The White Sands
Missile Range
Strategic Plan

Creating the
White Sands of
2015

March 2012
Forward

“In my personal military judgment, formed over 38 years, we are living in the most dangerous time in my lifetime right now...”

Chairman of the Joint Chiefs of Staff
General Dempsey (16 February 2012)

White Sands is a national treasure that has been given to us by our preceding generations --- from the ranchers who called this land their home, to the people who worked here to transform the dirt and air into the “Birthplace of America’s Missile and Space Activity.” We have come a long way from the those early days in 1945 when our Nation conducted a test involving the detonation of a nuclear bomb at the Trinity Site and those that look back on what we are doing today will no doubt comment on how much has changed from today.

We are a team of organizations providing long-range open-air developmental, operational, and environmental testing; training support; live fire support; and other defense services in support of our Nation’s National Security Strategy. We are sitting at the precipice of a remarkable shift that is taking place in our security strategy driven by a global financial crisis and the ending of a decade of war. As the Joint Force adapts to this new strategic environment, our support to that force must also change.

White Sands is exceptional because it is a family of complimentary capabilities uniquely positioned to provide decisive support to the Nation at this critical juncture. We are most effective when we as a Team work collectively and coherently. This will require more communication, more cooperation, and more interdependencies.

The fiscal environment drives us to having to reduce costs in a dramatic way. We must examine the needs of our customers and adapt ourselves accordingly. The strategic shift drives us to having to develop new capabilities and use our range in an innovative fashion. Taken together, we have to deliver better value to a more diverse set of customers, where perception of value is defined not by us here at White Sands, but instead by each customer. We also need to remember that we are the home to various warfighting units – Engineers, New Mexico National Guard, F-22s, and training units --- and they must be ready to deploy and we must be ready to care for their families, this is simply non-negotiable.

The White Sands Missile Range Strategic Plan – Creating the White Sands of 2015 attempts to lay out some planning priorities and an azimuth for supporting the changes to the Joint Force. It does not lay out how to meet these requirements but instead plots a common direction. As the sub-title implies, it does not look far out into the future, but like any azimuth, will be checked frequently and adjustments made as needs dictate.

I look forward to working with each of you as we move forward together.

X John G. Ferrari
Brigadier General, USA
Commanding
The White Sands Missile Range Strategic Plan
Creating the White Sands of 2015

“White Sands should not be a place to do testing; it should be THE place to do testing”
General Odierno, Chief of Staff, US Army, October 2011

Purpose and Need: White Sands Missile Range has long been one of the world’s preeminent military test facilities. As a Major Range and Test Facility Base, White Sands is a Tri-Service, Department of Defense asset that is managed by the Army. It is also the home to an array of organizations with a broad range of missions well beyond the principle mission of developmental testing. As the current custodians of this national treasure, particularly in this era of declining resources, it is imperative that we all continue to focus on providing timely, accurate, cost-effective, sustainable, and professional services. We must never compromise our tradition of quality, a tradition that is synonymous with White Sands. We are entering an era of two very large tectonic shifts related to the Defense Strategy of the United States which requires all of us to realign our path forward.

- **Strategy Shift**: The defense strategy is shifting away from a decade of war in Iraq and Afghanistan, towards a strategy focused on the Pacific Rim and Middle East which will change the types of weapons and systems that must be developed and tested.

- **Budgetary Shift**: The defense budget is entering a sustained period of stringency which will change our base funding and customer profile. We will have constraints such as hiring freezes that will necessitate our efforts to eliminate waste, reduce costs, and continuously improve.

Given these shifts, we must clearly lay out where we want White Sands to be in 2015 and then take actions to achieve that end state. Often times strategic plans look ten years into the future, we will be a bit more modest and look three years out. As we define our plan, our path ahead is built upon the following foundation:
We are Team White Sands: While we are comprised of disparate organizations, we will plan, prepare, and execute with the full team in mind. We will seek every opportunity to “cross-sell”; jointly invest to reduce capability gaps; and eliminate redundancies amongst ourselves. We have formed a council of technical directors from across White Sands and Holloman Air Force Base in order to formalize this process and to further deepen our interdependencies.

We Will Embrace a Culture of Change: While some say that the future is a dynamic place, in all actuality life in real-time is a dynamic place. It is the job of every leader, especially those at the more senior levels to lead, manage, and synchronize change. In the book “The Goal”, the author posits three questions every leader should ask: “What needs to be changed”; “What should it be changed to”; and “How do we make the change happen”. The US Army tool for managing change through Continuous Process Improvement is Lean Six Sigma. This will be our main, but not only, tool at White Sands. We have already published our CPI program goals and objectives and we need to make sure our projects are nested with our desired future state.

