. Navy
Commanding Officer

Fleet Readiness Center Southwest
Commanding Officer
Capt. Craig Owen
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FRC SW Mission & Vision
Mission
We generate readiness through timely and responsive production of engines, aircraft, and components for the warfighter.

Vision
To be the premier maintenance repair and overhaul organization in the Department of Defense by providing the best value, honest quality, and most reliable products.

FRC SW is a cornerstone of future naval operations which we achieve through a highly capable workforce and robust community partnerships.

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FRCSW is a cornerstone of future naval aviation MRO enterprise.
An F/A-18C Hornet assigned to the Blue Blasters of Strike Fighter Squadron (VFA) 34 launches from the flight deck of the aircraft carrier USS Carl Vinson (CVN 70).

About the Cover
AB3 Dylan Mills directs the crew of a C-2A Greyhound from Fleet Logistics Support Squadron (VRC) 30 aboard the aircraft carrier USS Carl Vinson (CVN 70).

Photo by MC2 Sean M. Castellano
The proverb “Good things come in small packages” may very well be the new mantra of the avionics department of Naval Air Systems Command’s (NAVAIR) In-Service Support Center-North Island.

An engineering tool called “Slam Stick”™ is helping to identify some of the perplexing maintenance, repair and overhaul (MRO) issues NAVAIR engineers face every day.

Manufactured by Midé and designed to measure and record vibrations, temperature and air pressure, the lightweight Slam Stick is a sensor that is 3 inches in length and less than 2 inches in width. And with a depth of slightly over one-half an inch, the device can be placed virtually anywhere in an aircraft from the pilot’s shirt pocket, to the least accessible bay.
“It has a three axes accelerometer which basically measures acceleration and vibration. It also has a DC accelerometer which means that it can also account for gravity,” said avionics engineer and Avionics Advanced Technologies Investment (ATI) Team Lead Brett Gardner.

“I saw this technology at a Small Business Innovative Research conference. The device there was just the accelerometer. It didn’t have the pressure or temperature capacity and was a 16 gigabyte model that was basically useless to us,” he said.

To adapt to NAVAIR’s purposes, Gardner contacted the Office of Naval Research in 2012 and secured backing through a Rapid Innovation Fund (RIF). The RIF program funds innovative technologies that support warfighters.

Modification and development of the Slam Stick took about one year and was held in conjunction with Midé at Fleet Readiness Center Southwest (FRCSW). Cost was approximately $450,000.

The device is now available in four different models: 25g, 100g, 500g and 2,000g. Each model is applicable to the range of acceleration to be measured.

“We use all models,” Gardner said. “The idea behind these was to give the engineers a way to go out and look at the environment on the aircraft. For example, what kind of G loading is there in the avionics bay? Is there a pressure or a temperature problem?”

The Slam Stick is used in a variety of airframes including the F/A-18 Hornet, T-45 Goshawk, F-35 Lightning II, E-2 Hawkeye and C-2 Greyhound.

The maiden use of NAVAIR’s Slam Stick at FRCSW was last year in locating the cause of a vibration reported by a C-2 Greyhound pilot during ground turns at the flight line.

Team lead engineer Vu Buu placed nine Slam Sticks throughout the aircraft and after the first application, ruled out the vibration as being caused by the plane’s engines.
The second application led the team to focus on the tail of the airplane where they found a faulty dampener on one of the flight-control surfaces. The dampener muffles the vibrations from the flight control surface to the yoke, or stick of the aircraft. Once replaced, the vibrations stopped.

Gardner said that locating and correcting the vibration took about two weeks.

The Slam Stick is manufactured in either a plastic or metal version. NAVAIR uses both.

Because the metal version is stiffer, it has a tighter tolerance on vibration profiles making it more accurate than the plastic model.

In addition to initially designing its specifications, Gardner also contributed to the software development of the device.

“We had a basic version of the software. The original accelerometer was highly inaccurate and was a three channel device. The one we have now is an eight channel. It has two different accelerometers in it, so that's six channels and a channel for the temperature and one for the atmospheric pressure,” he said.

