

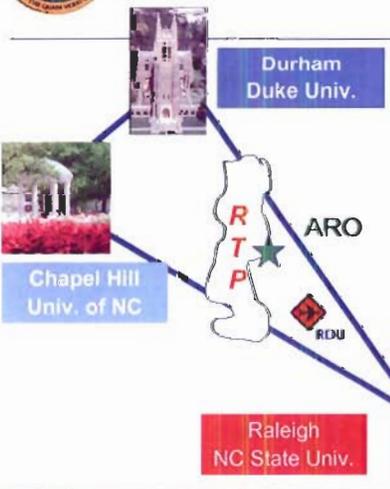
Roadmap

- **Research Triangle Area**
- **What is the Army Research Office**
- **Why is the RTP Location Critical to ARO Success**
- **DoD Recommendations to BRAC**
- **Recommended Alternative**

1

Research Triangle Area



Durham
Duke Univ.

Chapel Hill
Univ. of NC

RTP

ARO

RDU

Raleigh
NC State Univ.

Research Triangle Park

- Largest research park in the world
- 140+ high-tech organizations
- Leading microelectronics, biotechnology, telecom, pharmaceutical companies
- 40,000+ scientific, engineering & technical employees

Academic Resources

Three top-ten nationally ranked research universities within 15 minutes of ARO

2

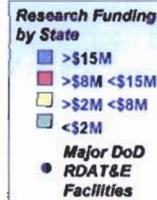
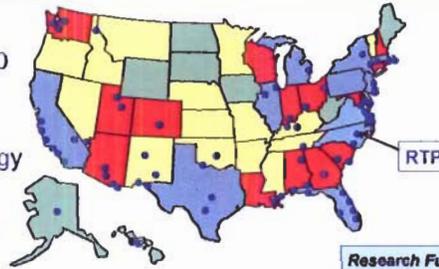


What is The Army Research Office?



ARO:

- Funds Army Research at over 200 Academic Institutions
- Manages Small Business Programs to Transfer Technology to the Army User
- Assesses Scientific Opportunities to Achieve Army Vision
 - Manages European and Far East Research Offices
- Strengthens the research infrastructure at HBCU/MIs
 - Educates a Superior Workforce in Army-Critical Technologies

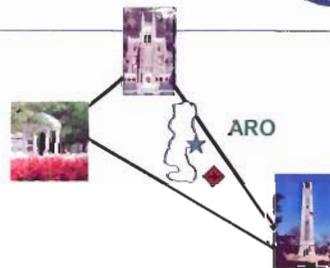


Research Triangle Location Key to ARO Success



Historic Rationale for RTP site

- Carefully chosen after national search
- Outside the beltway
- Expanding high-tech community
- Surrounded by major research universities
- Ease of travel/communications
- Improved personnel recruitment/retention
 - Quality of life
 - Cost of living
 - Research Opportunities



Today – A National Technology Hub

- Pioneered science underlying all major Army systems
- Program managers are hands-on researchers
 - widely acknowledged for outstanding scientific competence
- Proven synergy with ARO intellectual resources



Research Triangle Location Key to ARO Success



RTP has **the Strongest Innovation Capacity of any Metro Region in the Country**

Aggregated Innovation Capacity

Degrees Granted In Science and Engineering
A weighted measure of the degrees granted in scientific and technical fields as a share of the workforce.

Patents
The number of utility patents issued to companies or individuals per 1,000 workers.

Academic R&D
A combined measure of industry investment in R&D at academic institutions and total academic R&D.

Source: 2001 Progressive Policy Institute Metropolitan Indicators
<http://www.progressivepolicy.org>

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1

ARO Maintains a Strong Link to this Capacity through

PROFESSIONAL STAFF RESEARCH

- Duke University
 - Polymers, Math analysis, Spectroscopy, Biotech
- North Carolina State University
 - Laser materials, Microelectronics, Tactical communications
- University of North Carolina -Chapel Hill
 - Ultra-intense laser fields, Nano-composites, Superlattices

- + PROFESSIONAL STAFF RECRUITMENT
- + PROFESSIONAL STAFF INTERACTIONS

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Research Triangle Location Key to ARO Success



Examples: PROFESSIONAL STAFF RESEARCH

Triangle University	ARO Staff Scientist	Research Title
Duke University	Solid Mechanics	Synthesis, Mechanics, and Modeling of Stimulus Responsive Polymers
Duke University	Senior Research Scientist	Mathematical Analysis of Non-Stationary Fluctuations
Duke University	Mechanical Behavior of Materials	Microstructure-Property Relationships in Polycarbonate Derived From Position
Duke University	Senior Research Scientist	Annihilation Lifetime Spectroscopy
Duke University	Molecular Genetics and Genomics	Monte Carlo Studies of Continuous Hamiltonian Systems Coupled to Dissipative Mechanisms
Duke University	Cognitive Sciences	Mitochondrial Genome Stability
Duke University	Molecular Genetics and Genomics	Nonlinear Dynamical Characterization of Neural Population Response Variability
Duke University	Senior Research Scientist	Mitochondrial DNA Stability and Mutagenesis
North Carolina State University	Modeling of Complex Systems	Ultrafast Optical Characterization of Wide Bandgap Semiconductor Heterostructures
North Carolina State University	Probability and Statistics	Theory and Algorithms for Li Splines
North Carolina State University	Terrestrial Sciences	Topics in Stochastic Control Theory and Its Applications
North Carolina State University	Quantum Electro-Magnetic Devices	GIS Analysis and Simulations of Natural and Anthropogenic Terrain Change Impacts on Water and Sediment Transport
North Carolina State University	Senior Research Scientist	A Novel Approach for Short-Wavelength Nitride-Based Lasers and Detectors
North Carolina State University	Physical Behavior of Materials	Three Dimensional High Strain Rate Intergranular and Transgranular Failure Modes in Metallic and Ceramic Systems
North Carolina State University	Polymer Chemistry	III-Nitride and II-Oxide Based Heterostructures and Devices
North Carolina State University	Degradation, Reaction and Protection of Materials	Selective Catalytic Hydrogenation of Aromatic Polymers Facilitated By Supercritical Carbon Dioxide
North Carolina State University	Communications and Networks	Silicon-On-Insulator Technology Incorporating Highly Textured Diamond Films
North Carolina State University	Biodegradation	Ultra Wideband Impulse Radio for Tactical Military Communications
North Carolina State University	Information Assurance	Structural Analysis and Bioengineering of Thermostable <i>Phococcus Fuscus</i> Proteases
University of North Carolina -Chapel Hill	Organic Chemistry	Neuro Agent Detoxification
University of North Carolina -Chapel Hill	Optics, Photonics and Image Science	Positioning and Reliable Data Transmission of Sensor Networks
University of North Carolina -Chapel Hill	Synthesis and Processing of Materials	Cation-Olefin Cyclization Reactions in Constrained Environments
University of North Carolina -Chapel Hill	Electronics	Relativistic Particle Motion in Ultra-Intense Laser Fields
		Stochastic Modeling and Simulations of Polymer Nano-composites
		Phonons in Nanostructures: Wideband Gap Semiconductor Superlattices and Biological Microtubules