We Will Develop a Transparent and Customer-Focused Culture: Every organization provides a service or product to either another person or organization; consequently we all have customers. Whether the customer is a Program Manager or a resident with leaky faucets, they have the right to expect the best value proposition we can provide and to fully see how the value proposition is derived. Operating with a customer-focused culture requires a mindset that enables us to fully understand the processes and objectives of our customers and then adjust OUR business processes to meet their needs. In an era of fiscal constraint, being customer-focused also means identifying and eliminating non-value added activities, improving efficiencies, and driving down costs. Transparency, accountability, and outreach are absolutely essential.

The purpose of this strategic plan is to lay out the mission, vision, operational concepts, and goals that will guide our collective organizations for the next several years. It is meant to be a “touchstone” that will shape decisions, both major and minor. As such, it does not contain “the answer” but instead serves as a framework for leading change and ensuring the vitality of White Sands.
**Mission:** White Sands Missile Range is a Major Range and Test Facility Base providing long-range open-air developmental, operational, and environmental testing; training support; live fire support; and other defense services in support of our Nation’s National Security Strategy.

**Vision:** White Sands Missile Range as a vibrant and collaborative community of organizations; safely and sustainably providing a broad range of critical testing, training, and live fire support for the Department of Defense, other government agencies, and private industry; a recognized leader of providing cost-effective, value-driven, and high quality services; a fully-integrated and mutually supportive family of Soldiers, Sailors, Airmen, and Civilians; and an installation of choice for residents, tenants, and customers.

**Operational Concept:** Achieving this vision will require a sustained and deliberative effort. We can do this with a customer-focused approach and a culture that embraces transparency, change, and ambiguity. As one author has recently noted, organizations and leaders “...need to move beyond managing micro-rules towards managing complex networks of people, knowledge, and resources.” The following five pillars will ensure our efforts are aligned:

- **Continue Our Tradition of Excellence:** White Sands is the standard bearer for quality in testing. We can, and will continue, to do things that cannot be done anywhere else. We will leverage our reputation of excellence in order to expand our customer base.

- **Seek Efficiencies:** We live and work in a national fiscal environment that makes cost an important part of our customers’ decision-making process. As such, our customers, all of whom are facing fiscal stringency, are demanding that we reduce costs, increase transparency, and become more predictable in scheduling. We will take advantage of this new environment by focusing more on the Voice of the Customer and adjusting how we operate to meet their needs. We also must find innovative ways to leverage existing capabilities, such as aligning military training requirements (Army, Navy, Air Force, SOCOM, Marines, and our own 2nd Engineer Battalion) with test center and other customer needs.

- **Improve Our Foxhole:** We must continue to invest in our human, physical, and virtual capital even as we reduce costs. It is expected that supervisors will ensure that we have development plans for everyone in our organizations in order to broaden skill sets, achieve certifications, and meet future requirements. Concurrently, we will upgrade our range and
installation infrastructure utilizing every opportunity to combine funds to achieve the maximum effect at the least cost. We will also seek to expand and improve our range to better enable operational testing, live fire, training, and where possible maneuver.

- **Be Safe and Be Healthy:** While everything we do is important, nothing we do justifies sacrificing the health and welfare of our military and civilian community. Much of what we do is inherently dangerous and can be hazardous without constant vigilance. We will integrate a safety-conscious mindset into our planning and execution. But, it is not enough to just be safe and we must also encourage a healthy workplace wherein everyone thrives.

- **Maintain a Vibrant Installation:** We are a small and remote installation. Consequently, we must provide the support needed for our service members, families, civilians, contractors, customers, and visitors. This is not “nice-to-do”, but is instead vital to our future. Attracting talent, bringing in new business, and supporting our warfighters requires a level of services that we must provide. We will also continue to build on the excellent relations we enjoy with the surrounding communities.

**Goals:** As we look towards what White Sands Missile Range will be like in 2015, we will set a series of goals that will guide us to achieving our vision and expanding our mission.