NAVAIR engineers are currently using Slam Sticks to investigate physiological events in F/A-18 Hornets. Specifically, they are targeting the aircraft’s cockpit pressurization system.

Because the F/A-18 is a closed-loop self-regulating pressure system, measuring cockpit pressure during flight is not possible.

“There’s no way to record that data because there’s no computer connection that will allow engineers to record systems behavior. It’s a stand-alone system,” Gardner said. “However, there is a stand-by analogue meter that the pilot can look at to see what the cockpit pressure is, but it isn’t recorded anywhere. And it’s slow and inaccurate.”

Slam Sticks may be placed in an aircraft by using two-sided tape. After the flight, the Slam Stick’s data is matched to the aircraft’s file by layering one on top of the other to reveal the profile the aircraft flew and the profile of the cockpit pressurization system. The data reflects a real time tracing of the factors.

“This way we know what the cockpit pressurization theoretically should schedule to and layer that over the top and look to see if there were any anomalies,” Gardner said.

This summer Slam Sticks were used to obtain data on F/A-18 Hornets of Strike Fighter Squadron 37 (VFA-37) at Naval Air Station Oceana, and a pilot program targeting physiological events will conclude soon at Marine Fighter Attack Squadron 232 (VMFA-232) aboard Marine Corps Air Station Miramar. Data from both events are currently being analyzed.

“We’re finding that the aircraft don’t exactly regulate the way we thought they were designed to regulate. There are small anomalies that are probably going to be the new normal,” Gardner said.
Downloading and retrieving Slam Stick data currently requires use of a stand-alone computer. To improve the process, Gardner said that efforts are underway to establish research, development, test and evaluation (RDT and E) network authorization across the industrial/engineering side of the FRCs.

“The pilots bring back the aircraft memory unit (MU) and download all of the data by plugging the MU into a PEMA stripping station. We’re in the process of getting the Slam Sticks approved to plug into those stripping stations so the squadrons can upload the Slam Stick data to the servers for the engineers to access directly,” Gardner said.

Data compiled from the F/A-18 cockpits is passed to the Environmental Control Systems (ECS) subsystems engineers who are not only responsible for overseeing the processing, but for creating a solution to the problems found, as well.

The ECS team created software in a .matlab file which syncs the Slam Stick data to the aircraft file.

“Data such as weight off wheels and the cockpit canopy opening and closing allowed measuring of some of the different aircraft events to the duration of the flight. The .matlab program matches up the events to the recorded MU data files and allows engineers the opportunity to fine tune cockpit pressure graphs,” Gardner said.

NAVAIR’s F/A-18 and EA-18G Program Office (PMA-265) purchased approximately 160 Slam Sticks to assist with cockpit pressure testing.

Overall, approximately $500,000 worth of the devices have been sold, Gardner said.
Fleet Readiness Center Southwest (FRCSW) has earned the Secretary of the Navy’s (SECNAV) Fiscal Year (FY) 2015 Energy and Water Management Gold level award for FY 2014 environmental accomplishments.

SECNAV Ray Mabus presented the award to FRCSW Energy Program Manager Sarah Tuley in ceremonies Oct. 19 aboard the amphibious assault ship USS America (LHA-6) at Naval Base San Diego.

Secretary of the Navy (SECNAV) Ray Mabus addresses the audience during the Energy and Water Management Gold level award ceremonies Oct. 19 aboard the amphibious assault ship USS America (LHA-6) at Naval Base San Diego.  Photo by Jim Markle
In his remarks, Mabus said that the Navy continues its efforts to advance energy independence by increasing alternative energy sources in the fleet and ashore by 2020.

FRCSW’s efforts recognized by the “Gold” level category designate a “very good to outstanding” energy and water conservation program. It is the eighth time in the past 12 years that the command has been awarded the “Gold” level category of recognition.

In total, more than 65 shore-based Navy and Marine Corps commands were awarded the “Gold” performance level, including Marine Corps Recruit Depot San Diego, Marine Corps Air Station Camp Pendleton and Naval Base Coronado.