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DoD Recommendation to BRAC Co-Location of Extramural Research Managers to Bethesda, MD



This "Co-Located Center of Excellence" will foster additional coordination among the extramural research activities of OSD and the Military Departments. Further it will enhance the Force Protection posture of the organizations by relocating them from leased space onto a traditional military installation...payback expected in 2 years.

Rationale Presented:

Additional coordination: "Synergy"

Comment: Current "synergy" between researchers and nearby universities and commercial organizations **exceeds** the "synergy" gained by relocation with other service organizations.

"Enhance the Force Protection Posture"

Comment: Available leased space meets security "stand-off" requirements. Federal land available within 2 miles for new facility at lower cost.

Payback

Comment: Cost savings not dependent on moving ARO.

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North Carolina Recommendations to BRAC



- **Leave ARO in Research Triangle for Technical Excellence**
- **Relocate and expand ARO(W) for Interagency Synergy**
 - **ARO in Research Triangle sustains proven excellence in technical mission**
 - + Maintains location in high-tech, entrepreneurial R&D concentration
 - + Continued ability to recruit, retain, and sharpen the "best and brightest" program managers
 - **Co-located, expanded ARO Washington staff accomplishes BRAC recommended interagency synergy**

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North Carolina Recommendations to BRAC



- **Leave ARO in Research Triangle for Technical Excellence**
- **Relocate and expand ARO(W) for interagency synergy**
 - **Higher level of security**
 - ✦ Available leased facilities meet security "stand-off" requirement, OR,
 - ✦ Federal campus with traditional military installation-type security available within 2 miles for new facility.
 - ✦ Outside the DC beltway reduces concentration in DC area and WMD threat.
 - **Cost advantages (recommend COBRA cost analysis)**
 - ✦ Prior BRAC determined not cost-effective to move ARO.
 - ✦ ARO(W) established after prior BRAC to provide required synergy w/ other agencies.
 - ✦ Decreased construction and moving costs if new building is co-located within existing federal infrastructure in Research Triangle area.
 - ✦ Lower personnel costs based on locality pay differences.

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COMMITTEES:
ARMED SERVICES
BANKING, HOUSING, AND
URBAN AFFAIRS
SPECIAL COMMITTEE ON AGING

July 29, 2005

Dear Chairman Principi:

Thank you for taking the time to speak with me about the important BRAC issues in North Carolina. I am writing to follow up on our conversation. In my role as a member of the Senate Armed Services Committee, I have been extremely supportive of the Department of Defense's efforts to increase efficiency, streamline operations and promote jointness. As your Commission makes its final site visits and holds its last hearings, I hope the Commission will closely consider a number of key points about the critical value North Carolina bases offer to our national security.

Earlier this week, joined by fellow members of the North Carolina delegation, I wrote to you outlining our concerns about the Department of Defense's BRAC recommendation to relocate the C-130 aircraft of the 43rd Air Lift Wing at Pope Air Force Base. We are troubled about the ability of the Army Forces at Fort Bragg to be airlifted in a timely manner and about the costs that the Army would incur to operate Pope Air Force Base. We also highlighted the irreplaceable close working relationships forged in joint training, and the critical role the 43rd Airlift Wing plays in the rapid deployment and training of the XVIII Airborne Corps. I strongly believe the most prudent step is to establish a joint base with Pope and Bragg to maintain and enhance our premier power projection force.

As I mentioned yesterday, I also have concerns about the Department of Defense's recommendation to close the Army Research Office in Durham. The Army Research Office (ARO) has built strong relationships with Research Triangle Park, which is the largest research park in the world, housing over 40,000 scientific, engineering and technical employees. Likewise, the ARO also built strong ties with Duke University, the University of North Carolina and North Carolina State University. In fact, ARO program managers are also professors at the universities, allowing a flow of ideas from the theoretical to the practical arena, which is a key contributor to the success of the research office. Additionally, the value added to the ARO by the universities and Research Triangle Park can not be replicated within the constraints of the ARO's budget alone.

I understand the Department of Defense wants to co-locate the service branch's research offices in Washington D.C.; however, the Army already has a Washington office which serves as liaison to the other services. Relocating the Durham office will result in a loss of superb intellectual capital and resources with nothing gained.

Finally, I have watched with keen interest the Commission's deliberations on Naval Air Station Oceana, and I am aware of the enormous encroachment issues that the

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base is facing there. As you know, North Carolina prides itself on being a military-friendly state, and we welcome any expansion of our military community. With that said, I want to assure you that Marine Corps Air Station Cherry Point has the capacity and community desire to absorb at least four more squadrons, in addition to the two squadrons already scheduled to move to Cherry Point in 2007, in order to relieve pressure from Oceana. Moving some squadrons to Cherry Point will not only reduce congestion at Oceana, but would also position these squadrons only a couple minutes flight away for training ranges and aircraft carriers.

Thank you for the time and effort you are devoting to consideration of these important issues. I applaud your dedication to stationing our forces to best serve our strategic national security needs.

With warmest best wishes,



Elizabeth Dole
United States Senator

Cc: Mr. James H. Bilbray
Mr. Philip Coyle
Admiral Harold W. Gehman Jr., USN (Ret.)
Mr. James V. Hansen
General James T. Hill, USA (Ret.)
General Lloyd W. Newton, USAF (Ret.)
Mr. Samuel K. Skinner
Brigadier General Sue Ellen Turner, USAF (Ret.)

Statement of Senator John W. Warner, R-Va.
Chairman, U.S. Senate Armed Services Committee
Hearing on Virginia Installations
before the 2005 Defense Base Realignment and Closure Commission
July 7, 2005

Mr. Chairman, members, and staff of the Base Realignment and Closure Commission, the task you have before you is a difficult one, but essential to allow the Department of Defense to reduce its investment on unneeded facilities, thus freeing up resources for critical readiness requirements. You, and your colleagues who are not here today, are to be commended for the formidable challenge that you have assumed for the benefit of the American people and the men and women in uniform, the finest military in the world.