**Goal 1: Expand the Use of the Range and Reduce Our Costs**

As we enhance the White Sands value proposition by improving the efficiency of our operations, we must simultaneously establish the conditions where the range itself is the best value to the Department of Defense, other government agencies, and private industry. To be the best value, we must become the benchmark for quality, cost-control, transparency, delivery, and breadth of services. While our range “grew up” as a developmental test range, we will expand its use to include operational testing, training, live-fire, and limited maneuver. This will be easier said than done and will require a wholesale relook at our processes, procedures, scheduling, funding mechanisms, customer outreach, and support. Critical to this effort will be our ability to develop a dynamic airspace management capability and culture that will greatly improve our ability to support multiple concurrent activities. We will also seek to increase throughput by managing risk through enhanced, real-time situational awareness, and improved command and control.
Our future is inextricably linked to several new customers: the expansion of UAV and F-16 training at Holloman Air Force Base; the Army’s Network Integration Exercise which will drive increased operational testing and simultaneously grow beyond network testing to other capabilities; and the Weapons System Evaluation Program which will dramatically increase the use of the range for live fire purposes. We will also see a dramatic increase in the use of our range for integrating Joint Fires, such as the integration efforts of the Navy Desert Ship with Aerial Sensors. To expand our customer base and breadth of services, we will closely examine new and emerging technologies and seek to expand our capabilities where prudent. And while the primary mission centers on DoD testing, we will leverage these capabilities to actively seek increased private industry testing to round out our portfolio. As we maintain, refine, and enhance our capabilities we will bias towards flexibility, adaptability, and portability. We can further expand our range by enhancing our capacity to deploy to other locations, becoming a leader in “exportable” range capabilities for operational and developmental testing.

**Goal 2: Become More Interdependent**

Team White Sands has a vast array of capabilities and some capability gaps. As systems become more complex, investment in testing technology, people, and support will also grow more complex. As budgets become more constrained, it is imperative that we make maximum use of the assets we have, avoid unnecessary future investments and expenses, and eliminate unnecessary duplication. We need to find ways to work more collaboratively in our internal support mechanisms, our marketing efforts, and our investment strategy (for example, our NASA Test Center has a world class chemistry facility). We also must broaden our scope to consider regional capabilities and requirements. There are other test centers, organizations, and installations that can provide capabilities and we must fully integrate them where possible. For the Army Test Center, we will broaden and deepen our integration with the Operational Test Command, serving as their test and technology support capability of choice. We will also develop procedures and processes that will deepen our ties to Holloman Air Force Base and Fort Bliss through the TRIAD process in such areas as airspace management. In order to enhance this goal, we must develop processes and consider organizational
structures that enhance transparency, coordination, and cooperation. We will also become more interdependent by becoming a leader in the US Government’s efforts at Data Center Consolidation and Data Management, to include upgrading our Network Enterprise Center and wireless capabilities. No longer will everyone have their own server farms or proprietary systems, instead we will expand our consolidated capacity in order to reduce costs. In the end, every “interdependency” is about establishing a culture of trust.

**Goal 3: Expand our Electromagnetic Testing Capabilities**

21st Century warfare will usher in a new domain for dominance --- cyber warfare. Computers, wireless devices, and electronic components are embedded in almost every weapon system we have. The enhanced capabilities they provide make them lucrative targets for cyber attack; their complexity and sensitivity make them potentially vulnerable in the electromagnetic environment of the modern battlefield. These vulnerabilities result from naturally occurring or man-made conditions, or they may result from hostile actions. Consequently, employment of these systems must consider not only the hugely complex electromagnetic background of the urban environment, but threat applications such as Electromagnetic Pulse, High-Power Microwave, and electronic attack. White Sands possesses key assets that can support testing in the most demanding electromagnetic environments, but we must enhance these capabilities to fully test and integrate these systems. To do this we will need to invest in diagnostic instrumentation, emitters, facilities, live and constructive tactical networks, modeling and simulation, and most importantly human capital. Constructing the Joint Urban Test Capability, restoring and modernizing the EMRE site, and enhancing our spectrum analysis and characterization capability are critical to expanding this line of business. These are relatively new skill sets, the technology is rapidly advancing and our adversaries are not standing still. White Sands’ unique physical attributes (land, air, and purity of spectrum) will retain their values as assets only if we invest coherently. Developing this roadmap to link the physical, human, and virtual capital to these investments, in consultation with key customers, must be done rapidly.
Goal 4: Prepare to Support the Future Joint Fight

The Joint Staff has recently published the Joint Operational Access Concept (January 2012) as the first of several new concepts supporting the new shift in strategy. Its central theme is “Cross Domain Synergy” to establish superiority in order to ensure joint forces will achieve operational access in the face of emerging anti-access and area-denial capabilities around the world. We must prepare now to be able to support testing and experimentation to meet this challenge. The future joint fight will be enabled by enhanced ISR, long-range lethality, and rapid deployment. Cyber operations, information dominance, data assurance, power projection, missile defense, and space systems are critical capabilities to meeting the anti-access and area-denial challenge. The joint “kill chain” will involve linking multiple and disparate sensors in all environments and across multiple domains, to shooters on the ground, sea, and air that will engage multiple targets over long distances with devastating results. White Sands is uniquely positioned to be a leader in testing and integrating the joint kill chain. Our Navy Test Center is already becoming a leader in this endeavor and together we can leverage our expertise to build upon this emerging requirement. We will have to make investments in people, capabilities, and processes in order to capitalize on this opportunity.