One measure of a successful energy conservation program is by meeting compliance with executive order 13423 (EO 13423). Signed in January 2007, EO 13423 directs federal agencies to improve energy efficiencies by reducing water consumption, electricity usage and greenhouse gases by three percent per year.

The new executive order 13693, Planning for Federal Sustainability in the Next Decade, started in the beginning of FY16 which created the new baseline of FY15 and a yearly energy reduction of 2.5% moving forward to FY2025.

FRCSW surpassed EO 13423 requirements with a 4.6 percent reduction in energy consumption from FY 2014, and reduced its utility budget by more than $948,000 from the previous fiscal year.

The energy intensity dropped from 92.57 British Thermal Units (MMBTU)/thousand square feet (KSF) to 86.58 MMBTU/KSF.

Using an Energy Savings Performance Contract (ESPC) which enables federal agencies to partnership with energy service companies, the command will save an additional 24,704 million British thermal units (MBTU) of energy, and more than $2 million annually starting in FY17.

Furthermore, the ESPC will provide for state-of-the-art laboratories with daylight harvesting, LED lighting and condensing boiler plants that are 92 percent efficient.

In other conservation efforts Tuley said that FRCSW saved over $10,000 in water usage, bolstered by a 50 percent reduction in landscape watering and repairs to air leaks coupled with a steam management program in Building 472 during the summer, gained more than $100,000 in savings per month.

She added that many projects planned during FY 2015 are being completed this year.

“"In Building 463, for example, we’ll be completing a full HVAC retrofit which includes installing two new boilers, 16 new air handlers and cooling towers. We anticipate a projected savings of a little more than $1 million a year in B-463 alone once this equipment is commissioned,” she said.

FRCSW will see massive energy savings in FY17 and moving forward each year with the current projects.
We have a mishmash of full birds and darts in here,” said Tim Guilbert as he walked between the F/A-18 legacy and Super Hornet aircraft stored in a cavernous new tension fabric aircraft hangar at the Fleet Readiness Center Southwest (FRCSW) Test Line.

The “full birds” have wings, the “darts” don’t.

About 115 feet in width and almost as long as a football field, the hangar is well lit, ventilated and climate-controlled by two gas and electric units located outside of the building to regulate the humidity inside.

“Our optimum health and humidity for is 35 percent relative humidity plus or minus five. We want to be in the 30 to 40 percent range,” Guilbert said.

The production line manager and preservation supervisor and Naval Aviation Maintenance Program (NAMP) aircraft preservation manager, Guilbert oversees the FRCSW preservation program.

And thanks to Commander, Naval Air Forces (CNAF) the program recently received two hangars to help the command manage its F/A-18 preservation program.

Costing approximately $2.5 million each and able to accommodate up to 16 full Super Hornets, or 36-40 legacy “darts,” the hangars’ sole purpose is for storage. They are not outfitted for repairs or maintenance activity. Construction took about eight months.

The fabric “skins” are made of flame-resistant polyester pulled over a framework of steel. The materials can last five to 10 years, dependent upon environmental factors.

“The new hangars will minimize the cost of our level 2 preservation maintenance cycles,” Guilbert said. “We had 60 plus aircraft, and at one time we had almost 90 Hornets in level 2.”

There are four levels within the preservation program.

Level 1, not applicable to FRCSW, is preservation at the squadron level.

Level 2 occurs upon an aircraft’s induction, and encompasses the preservation procedure which includes fuel system preservation, caps and plugs. Aircraft in a level two preservation are typically seen wrapped with a laminated metal foil to prevent moisture contamination at intake openings.

Aircraft may remain in a level two state for up to one year.

“After one year you have to refresh them and do the whole thing over again. In the meantime, there are maintenance schedules that include daily inspections, seven-day, 28 and 56-day inspections all with different requirements. And there are heavy weather inspections where we inspect any wrapped areas and check for water intrusion,” Guilbert said.

“The goal of level 3 is if the shelter is there, the aircraft are put into a ‘dynamic level three,’ which means to take the whole aircraft and put it in a climate-controlled environment,” he said.