I use those two groups deliberately because in the end, that is for whom you perform this duty, and to whom you are answerable. When my colleagues and I wrote the legislation that authorized the defense base realignment and closure round for 2005, we specifically addressed issues of openness, transparency, and an independent review of critical decisions in order to preserve the integrity of, and public trust in, the process. We added language to exclude -- to the maximum extent possible -- political influence in the process, and preconceived notions of what should be closed, what should be realigned, and what should remain open. We put specific criteria into law to ensure that the military value of our installations and infrastructure were given priority, and directed the Secretary of Defense to make recommendations based on those criteria—and those criteria alone. Section 2913(f) of title 10, United States Code states,

“(f) Relation to Other Materials—The final selection criteria specified in this section shall be the only criteria to be used, along with the force structure plan and infrastructure inventory referred to in section 2912, in making recommendations for the closure or realignment of military installations inside the United States under this part in 2005.”

We established this BRAC commission -- an independent commission -- and tasked it with the responsibility of objectively, and independently, reviewing the Secretary's recommendations. The Commission was specifically empowered to amend the Secretary's recommendations, if their analysis revealed “that the Secretary deviated substantially” from the BRAC criteria and/or the force-structure plan submitted as part of the BRAC process. Finally, we charged the commission with the sole responsibility of submitting a final list of recommendations to the President.

While we in Congress retain a right to review and reject the final recommendations in total, the commission is charged with reviewing and amending each recommendation to ensure the use of correct data, an accurate and substantiated assessment of cost savings, and -- most important -- recommendations that advance the tenets of “military value” as clearly prescribed in law. While many have criticized the BRAC process over the years, no one has come up with a better, fairer, more objective way to address the unpleasant task of closing military bases. Thank you for your commitment and willingness to participate in this process essential to maintaining America's modern and strong national defense.

The Commonwealth of Virginia has enjoyed a close relationship with our men and women in uniform since the founding of our Republic. Virginia is home to some of the most diverse and capable military personnel and installations, including leased facilities, effectively supporting the full range of U.S. military missions and special operations.

The Hampton Roads region serves as the homeport for the U.S. Naval Atlantic Fleet with critical installations including Naval Air Station Oceana, Norfolk Naval Station, Norfolk Naval Shipyard, and Naval Base Little Creek. Langley Air Force Base has the honor of being the first air base in the world to support the operations of the best fighter jet in the world, the F/A-22 Raptor. Located near these installations are the traditional Army bulwarks at Fort Story, Fort Monroe, Fort Eustis, and Fort Lee in nearby Petersburg. This compact and critical collection of military activities has enabled our military forces to work and train together ever since the joint siege at Yorktown became the stepping stone for the beginning of our nation. The region continues to serve as the center of joint war-fighting as the home of Joint Forces Command and the only headquarters in the United States for the North Atlantic Treaty Organization. We cannot underestimate the importance of the Hampton Roads region to our nation's security.

Mr. Chairman and members of the Commission, before I go any further, I would like to state for the record my

thoughts on your request to the Secretary of Defense dated July 1, 2005 for additional information on the Navy's recommendation to preserve its presence at Naval Air Station Oceana. I realize that, if by some unfortunate turn of events, NAS Oceana is added by the Commission for consideration for further action on July 19, 2005, I will have an additional opportunity to testify before you with the facts about why this fine installation must be maintained. NAS Oceana is a superb base with access to unlimited ranges and training airspace. Like many other installations in a suburban setting supporting rigorous military operations, NAS Oceana has been proactively and aggressively cooperating with local communities to address issues related to the encroachment of local development. I point out that problems with encroachment are not unique to Oceana. A Joint Use Land Study was recently completed for NAS Oceana by the Department of Defense Office of Economic Adjustment (OEA) in cooperation with numerous local communities. The study resulted in the establishment of a long-term plan to manage the growth of surrounding development while allowing certain types of construction and maintaining safe decibel levels for residential areas. Luckily, NAS Oceana has not had to restrict flying operations to curtail the take-off of combat loaded aircraft to one end of the runway like other air bases in the DOD inventory which have more severe encroachment problems. Given that the Commission has taken an interest in the threat of encroachment on our bases, I have to question why the Commission did not develop questions and scenarios for the Department of Defense to further explore options to alleviate encroachment issues at the air bases with more severe problems.

Naval Air Station Oceana is the United States Navy's Master Jet Base on the East Coast, with the primary mission of training and deploying strike-fighter squadrons. NAS Oceana has one 12,000 foot runway and three 8,000 foot runways. An outlying landing field under construction in North Carolina will be shared with the two squadrons of F/A-18's at NAS Cherry Point, North Carolina, allowing for more efficient use of training resources. NAS Oceana's proximity to Norfolk Naval Station allows quick surface transport of men and material necessary to load aboard the aircraft carriers to which the airwings are assigned, supporting the Navy's ability to surge forces forward quickly under its Fleet Response Plan. The aircraft are then launched from nearby NAS Oceana and can recover aboard the aircraft carrier as soon as it clears the Chesapeake Bay.

From a more distant base, this process would require airlift, and long flights for the air wing aircraft that would then need a divert base on which to land should the carrier be unable to land aircraft. Presently NAS Oceana serves the function of both home base and divert base, and is able to quickly turn aircraft around if any maintenance is required. During the period when a carrier is in ready-surge status prior to extended deployment, and during the sustainment period following deployment, carrier pilots are required to maintain carrier qualification through periodic day and night refresher landings. From a more distant base, such operations would entail movement of men and material for longer periods of time, with a detachment both onboard the carrier and at the divert base. These operations would also require more family separation for airwing flight and maintenance personnel, even during those times when the ship is not deployed.

NAS Oceana also provides a realistic climate and altitude to train pilots for the demanding landings aboard aircraft carriers. Controlling jet engine response is critical and this response varies greatly with elevation. Therefore, training should be accomplished as close to sea-level as possible. It would be counterproductive to do field-carrier-landing-practice at too high an altitude (e.g. Cannon AFB is 4,330 above sea-level). Such training could actually result in dangerous habits for our pilots.

To summarize, the combination of close proximity to the fleet, access to superb training ranges, and an encroachment problem that is being managed, resulted in the Navy's decision to remain at NAS Oceana. I hope the BRAC Commission will objectively review the facts and will support the Department's decision.