Goal 5: Continue to Improve Our Community

White Sands is both a large (geography) and a small place (population). As a remote installation we must never forget to focus on our community – service members, family, civilians, contractors, and those who live near us. We have both Active Duty and National Guard units deploying to the Middle East and it is our obligation to support them and their families – we simply have no higher priority. We should be able to link each of our organizations with a military unit to build a personal relationship with our military members and their families during this stressful period of their lives. Our neighbors are also extremely important because we are only able to accomplish our varied and often-times hazardous
missions because of the trust and confidence we have earned from our surrounding communities. While we are in a great position today, trust is easily lost and White Sands does not exist in a vacuum. We rely upon relationships such as the ranchers in our call-up areas, the universities that provide us our workforce, the local communities that support our troops, the Veteran’s who have fought before us, the elected representatives of the people, and the governmental organizations that provide oversight. We will not just sustain these relationships; we will build upon and expand them. A priority will be the expansion of our efforts to establish a synchronized and collaborative approach to our local education institutions, primary/secondary schools, community colleges, and universities – they are producing our future workforce and educating our children today. We will continue our ambitious outreach program to invite community leaders to visit White Sands in an effort to be more transparent and also form a lasting partnership with the VA Hospital in Albuquerque that will ensure our service members are fully aware of their benefits and also visit with those hospitalized veteran’s from our past. We will also look to continue our investments in our installation in areas such as our single soldier barracks, family housing, and quality of life programs. Our Exchange and MWR operations will need to be adjusted to meet changing demographics and requirements, as well as right size to the new fiscal environment. In some cases, new facilities will be pursued, in other cases, we will need to identify which services are of lesser priority in order to protect services that we rely upon such as child care, food service, and recreation.

**Goal 6: Develop a Sustainability Mindset**

All of us have a moral obligation to reduce our consumption of energy, eliminate water waste, and reduce the amount of waste we generate. We owe it to future generations to be good stewards of the environment as well as the budget. But the sustainability mindset goes far beyond environmental considerations; it is contemplating the long-term consequences of our actions and engineering what we do today with our successors in mind. The Army’s Net-Zero Installation program is just one example of the Department of Defense’s on-going efforts to reduce, re-use, and recycle. White Sands will become a leader in the deployment of solar energy initiatives, look at dramatically reducing energy consumption by metering facilities and reducing overall space utilization. Energy consumption, waste disposal, and hazardous material usage are major contributing factors to White Sands reputation of being expensive. If we can demonstrate success in these areas, it will free up funding to invest in other capabilities. We also have to work with our federal and state partners to preserve our “fence lines” since our future is most likely going to require expanded distances along the air, ground, and electromagnetic domains. Simply put, our national security mission is outgrowing our land mass and our ability to preserve our capability to
operate beyond our physical borders will determine our future. We will work with the Federal Aviation Administration to expand our ability to more efficiently manage the regional airspace. Recent examples such as an Operational Test by the Army in the mountains near Cloudcroft and a Navy Test using the call-up areas demonstrate our unique capabilities that must be both preserved and expanded. In a larger context, we need to develop processes that consider the enduring ramifications of investments we make today. Our range is literally littered with short-term, quick fixes to problems of yesterday. We can no longer afford to be so myopic.

**Objectives:** Due to their more inherently transient nature, specific objectives in support of these goals are not included in this document. The White Sands Missile Range Chief of Staff will be responsible for developing and monitoring the progress of objectives; maintaining periodic status reviews; ensuring objectives are assigned to the appropriate individuals and organizations; have meaningful and achievable measures; have continued alignment with strategic goals; and are available to the entire White Sands community.

The framework outlined above encompasses two parallel activities. The first is the Continuous Process Improvement program and the second is the more traditional strategic planning process. A significant point is the intent to make data-driven decisions that include all stakeholders. So, while an initial set of goals are listed, as our Continuous Process Improvement program progresses, it is expected that the insights derived from the individual projects will provide the feedback that will affect how we look at our goals and their supporting objectives. So rather than ‘push’ an agenda, we will lay out an initial course and let the data ‘pull’ the specific avenues of approach.

**Summary:** We remain a Nation at War, but we are a Nation in the midst of a Strategic Pivot. Our service members continue to deploy to Afghanistan and other locations. We owe them and their families our support. At the same time, our focus is changing to the Pacific and Middle East with fewer total resources. Managing transitions and change is hard, but it is the most important task we perform for our successors. We all have much to do, but the current operational and fiscal environment will not allow us to “ignore the important to address the urgent”. We may make mistakes, but we will adjust as necessary. Only through leadership and cooperation at all levels will we be able to execute this process and ensure that White Sands continues to be vibrant, relevant, and exceptional.