Level 4 signifies when the aircraft have reached an overhaul or Planned Maintenance Interval (PMI) cycle, a time when the requirements for a stringent level two or three can no longer be met.

If parts are unavailable during the analysis of overhaul or PMI, work must stop and the aircraft may revert back to a level 3 preservation state depending upon the parts arrival date.

“If it was level 2 (under this scenario) we would have to wrap them back up expending more labor hours and material costs, but now that we have the level 3 capability with the hangars, we can prep them for storage with minimal labor and material costs and store them indefinitely or until they are pulled back in for repairs,” Guilbert noted.

“Overall, the new level 3 preservation process takes about 50 hours per aircraft per year. That is a much better deal than the 350 that we were currently executing for level 2,” he said.

FRCSW is currently slated to receive a third tension fabric aircraft hangar at its test line in late June 2017. It will exclusively store H-60 Seahawk helicopters.
Would you want to pay $200 to replace one drill bit or $500 for a new reamer? No? The Navy doesn’t want to either.

Many of the artisans at Fleet Readiness Center Southwest (FRCSW) routinely use a variety of drill bits, reamers and cutting tools in the course of their work.

Instead of replacing these tools as they become dull or buying new ones vice modifying to a specific task, FRCSW turns to toolmakers Luis Quiambao and Henrico Fulgencio in the cutter and tool grinder shop in Building 379 for sharpening and adapting the command’s tools to meet the artisans’ needs.

A department of the command’s jig and fixture shop, the cutter and tool grinder shop is a sprawling area containing about a dozen grinding and milling machines where Quiambao and Fulgencio handle 200 to 500 tools quarterly.

“Both of us were machinist repairmen while serving in the Navy. We had been to Machinery Repairman ‘C’ School, grinding school, and we were able to revive this shop and start accepting jobs from different production shops here,” Quiambao said.

Both toolmakers were previously assigned to the production shop in Building 94, repairing F/A-18 Hornet wings. Quiambao left in December 2014 and Fulgencio joined him in the cutter and tool grinder shop this past January.

“In the wing shop you could be told that you need to work from a half inch to five thousandths or until you remove enough corrosion from the surface so a new bushing could be installed. Since you don’t have that exact size of reamer, you would send them to this shop for modification to a new dimension specified by engineers,” Quiambao said.

In grinding reamers and cutters the work is typically within ½ of a thousandth tolerance; the thickness of copier paper is roughly 4 thousandths of an inch.

The shop recently completed work on 87 reamers for FRCSW Site Yuma, Fulgencio noted.

Another recurring customer is the production shop in Building 472 that consistently requests sharpening of milling cutters. Milling cutters are tools normally used in milling machines that remove material by movement within the machine. The production shop’s handheld teardrop cutters that are used to cut finished machining metals are also routinely modified.

“We can get an urgent request for a two or three day turnaround time. I have an urgent call now from FRCSW Site Camp Pendleton for a reamer to fix a helicopter panel. For modifying reamers we use about four different machines, one step at a time. We have each machine setup to cut a certain way so we don’t have to re-set for each step,” Quiambao said.

“Before, these were contracted out for sharpening. But Louis noticed that the company that sharpened the reamer did it at the wrong angle, which is why it wouldn’t cut properly. So the command decided to save money and bought the diamond wheels and started having us provide that sharpening service,” Fulgencio said.

The F/A-18 canopy shop in Building 250 routinely sends its one-pass drill bits to the shop for sharpening and adjustment. The bits, made of carbide, are solely used by artisans to ream holes in the Hornet canopies.

In addition to carbide, the shop also modifies and sharpens tools and bits made of high speed steel and cobalt, saving FRCSW tens of thousands of dollars annually in replacement costs.
All roads lead to the paint complex in Building 466, where Fleet Readiness Center Southwest (FRCSW) aircraft products are concerned.

Most recently, that road was traveled by the first MV-22 Osprey tilt-rotor aircraft to undergo painting at the command. The Osprey was inducted in November and flown from its Planned Maintenance Interval-2 (PMI-2) event that was completed at FRCSW Site Miramar.