The Fredericksburg region, though smaller than Hampton Roads, also serves as host to three important military reservations. Marine Corps Base Quantico, the Naval District of Washington, West Area with its 4 tenant activities including Naval Surface Warfare, Dahlgren, and Fort AP Hill which, though less than two hours from the Pentagon, has more training and maneuver area than the area within the Capitol Beltway. Each of these installations has the ability to accommodate significant additional military activities as the needs of the future war-fighter require.

Down past the Shenandoah, in the southwestern part of Virginia, the proud people of Radford support the manufacturing of the munitions and explosives that our military forces require in this global war on terrorism. Finally, here in Northern Virginia you will find Fort Belvoir, Fort Myer, Henderson Hall, Arlington Hall, the Pentagon and many other federal enclaves established to support military operations, headquarters activities, and the National Command Authority, as well as new requirements emerging for homeland defense and the protection of the National Capital Region.

In all, the Commonwealth has a long and storied tradition of answering the call of our nation to provide the unique resources, the finest men and women, and the spirit of our founding fathers to all endeavors up to and including this round of defense base realignment and closures.

I have long been a supporter of the BRAC process and have led, in the face of considerable opposition, the efforts of Congress to establish and to preserve this 2005 BRAC round. Having invested so much of my time and effort over the past several years to safeguarding this process, I have a vested interest in ensuring that this round is conducted fairly and with complete objectivity and integrity. This is why I feel compelled to appear before you today to raise important issues that, in my mind, demonstrate that certain recommendations by the Secretary of Defense have not been made in accordance with BRAC law. My concerns cut to the heart of the BRAC process and I trust the commission will take the time to explore them in further detail subsequent to our presentations this afternoon. Both the commission and the representatives of affected communities must continue to work together to ensure that final decisions about base closure and realignment are made in accordance with the criteria and procedures established by law. We must preserve the integrity of the BRAC process so that the Department of Defense may, if the need arises in the future, return to this tried and tested process for making very difficult and challenging decisions.

It has been ten years since the last round of defense base closure and realignments. There is no doubt that the Department has excess capacity on its military installations and many of the Department's recommendations, in accordance with Congressional intent on the use of military value and other criteria, will effectively improve the efficiency of installation operations and infrastructure support. For the current round though, the Secretary of Defense, in his first policy memorandum on the 2005 BRAC process on November 15, 2002 directed the goal to "*produce BRAC recommendations that will advance transformation, combat effectiveness, and the efficient use of the taxpayer's money.*" Congress provided further direction to the Department of Defense by including in the 2005 Ronald Reagan National Defense Authorization Act an amendment to the BRAC statute that directed the criteria to be used by the Secretary to make BRAC recommendations, along with the clarification as written in section 2913(f) of title 10, United States Code that:

"The final selection criteria specified in this section shall be the only criteria to be used, along with the force-structure plan and infrastructure inventory referred to in section 2912, in making recommendations for the closure or realignment of military installations inside the United States under this part in 2005."

On October 14, 2004, a second DOD policy memorandum entitled BRAC 2005 Military Value Principles stated that "*the Department has determined that the most appropriate way to ensure that military value is the primary consideration in making closure and realignment recommendations is to determine military value through the exercise of military judgment built upon a quantitative analytical foundation.*" This policy was published over a year after the military departments and defense agencies established their own analytical foundation consisting of a military capacity assessment based on certified data and an objective military value scoring system based on a series of weighted factors. It is at this juncture that I believe the BRAC process began to deviate substantially from the criteria established by Congress.

Based on an extensive review of supporting documents, along with the experience I have had in the drafting of legislation and participation in 5 successive rounds of BRAC, I must respectfully call to the attention of the Commission to a number of the Department's BRAC recommendations which—in my view—"deviate substantially" from the BRAC legislative requirements. The BRAC law simply does not provide the legal basis, or otherwise allow for the Department to take action or implement decisions that are not in accordance with BRAC criteria.

My research has found a number of documents that raise concerns regarding three substantial and persistent deviations from the BRAC law that the Department of Defense made during the BRAC process:

1. Certain recommendations were justified by factors and priorities other than the selection criteria in violation of section 2914 (f) of the Defense Base Closure and Realignment Act of 1990 as amended;
2. Certain recommendations were based on data that was not certified as required by Section 2903 (c)(5)(A) of the Defense Base Closure and Realignment Act of 1990 as amended; and
3. Certain recommendations did not contain accurate assessments of the cost and savings to be incurred by the Department of Defense and other federal agencies as required by section 2913(c)(1) and section 2914(e) of the Defense Base Closure and Realignment Act of 1990 as amended.

To support my decision, I have attached legal analyses that address these issues in greater detail.

The commission must determine if the Department simply disregarded the selection criteria—and used subjective military judgment in place of the criteria in law—to justify certain BRAC recommendations when the analysis process established to provide an objective review of data did not support the recommendation.

On October 14, 2004 Michael Wynne, the Acting Undersecretary of Defense responsible for managing the internal BRAC process in the Department, issued a memo to the Secretaries of the military departments and the chairmen of the Joint Cross-Service Groups which stated that the Department would use a specific set of principles when applying military judgment in their deliberative process. These principles include references to the Department's ability to recruit and train, to provide quality of life, to organize, to equip, and other elements that are important to the Armed Forces ability to execute its missions. Nowhere in these principles, nor the July 2, 2004 memorandum, which provides greater detail, from Secretary Wynne to the chairmen of the Joint Cross-Service Groups, will you find any mention of leased office space or any indication that it would serve national security to reduce military presence in the National Capitol Region (NCR).

Further, Secretary Wynne's published guidance on the interpretation of military value criteria does not have any discernable correlation between military value and the goal of reducing leased office space in the NCR or reducing DOD's presence in the NCR.

Use of Alternate Criteria

The law directs the Secretary of Defense to use 4 primary selection criteria related to military value in making recommendations. These criteria outlined in section 2913 of title 10, United States Code state:

- “1) The current and future mission capabilities and the impact on operational readiness to the total force of the Department of Defense, including the impact on joint war-fighting, training, and readiness.*
- 2) The availability and condition of land, facilities, and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.*
- 3) The ability to accommodate contingency, mobilization, surge, and future total force requirements at both existing and potential receiving locations to support operations and training.*
- 4) The cost of operations and the manpower implications.”*

Section 2913 also provided other criteria to the Secretary of Defense as follows:

- “1) The extent and timing of potential costs and savings, including the number of years, beginning with the date of completion of the closure or realignment, for the savings to exceed the costs.*
- 2) The economic impact on existing communities in the vicinity of military installations*
- 3) The ability of infrastructure of both the existing and potential receiving locations in existing and receiving locations to support the forces, missions and personnel; and*
- 4) The environmental impact on communities”*

With one exception, these criteria were identical to those proposed by the Department in December 2003 and adopted in February 2004. They were intended by Congress to serve as the framework for the Department's BRAC analysis. Yet, on September 8, 2004, Acting Undersecretary of Defense Wynne proposed that a series of 77 transformation options would “*constitute a minimal analytical framework upon which the Military Departments and Joint Cross Service Groups will conduct their respective BRAC analyses.*” There is no record that these options were ever formally approved. The GAO noted in its July 1, 2005 report that “*while furthering transformation was one of the BRAC goals, there was no agreement between DOD and its components on what should be considered a transformational option.*” However, the record will show that these options were extensively used by the military departments and Joint Cross Service Groups.

Concerns about the use of the BRAC process to implement transformational options were raised by the Department's BRAC Red Team in the March 22, 2005 briefing notes: “*since transformation is not one of the final selection criteria, transformational justifications have no legal basis and should be removed.*” However, as

late as July 1, 2005, the Executive Director of the Technical Joint Cross-Service Group informed my office that *"Transformation options guided TJCSG recommendations."*

These transformation options or "imperatives" were clearly emphasized by senior officials of the Department of Defense in their communications to subordinates who were tasked with the day-to-day work associated with putting together the BRAC recommendations. Many of the decisions were based on two OSD imperatives as quoted in the internal minutes of the Headquarters and Support Activities (H&SA) Joint Cross Service Group (JCSG): *"(1) significant reduction of leased space in the NCR; (2) reduce DOD presence in the NCR in terms of activities and employees."*

The goal to vacate leased office space was the guiding principle for many of these recommendations--not military value, cost savings or any other legislated criteria. This is not permitted by law.

On February 17, 2005, the H&SA activities JCSG, acknowledged DOD's guidance to vacate leased office space, particularly in the NCR. The following is an excerpt from the minutes: *"Was it DOD guidance to get out of leased space? Yes, but there is no supporting documentation -- there was the general sense that being in the NCR is not good -- most space in the NCR is leased, so the connection was made that vacating leased space is favorable."* This was even more clearly conveyed to the OSD member of the H&SA Joint Cross-Service Group by an OSD official involved in the BRAC process. The minutes of the January 5, 2005, meeting of the H&SA group state: *"The OSD Member met with Mr. DuBois and gave him an NCR update. Mr. DuBois stated the leadership expectations include four items: (1) significant reduction of leased space in the NCR; (2) reduce DOD presence in the NCR in terms of activities and employees; (3) MDA, DISA, and the NGA are especially strong candidates to move out of the NCR; and (4) HSA JCSG should propose bold candidate recommendations and let the ISG and IEC temper those recommendations if necessary."*

Note that the Missile Defense Agency, the Defense Information Services Agency, and the National Geospatial Agency were specifically identified as likely candidates. I cannot recall in my 17 years of association with the BRAC process when installations within a specific region were targeted by the Department of Defense for specific scrutiny and recommendations for realignment or closure. Congress intended the legislative criteria and force structure requirements to be evenly applied to all military installations. OSD imperatives targeting a certain region should not be used to guide the BRAC recommendations. In fact, these imperatives violate section 2903(c)(3)(A) of the BRAC law which requires all installations within the United States to be treated equally.

These "expectations" are further reinforced by the March 24, 2003, minutes of the H&SA Joint Cross-Service Group which state, *"Thinning of headquarters in the National Capitol Region (NCR) remains a DOD objective."* The justification accompanying the recommendation to move the Missile Defense Agency to Huntsville stated: *"this recommendation meets several important Department of Defense objectives with regard to the future of leased space, rationalization of the Department's presence within 100 miles of the Pentagon, and enhanced security for DOD activities."*

In the minutes of the Technical Joint Cross-Service Group of January 19, 2005, relating to the recommendation to move the extramural research elements (DARPA, ONR, AFOSR, ARO, DTRA) to Bethesda is the statement that *"the military value analysis is irrelevant as this scenario strives to get out of leased space per the OSD imperative and there is currently no military value for research at Anacostia."* (emphasis added) This statement clearly demonstrates that military value was not applied to the decision to vacate leased space in the NCR. The OSD imperative on leased space was the driving factor in this decision, as opposed to military value, which by law, is the criteria that should have been applied.

This goal to move out of leased office space in Northern Virginia was further reinforced by a seemingly inequitable change to a metric used to assess DOD owned space. This metric was adopted by the Chairman of the Infrastructure Steering Group in a memorandum on February 15, 2005. The metric associated with DOD's new antiterrorist standards allowed activities that are in DOD owned space to receive a score of 1, while activities located in leased locations where DOD represents 25% or more of the occupancy would receive a score of 0. The memorandum stated that *"the implication of this metric change is that all leased space will now be largely scored poorly. The formalization of this methodology has a minimal impact on the military value results. The results of this change are consistent with the strategy used by HSA JCSG to pursue leased space."*

It is difficult for me to understand why an activity in DOD owned space would arbitrarily score higher for force protection than an activity in leased space simply because of title ownership. However, DOD changed the metrics late in the process to treat these spaces differently. One can only conclude, as their own statements

demonstrate, their goal was simply to get out of leased space per the OSD imperative. If force protection /antiterrorism measures had been consistently assessed, the effects of installation deficiencies most likely would have dramatically altered the military value of the Washington Navy Yard and the US Marine Corps Barracks at 8th & I in the District of Columbia, Los Angeles Air Force Base, California, and leased facilities at Headquarters, Southern Command in Miami, Florida, to name a few.

The minutes from the Technical Joint Cross-Service Group of February 22, 2005 clearly state that DARPA and ONR had higher quantitative military values than the Anacostia Annex in the District of Columbia, or at the Naval Military Medical Center in Bethesda, Maryland, but the decision was made to move them to the lowest military value location of the three based on the justification to "*Vacate leased space in the National Capital Region.*" The BRAC Red Team also stated in the March 22, 2005 briefing notes that "*since ONR and DARPA are in leased office space currently, there is no need to justify military value decisions as compared to Anacostia.*" (The site originally slated to receive these functions). Once again leased office space is mentioned as the driver and military value is deemed irrelevant.