This course of events was quite unique: FRCSW Site Miramar completed the PMI-2 earlier in the year, returning the aircraft to the Marines of Marine Medium Tilt-rotor Squadron 161 (VMM-161) for build-up and testing before flying it to FRCSW for final painting and weight/balance as part of the PMI-2 process.

Final paint at FRCSW is typically applied before the build-up and testing of the aircraft prior to delivery to the customer; however, adequate paint facilities and the proper certifications are not available at Site Miramar, and so, required a different flow of events.

Preparation for the MV-22 paint event began more than a year ago when two journeyman, crew leader David Powers and painter Charles Broadnax, traveled to FRC East (FRCE) at Cherry Point to receive training on the MV-22’s strip and paint operations.

While FRCE’s operations and facilities differ from those of FRCSW’s, the team learned the unique differences and challenges involving the removal the aircraft’s original coatings, preparing the surfaces for painting, and applying the new Type IV paint, including the required stenciling and markings.

Logistics preparations continued throughout the year with stakeholder meetings that included materials lab engineers; deputy IPT leads; production control; production managers; planning department; paint crew leaders and artisans; supervisors; financial; safety office; and business office personnel. These critical preparations ensured the right materials were ordered along with the appropriate source documentation, and solutions to concerns were tailored to successfully assist the paint complex.

As an airframe, the MV-22 is a unique configuration both in its body and its large nacelles and subsequently massive 38-foot propellers.

The propellers require appropriate masking for sanding, and then separately for paint operations to include rotation during the painting process. Planning when to rotate the propellers, as well as the stenciling/marking of the areas, was critical due to the need to raise or lower the aircraft’s struts to allow clearance in the dual-bay operation.

The V-22 fuselage and empennage are comprised of aluminum, carbon/epoxy composite, and carbon/epoxy composite overlaid with 5 thousandths-of-an-inch copper mesh. The wing and nacelles are comprised of carbon/epoxy composite and fiberglass.

This mix of substrate materials and subsequent treatments fell under the expertise of materials engineer Esther Chan. Her dedication was critical in the timely success of the project, as she became respirator-certified and suited up to provide the necessary guidance to the artisan team.

Pre-training on the copper mesh (Astro-Strike) and the new primer and Type IV paint were stepping stones to success for the paint complex. Powers and Chan developed a training regimen consisting of an eight-hour education and lab environment for the artisans.

Using donated aircraft surfaces from the composite shop so as not to damage the Astro-Strike surface, the artisans learned new sanding techniques with new sanding materials, as well as painting with the new Type IV paint.

After induction of the MV-22, artisans and materials lab engineers overcame their first objective: fitting the new fall protection stands to the airframe under the instruction of FRCSW safety specialist Javier Trujillo.

FRCE crew leader James Kanuck and materials lab engineer Ryan Glembocki provided...
direct support and guidance to the FRCSW crew leaders and team members. The experience of the FRCE members translated directly to the paint artisans, reducing a potential 30-day estimated turn-around-time to a 14-day delivery from the paint complex to the weight/balance team.

The MV-22 paint process requires hand/scuff sanding of the entire surface of the airframe; and with such a large aircraft, the paint complex team needed to ensure enough members were trained. The aircraft was swarmed, creating a “leopard” pattern look on the airframe without sanding into the Astro-Strike.

Wiping the aircraft down following sanding, the artisans masked it for painting the tri-color paint scheme. The stenciling and marking of the aircraft with several hundred stencils of various sizes was another challenge, as well.

Since FRCE and FRCSW are the only FRCs to provide paint services to the fleet for this aircraft and with a growing population of MV-22s on the horizon that includes Navy models, it is anticipated that FRCSW will paint upwards of 15 units per year.

Currently, the paint complex is scheduled for three units in fiscal year 2017, with a goal to reduce the TAT through experience gained from this and future evolutions.

The success of FRCSW’s first MV-22 paint operation may be attributed to excellent logistics integration planning and good material sourcing. But success is also truly rooted within the people involved: the artisans, engineers, logisticians, P/Cs, QAs, and other members who take pride in their work, teaming together, determined to succeed for the fleet.