Military value was given priority in the legislation because this process was designed to improve capability and free up resources for other military activities. However, the arbitrary mandate to vacate leased office space in the NCR will have the effect of reducing military value. You may remember the statement by a representative from the Missile Defense Agency before the commission on May 27, 2005. That individual, and representatives of the other technical commands (DARPA, ONR, DISA, HRC, NGB, WHS, AF, and DTRA), stated their concerns with the risk of losing people and detrimentally impacting the **mission**. In the case of the activities in these leased office spaces, whether it is DARPA, ONR, DISA, MDA or many of the others, the military value is provided by the people. As you have all heard, many of these people have no intention of moving and will simply seek other jobs. Some may not believe this to be the case, but you will soon here from one senior DOD science and technology official who believes he will lose many of his employees and his ability to serve the war-fighter will be severely diminished if his activities are moved from the area. He is taking a great personal risk by testifying today and I commend him for his sense of duty. Furthermore, DOD, in its savings analysis, acknowledges that it will lose people. You must consider that these people cannot be easily replaced. They have advanced degrees and as you know, it is difficult to hire people of that caliber and even harder to hire those who can get a clearance. Even if they can get a clearance, the current backlog is 328,913 people awaiting clearance. It will take years to work through this backlog. Rather than advance military value, the recommendation to move these activities from this area would dramatically hinder it.

The problems identified above are not isolated. I would like to draw your attention to the minutes of the Technical Joint Cross Service Group of November 18, 2004. According to one participant in that meeting: "*The Technical Joint Cross Service Group (TJCSG) has registered 29 closure/realignment scenarios on the Department's Scenario Tracking Tool. But 20 months after the TJCSG's first deliberations in March 2003, and with the Cost of Base Closure and Realignment (COBRA) data calls set to launch in a matter of days – not one scenario is the output of the Linear Optimization Model (LOM), not one is driven by data on excess capacity, and not one reflects data-derived military value. In short, not one is the result of quantitative analysis. All are instead the product of military judgment. Military judgment is a critical part of our process, but it is subjective by nature and strongly dependent on the mix of individuals within the TJCSG. The process was designed to be data driven for those very reasons, but it has drifted into one that will be, at best, data-validated, and at worst, data-rationalized. Without proactive measures, the scenarios will be difficult to defend before the BRAC Commission.*"

My observations are consistent with the testimony of witnesses and Congressional delegations around the country to date who have presented the Commission firm evidence supporting similar observations of questionable data and an internal collapse of the quantitative analytical foundation in lieu of other guidance provided by senior defense officials. These observations are also consistent with issues raised by the Government Accountability Office in its July 1, 2005 report to the Commission and to Congress.

The issue of force protection is important and can and should be addressed outside the BRAC process so that other options, all options, can be considered. Leased space should also be addressed outside of the BRAC process since it does not require a BRAC to move from leased space. The Department elected to work outside the BRAC process with the State of Florida in finding a suitable replacement for the leased building in which US SOUTHCOM HQ currently resides. The Department can and should do the same with respect to the activities in leased space in the National Capitol Region. According to the law, all installations must be treated equally.

Inaccurate and Incomplete Data

In the case of leased office space in northern Virginia, the Department of Defense did not ensure—as required by law—that the recommendations submitted concerning the closure or realignment of a military installation were based on data certified by designated officials to be accurate and complete information. The H&SA JCSG initially relied on capacity data for administrative functions provided and certified by the military services and defense agencies. Upon review of the capacity data received by H&SA, the group realized that less than 20% of the leased locations (coded as administrative functions in the installation inventory provided in appendix B "inventory of Installations" of the force structure report required by Section 2912 of the Defense Base Closure and Realignment Act of 1990), had certified data available, severely limiting the groups ability to perform an accurate and complete capacity assessment. Furthermore, the certified data received in response to specific questions pertaining to an assessment of leased locations and force protection was inconsistent or contained obvious errors. In an October 2004 memorandum to the Infrastructure Steering Group describing military value scoring changes, the H&SA JCSG concluded that *"based on an analysis of the effect of the missing, wrong, and incomplete data on the proposals, there were some data issues that could affect the generation and comparison of proposals by group members."* The incompleteness of data pertaining to leased space finally resulted in the adoption of questionable assumptions in January 2005 pertaining to the cost of leased space, status of leases, and compliance with antiterrorism/force protection standards, which were then inconsistently applied to proposals under consideration at that time.

The Department of Defense Inspector General (DOD IG) coined the phrase "derived data" in its draft report to refer to information that was established by means other than a data collection from the military department or defense agency and could not be certified. This derived data included critical information related to lease costs, costs to implement force protection measure, and space requirements for new construction. The DOD IG also counted over 150 data discrepancies in certain recommendations proposed by the H&SA JCSG that did not use certified data in the OSD database. Although these discrepancies were raised before the submission of the final report to the Commission, the H&SA JCSG made no attempt to correct their final military value report.

The Government Accountability Office (GAO) stated in a July 1, 2005 report that *"Using **mostly** certified data, the headquarters group examined capabilities of each function from questions developed to rank activities from most valued to least valued. Exceptions occurred where military responses were slow in arriving, contained obvious errors, or were incomplete, and in these cases, judgment-based data were used (emphasis added)."* MOSTLY certified data is not in compliance with section 2903(3)(C)(5)(A), which states that *"Each person referred to in subparagraph (B), when submitting information to the Secretary of Defense or the Commission concerning the closure or realignment of a military installation, shall certify that such information is accurate and complete to the best of that person's knowledge and belief."* How can a person certify "judgment-based, derived data"?

Inaccurate Costs and Savings Estimates

As identified by the Government Accountability Office, the H&SA JCSG assumed savings for reductions in military personnel as a result of recommendations to collocate leased space onto military installations that were not certified by the affected military department. For example, according to the transcripts from the June 15, 2005 hearing in Fairbanks, Alaska, DOD counted as savings the salaries of personnel who will remain in the military and perform the same mission—just in a different location. This is not a net "savings." These personnel remain in the military.

Since 32% of BRAC savings come from personnel reductions, this calls into question the entire savings estimate—particularly since we are not reducing any meaningful force structure.

My staff also discovered peculiarities associated with the savings estimated for the movement of miscellaneous Air Force activities from leased space to Andrews Air Force Base. The report outlining the Secretary's recommendations states that there is a one year payback and a \$30.8 million annual savings after implementation of the move. However, the minutes of the meeting on this subject that was held on January 13, 2005, state that there is a 100 + year payback and an annual savings of only \$0.7 million thereafter. What happened to dramatically change the numbers? The Department packaged this recommendation with an unrelated recommendation to relocate miscellaneous National Guard Bureau functions in leased locations that did achieve savings. Would it not have been a wiser course of action, one that would save more money for the US military, to just move the National Guard function and leave the Air Force activities where they are? If saving money was the imperative that would have happened. Unfortunately, it appears that vacating leased office space was the imperative, therefore the numbers were made to fit.

In the recommendations focused on leased space, the H&SA JCSG also derived substantial "savings" from a questionable assumption of the amount of square footage of new military construction required to compensate for vacating leased office space. For example, the recommendation to relocate miscellaneous Air Force and National Guard Bureau leased space to Andrews Air Force Base and Arlington Hall would result in the reduction of 532,000 leased gross square feet. Yet, the new construction in the recommendation proposes to construct 358,485 gross square feet. The capacity analysis for Arlington Hall reveals an existing deficit of 61,815 square feet, while Andrews AFB has a surplus of 42,019 square feet. Neither the COBRA footnotes nor the proposed reduction in military personnel and contractors can justify the reduced square footage required to support the recommendation.

Also, the H&SA JCSG did not use certified data to estimate the savings to be gained by vacating leased office space in northern Virginia. Although initial data calls attempted to gather the costs associated with leased space, this information was eventually abandoned and replaced with an arbitrary cost per square foot "expected" to be incurred in future leases. No attempts were made to determine the conditions of the leases to be affected, expiration dates, and current usage, in contrast with other military departments and JCSG's which incorporated actual lease costs and supporting costs into their analysis. In certain cases, savings were taken as part of the BRAC recommendation for personnel previously scheduled to return to the Pentagon upon completion of renovations.

There is also evidence that individuals within the BRAC process were trying to make the numbers fit their desired scenarios. The minutes of the H&SA meeting on February 24, 2005, state that, as a result of the decision by the Chief of the Army Reserve to approve an increase from 7% to 20% personnel savings associated with moving the Army Reserve Command to Fort Detrick, MD, *"members express concern that people are beginning to do some gaming with the numbers now and they intend to make the ISG (Infrastructure Steering Group) aware."*

Another dramatic problem associated with assumed, not actual, savings is demonstrated in the movement of the Extramural Research Program Managers from their current location to the National Naval Medical Center in Bethesda. According to the data they used in their analysis, it will cost approximately \$1.5 million to build a new parking structure. Upon further investigation with the Department of the Navy, we found that this number was an error and that it will actually cost \$17.835 million for the parking structure. We also found that the rents that were cited in the Technical Joint Cross Service Group's (TJCSG) analysis of the leased space that the Extramural Research Program Managers currently occupy was dramatically different from what the Department is actually paying for rent. This was most notable in the case of the Defense Advanced Research Projects Agency which is listed as having \$38.5 million in recurring savings associated with the relocation. However, this is based on data which includes a number of errors. DARPA itself has acknowledged to the Senate Armed Services Committee that their lease costs are only \$8.9 million per year (the buildings landlords state that it is \$6.2 million) and that the remaining \$29.6 million is associated with such things as Information Technology requirements, mailing, supplies, equipment, and telephone service. The costs associated with these items would not be saved on a recurring basis. Furthermore, the TJCSG's analysis does not include the cost of the lease payments that the General Services Administration will continue to incur, or the \$7.1 million contract termination cost to restore the facilities, even though section 2913 of the Defense Base Realignment and Closure Act requires that such costs be accounted for. Section 2913(e) states:

"the selection criteria relating to the cost savings or return on investment from the proposed closure or realignment of military installation shall take into account the effect of the proposed closure or realignment on the costs of any other activity of the Department of Defense or any other Federal agency that may be required to assume responsibility for activities at the military installations."

In the case of leased office space, that means that lease payments for which GSA or any other entity will be responsible must be deducted from the calculation of "savings".

Furthermore, the recommendation associated with the movement of the Extramural Research Program managers significantly understates the cost of sustainment and recapitalization for the proposed building at Bethesda--despite DOD standards in these two areas. The inclusion of the true costs associated with these two areas would add several million dollars to the recurring cost of moving to Bethesda or any other installation.

The Government Accountability Office found a number of problems in the way that the Technical Joint Cross Service Group accounted for personnel and leased office space savings. For example, the GAO found that, *"the recommendation to co-locate the extramural research program managers also includes \$2.7 million in*

annual recurring savings for the Defense Threat Reduction Agency vacating leased space; however, the agency is already scheduled to move to Fort Belvoir, Virginia, in January 2006."

Taken together, these corrections increase the one time costs to the Department from \$153.5 million to \$176.9 million, and reduce the net present value of the savings over 20 years from \$572.7 million to \$143.2 million—a \$430 million difference.

Mistakes of this magnitude in these areas, and others we have heard of, call into question whether or not there will be any savings associated with BRAC recommendations on leased office space if the Commission were to approve them.

Options

Mr. Chairman and members of the Commission, I understand the intent of the Department to reduce leased office space as part of the process to identify excess facilities on military installations. Vacating leased space is a smart move when you have identified excess capacity and underutilized facilities on military installations. The first goal should be to minimize leases and to maximize the effective use of all facilities on military bases. But leases have served and continue to serve a vital purpose for all federal agencies—that is, to position manpower and resources efficiently near established functions where and when capital investment may not be required. As in private industry, the government uses leased space for flexibility and reduced operations and maintenance costs. It makes no sense to take on the substantial cost of new construction and a perpetual operations and maintenance tail for functions that do not need, and actually may suffer from isolation on a military installation, detached from supporting private sector interests. Secure leased space serves as an enabler and should not be dismissed without a full assessment of the costs and benefits.

Other options exist outside of the BRAC process to address leased space, one of which the Governor will raise shortly. The commission will have to assess whether decisions to vacate leased space are best handled as a mandate through the BRAC process. In my opinion, the Department got it right when they decided that the same lease and force protection issues at the Headquarters complex for the United States Southern Command in Miami Florida would best be handled outside the BRAC process. The Department got it right when they decided that the same lease and force protection issues at the Headquarters, Joint Forces Command in Suffolk, Virginia would best be handled outside the BRAC process. We should insist on consistency.