For FRCSW aircraft, all roads lead to paint: Taking the “Pain” out of Paint, leaving the “T” for on target delivery!

FRCSW, FRCSE Collaborate on JASDF E-2C Requirement

In a move that exemplifies teamwork and cooperation, Fleet Readiness Centers Southwest (FRCSW) and Southeast (FRCSE) recently joined forces to ensure the timely return of E-2C Hawkeye components to the Japanese Air Self Defense Force (JASDF).

Work on the JASDF E-2C assets was derived from a 2011 Repair Commercial Services Agreement (CSA) between FRCSW and Aeronautical Systems Incorporated (ASI). ASI provides maintenance, repair, overhaul and logistical support to foreign militaries.

The JASDF operates approximately 13 E-2C aircraft, and was in need of crucial repairs to the nose steering assembly units of eight aircraft to meet mission requirements. Steering assembly units enable pilots to taxi the airplane prior to takeoff and after landing.

Under the terms of the CSA, FRCSW ordered all repair materials through the Defense Logistics Agency (DLA) and provided the touch labor to service the steering assemblies, said Lee Strother, performance-based logistics program coordinator, who ensured the on-time delivery schedules and cost requirements of the project.

“We do a complete overhaul to these,” said hydraulics/pneudraulics shop supervisor Jack Jackson, “That means we’ll completely disassemble the unit, evaluate, order any outstanding material required, then send it out for cleaning, remove any corrosion, run a non-destructive inspection on them and assemble and test them before they’re sent to paint and returned to the customer.”

The units were inducted into the FRCSW components program in Building 472 last August and September and were returned in less than five months, thanks to cooperative problem solving between the two FRCs.

“As the first few units were nearing completion of repair, ASI was notified that the test bench for the nose steering assembly was down for service,” wrote Carlos Pichardo, ASI director of operations in his April 12, 2016, letter of commendation to FRCSW.

“(Then FRCSW Components IPT Lead) Wade Wendell took initiative to identify solutions for testing. Mr. Wendell worked directly with engineering at FRCSW to see if there was any way to bring the test stand back up, and when it was deemed that it would take a number of weeks, Mr. Wendell identified that there was an active test bench located at FRCSE. This out-of-the-box thinking allowed ASI to work with FRCSW for the repair of the assets and the final testing was performed by FRCSE so that the final delivery made it to the customer within their fiscal year requirement.”

Pichardo noted that “… any items not delivered within the JASDF fiscal year lose funding.”

“ASI has recently sent additional JASDF assets to FRCSW for repair and with the assistance of the Components Integrated Product Team at FRCSW and its management, we look forward to continued success in the support of availability delivered for United States allies,” Pichardo wrote.

The FRCSW test bench used to assess the E-2C nose steering assembly units is currently under an update modification.

In addition to E-2C components work, FRCSW also services legacy Hornet Aircraft Mounted Accessory Drives (AMAD) under its service agreement with ASI.
In a move that will improve service to the fleet and garner considerable energy savings, the Navy Primary Standards Laboratory (NPSL) opened its new 2,000 square-foot calibration laboratory Nov. 8 in Building 379 aboard Fleet Readiness Center Southwest (FRCSW).

FRCSW Commanding Officer Capt. Craig Owen led a ribbon cutting ceremony to mark the lab’s relocation from Building 66, where it had operated for almost 50 years.

The NPSL is the Navy’s highest level echelon for metrology calibration (the science of measurements) and provides technical assistance and training to fleet and shore metrology and calibration program personnel.

Laboratory manager Marcio Chinn said that Naval Air Systems Command (NAVAIR) provided new equipment for the lab that will be used in laminar (liquid and gas) flow calibration.

Liquid flow calibration is used to test turbine flow meters found throughout the Navy. In the fleet, they are typically used to transfer jet fuel and water from supply ships to aircraft carriers.

“We verify that these systems are running properly,” Chinn said. “These meters measure fluid quantity and are very similar to a gas pump when pumping gas into a car: They show how many gallons are pumped.”

Gas flow calibration tests meters that measure aircraft cabin pressure, breathing apparatus in oxygen masks, or how much air is going through an oxygen tank, and nitrogen from fuel pumps.

Chinn said meters that measure wind speed on ships are calibrated using a closed-loop wind tunnel.

In addition, he said the meters are also used “… on HVAC systems and by safety personnel throughout the Navy to monitor proper circulation of cleaning hoods ventilation and air circulation throughout the ship.”

Prior to moving to the new location, the six-member lab staff endured continual interruptions to their work that were caused by building maintenance and repair calls.

“Our former building was degrading to the point that we had two months of down time per year the past two fiscal years,” Chinn noted.

Furthermore, he said that the lab had to rent its water chillers and relied on base supplied air.

“We were wasting 20 gallons of water per minute for eight hours a day, five days a week. Now, we are recirculating that water instead of it being poured down the drain.”

Because the new lab is supported by its own high-efficiency chiller and advanced compressors, work production may resume unhindered and service expanded with substantial operating savings.

“Non-utility savings will be around $450,000 per year and for utilities savings, around $100,000 per year,” said FRCSW energy program manager Sarah Tuley.

Tuley said that the $2 million lab renovation was one project of a larger, $24 million plan targeting energy efficiencies throughout FRCSW buildings. Energy savings will pay for the improvements.

“This will entail lighting and lighting upgrades; lighting controls and LEDs, energy conservation measures and decentralization of compressed air in 19 of our buildings. An HVAC retrofit in Building 463, water conservation measures that include cooling tower upgrades in three different buildings, and wash rack systems in the paint complex will also be part of the contract,” she said.

FRCSW is also the parent command to two other calibration laboratories: one in Okinawa and the other in Iwakuni, Japan.
Commander, Fleet Readiness Centers (COMFRC) recently selected Seaman Deserae Kimber as its fiscal year (FY) 2016 Bluejacket of the Quarter, fourth quarter.

Kimber, who is assigned to Fleet Readiness Center Southwest (FRCSW), is also the command’s FY 2016 Blue Jacket of the Year.

“I was shocked in winning the COMFRC Bluejacket of the quarter award. It made me open my eyes to what I’m doing and how it can benefit me as a Sailor in branching out to help other people — the good influence I could have on other senior E-3s and other junior Sailors who come to this command,” she said.

A native of Hudsonville, Mich., Kimber joined the Navy in 2015 and, accompanied by her uncle, enlisted in Tampa, Fla.

“My uncle Rudy retired from the Navy in 2014 as an aviation ordnanceman. He was a recruiter, and actually took me to his recruiting station in Tampa, which is why I enlisted there,” Kimber said.

“I joined the Navy to better my life and to make bigger opportunities for myself. I wanted to go a different route than just going to college; I wanted to do new and refreshing things instead.”

Kimber’s uncle is not the only family member with a history of naval service. Her husband, Scott, is currently a Seaman assigned to Helicopter Maritime Strike Squadron (HSM) 78 stationed aboard Naval Air Station North Island.

After graduating from Naval Training Center, Kimber, who is 20 years old, reported to FRCSW and was appointed to the Support Equipment (SE) shop in Building 767.

The shop performs periodic maintenance, troubleshooting and repairs to equipment used to support aircraft, including pneumatic and hydraulic systems and liquid oxygen systems. Its primary customers are squadrons assigned to Naval Base Coronado.

“I’d like to stay in my field of aviation support,” Kimber said. “And for now, I plan on staying in the Navy but maybe not the full 20 years.”

Meanwhile, in addition to her work in the SE shop, Kimber stays busy handling command and collateral duties as an auxiliary security force (ASF) member and an assistant command fitness leader, which is a second class petty officer billet. She is also a member of the Coalition of Sailors Against Destructive Decisions (CSADD) and an MWR volunteer.

“I like the camaraderie and teamwork in the Navy,” she said. “It’s a lot different than being on the outside and it’s something I’d miss if I left.”