As to the issue of security, it is imperative that protect our most precious national resource, the men and women serving our nation. Prudently and consistently imposing force protection and anti-terrorism standards for all federal employees is the right thing to do. Whether it is the Capitol, the Internal Revenue Service, the new Department of Transportation Complex, or the Army Human Resources center, all American citizens deserve the highest measure of protection in their workplace. I have been working with the Department of Defense for over two years now, well before the BRAC recommendations were announced, to push them for an investment plan on what resources would be needed to meet DOD's unique standards and goals for force protection and anti-terrorism. I am still not aware of any Department assessment on the true costs required to meet their force protection standards. The BRAC recommendations for force protection will not resolve DOD's challenge to secure all facilities not located on military installations. What the BRAC recommendations will do is to severely curtail the innovation and cooperation currently underway between the private sector and the government to provide more secure leased space, while maintaining the current benefits of flexibility and reduced costs. Trying to solve force protection concerns in leased space in the BRAC round at the sacrifice of military value and at a prohibitively high cost was a mistake that needs to be corrected.

The Commission should allow the Department to complete force protection assessments for leased office space in order to make decisions based on actual facts, a true assessment of costs, and prudent judgment, as opposed to derived data, and arbitrary assumptions of savings. The Department should continue to work with local communities, the private sector, and installation commanders to identify and provide appropriate alternatives to any existing locations that do not have adequate force protection, or are otherwise too expensive, upon expiration of existing leases.

Other Concerns

Mr Chairman, I would also like to take a few minutes to outline my concerns regarding the recommendation to close Fort Monroe and move significant activities from Fort Eustis. Everyone recognizes the historic nature of Fort Monroe and its unique physical characteristics, which provide excellent force protection. The decision to close Fort Monroe could not have been an easy one. It also may not have been wise. By excluding the

extensive costs to cleanup the facility, and ignoring the legal confusion surrounding the ownership of the property, the Department may well have put forward a recommendation which will cost the people of the United States far more than it will ever save. I ask you to look closely at the Department's rationale and the true costs to the Department, and explore other options, such as that put forward by Mayor Kearney, before you make any final decision.

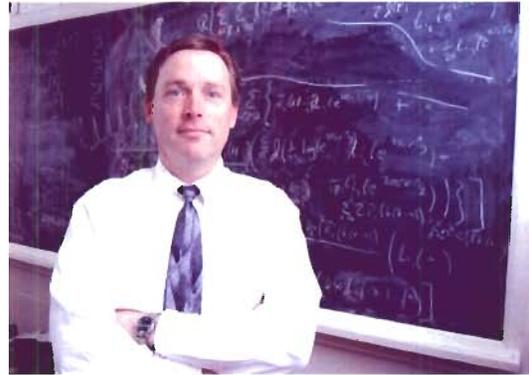
I also believe that the recommendations surrounding Fort Eustis may not result in the best solution for the US military and the American taxpayers. The cost to move the Aviation Logistics School in particular will cost \$492 million to implement and only save \$77 million over the course of 20 years—if the estimates are correct. The Department should have examined this wonderful facility more closely in its decision to relocate the Missile Defense Agency and the Army Materiel Command. The proximity to the Pentagon and the collection of highly skilled researchers, engineers, and technicians resulting from the presence of NASA Langley and Jefferson Labs would make this an ideal location for these activities if more suitable locations cannot be found in Northern Virginia. I ask that the Commission speak with Mayor Frank regarding his efforts to partner with the Department of Defense to provide them with the facilities they require.

Conclusion

Mr. Chairman, given the quantity and the quality of the data that has been provided, I understand the challenge you have before you. In turn the Congress will take up these recommendations. My staff, like yours, has been working through the unprecedented volumes of data and documents. We will continue to send information to you and your staff that will be important to your deliberations. This is a challenging BRAC round. The recommendations are not simple and the supporting documents have a number of errors that must be assessed. Ultimately, in order to protect the integrity of the process, and in fairness to all those impacted by BRAC decisions, the commission should follow the norms of law. The Department of Defense must prove its case beyond a **beyond a reasonable doubt**. You have a responsibility to ensure that final BRAC recommendations are grounded in accurate information and guided by the criteria established in law, particularly military value. I commend you for your efforts and wish you luck.

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BIOGRAPHICAL NOTES
for
Robert K. McMahan, Jr., Ph.D.



Dr. McMahan is Senior Advisor to the Governor of North Carolina for Science and Technology and the Executive Director of the North Carolina Board of Science and Technology. In this role he advises the Governor, the Secretary of Commerce, the General Assembly, and the Boards of Science and Technology and Economic Development about science and technology matters and supports and advises the state government on science, technology, entrepreneurship and technology-based economic development. He also serves as the primary liaison to the University of North Carolina System, the SBTDC, the NC Community College System, other private colleges and universities, key agencies such as the Biotechnology Center and MCNC, and associations such as CED, NCTA and NCBIO with regard to these issues.

Prior to this he was a Senior Technology Strategist for In-Q-Tel, a private venture capital organization funded by the CIA and NIMA, where he was part of a team responsible for developing a technology investment strategy for the CIA, and then deriving, molding, and structuring individual investments and technologies within the portfolio. Before joining In-Q-Tel, he was Executive Vice President of Engineering / Research and Development for the Swiss-based, mid-cap GretagMacbeth, LLC, where he was responsible for the company's worldwide research, engineering, and product development activities and for the creation and operation of the company's Advanced Technology Laboratories in the Research Triangle Park. He joined GretagMacbeth after its acquisition in 2000 of McMahan Research Laboratories, the advanced technologies company for which he was President & CEO and which he founded in 1987 in Cambridge, MA and expanded to the RTP in 1989. Dr. McMahan has been involved in the creation of a number of technology startups, and has participated in equity and LBO capital raises.

In addition to his duties with the state, Dr. McMahan also currently holds the positions of Research Professor of Physics and Astronomy at the University of North Carolina at Chapel Hill, where he teaches and conducts research in cosmology, instrumentation, and the large scale structure of the universe, and Adjunct Professor of Technology and Management at the North Carolina State University College of Textiles. Dr. McMahan received Bachelors Degrees in Physics and in the History of Art from Duke University in 1982, a Ph.D. degree in Physics from Dartmouth in 1986, and a postdoctoral fellowship from the Harvard University / Smithsonian Astrophysical Observatory Center for Astrophysics. He has published over forty papers in scientific and engineering journals, sits on a number of state and corporate boards and commissions, and holds multiple patents in the field. He, his wife Karen, and their two sons live in Chapel Hill.