Kimber is awaiting orders to her next duty station and is schedule to rotate out in October 2017.

Fleet Readiness Center Southwest (FRCSW) selected William Fields as its Fiscal Year 2016 Civilian of the Quarter, second quarter.

Fields, an acquisition program specialist (commodity lead), was recognized for his work in contracting and purchasing functions in the 6.13 division by FRCSW Commanding Officer Capt. Craig Owen in ceremonies Sept. 30 in Building 94.

“The division 6.13 has only been up and running for about the past two and a-half years. We make sure everyone is in compliance for the acquisitions and contracting outside of the Defense Logistics Agency,” Fields said.

“We’re the liaison between the contract officer, who generally doesn’t understand naval aviation because that’s not their cue, and whoever comes through the door in need of everything from credit cards, to General Services Administration purchases, to labor and facilities contracts.”

A former electrician for Navy contractor AES, Fields worked at Camp Pendleton servicing AH-1 Super Cobra and UH-1 Huey helicopters before transferring to FRCSW in 2003 and promoting to an electrical planner/estimator for manufacturing the following year.

He has been an acquisition program specialist since 2014.

A paramount concern is keeping the command’s machinery operational to ensure a consistent flow of artisan work within production timelines.

“We’ve only got so much experience on the floor to fix those machines here that break down, so sometimes we need to bring in the vendors or the original equipment manufacturer to come in to repair or overhaul — so we make sure we get the right contracts, so what their requirements are matches up to the compliance, mostly Fleet Logistics Center, to make sure we’re getting what we want,” Fields said.

To further reliable artisan work flow, Fields revised the command’s tool ordering procedures down from an average of nine months to only 30 days, and also provided input to the development of the Government Commercial Purchase Card Request portal.

The variety of his duties and the people he meets, Fields said, are what he enjoys most in his position.

“You never know what requirements will come. But after two years I know some will be repeats, but by the time you have it figured, something new comes in. You don’t get stale here,” he said. “And I get to interact with a lot more people than previous jobs I’d had, and we’ve got some pretty neat people here.”

The father of three, Fields lives in Riverside County with his wife Darilynn.
Awards and Recognition

Fleet Readiness Center Southwest welcomes its newest chief petty officer selectees during pinning ceremonies in the Fleet Logistics Support Squadron (VRC-30) hangar aboard Naval Air Station North Island. From left are: AZC(AW/SW) Jessical Grant, AZC(AW/SW) Erica Jiles, CSC(SW/AW) Pia Roxas, ATC(AW/SW) Zachary Scott and ASC(AW/SW) Ryan Springfield.

Photo by Scott Janes

Naval Air Systems Command (NAVAIR) avionics engineers are joined by San Diego area high school students at Sweetwater High School for the inaugural Quadcopter Challenge. NAVAIR engineers served as mentors to encourage the students’ interest in aviation principles and scientific subjects. In addition to Sweetwater, participating high schools included Chula Vista, Eastlake, Hilltop, Olympian and Southwest.

Courtesy photo

Fleet Readiness Center Southwest Commanding Officer Capt. Craig Owen presents Priscilla Ford with a Letter of Appreciation for her contributions to the Naval Air Systems Command’s African-American Pipelines Advisory Team (APAT). APAT strives to promote diversity initiatives and mentoring efforts throughout the NAVAIR enterprise.

Photo by Scott Janes

Fleet Readiness Center Southwest (FRCSW) Commanding Officer Capt. Craig Owen presents the SECNAV FY 2015 Energy and Water Management Gold Level Award to members of the FRCSW environmental team during the weekly boards meeting in Building 94. During FY 15, FRCSW reduced its water usage by $10,000 and energy intensity from 92.57 British Thermal Units (MMBTU)/thousand square feet (KSF) to 86.58 MMBTU/KSF.

Photo by Scott Janes

FRCSW Commanding Officer, Capt. Craig Owen, recognizes the competency team consisting of Jim Compagnon, Freddie Asuncion and Greg Crabb (L to R) for their above and beyond recruiting efforts at the command in Fiscal Year 2016.  Photo by Scott Janes