ARMY INSTALLATIONS: MOBILIZATION AND MANAGEMENT STRATEGIES OF STRATEGIC CONSEQUENCE

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This SRP is submitted in partial fulfillment of the requirements of the Master of Strategic Studies Degree. The U.S. Army War College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

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U.S. Army War College
CARLISLE BARRACKS, PENNSYLVANIA 17013
**Report Documentation Page**

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE
   18 MAR 2005

2. REPORT TYPE
   -

3. DATES COVERED
   -

4. TITLE AND SUBTITLE
   **Army Installations Mobilization and Management Strategies of Strategic Consequence**

5a. CONTRACT NUMBER
   -

5b. GRANT NUMBER
   -

5c. PROGRAM ELEMENT NUMBER
   -

5d. PROJECT NUMBER
   -

5e. TASK NUMBER
   -

5f. WORK UNIT NUMBER
   -

6. AUTHOR(S)
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7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
   **U.S. Army War College, Carlisle Barracks, Carlisle, PA, 17013-5050**

8. PERFORMING ORGANIZATION REPORT NUMBER
   -

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
   -

10. SPONSOR/MONITOR’S ACRONYM(S)
    -

11. SPONSOR/MONITOR’S REPORT NUMBER(S)
    -

12. DISTRIBUTION/AVAILABILITY STATEMENT
    **Approved for public release; distribution unlimited**

13. SUPPLEMENTARY NOTES
    -

14. ABSTRACT
    **See attached.**

15. SUBJECT TERMS
    -

16. SECURITY CLASSIFICATION OF:
    a. REPORT
       **unclassified**
    b. ABSTRACT
       **unclassified**
    c. THIS PAGE
       **unclassified**

17. LIMITATION OF ABSTRACT
    -

18. NUMBER OF PAGES
    **46**

19a. NAME OF RESPONSIBLE PERSON
    -

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18
ABSTRACT

AUTHOR: Mr. James M. Coffman

TITLE: Army Installations: Mobilization and Management Strategies of Strategic Consequence

FORMAT: Strategy Research Project

DATE: 18 March 2005   PAGES: 46   CLASSIFICATION: Unclassified

The U.S. Army is currently executing the most protracted mobilization effort since the end of World War II. It is also facing an enormous installation sustainment challenge, which, like the mobilization effort, appears to have no end in sight. Enabling the nation's armed forces to mobilize in a decisive manner requires a substantial sustaining base. The sustaining base supports the institutional force by creating, providing, and sustaining the land component of the combatant commander's joint and multinational force. Without the sustaining base, there is no other place from which to draw on these national assets to support the National Military Strategy (NMS). This Strategy Research Project (SRP) examines the Army's installation management and sustaining base practices and strategies, and then analyzes current installation management efforts. It also examines the effects of Base Realignment and Closure, environmental concerns, the potential impact of the Army Modular Force, and restationing. This SRP will offer recommendations addressing future installation management challenges associated with continuous mobilization efforts, organization of the Installation Management Agency (IMA), installation funding strategies, the development of mobilization support infrastructure, and the joint basing and management concept.
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ACKNOWLEDGEMENTS

Several people provided me with insight, inspiration, and support as I developed this paper. The subject matter experts at the Army War College unhesitatingly gave their time and energy to assist me in this endeavor. In particular, I wish to thank Professor James Kievit and Colonel Jiyul Kim for their steady advice and feedback as I investigated the issues formulated in this paper. I also want to thank the staff from the Office of the Assistant Chief of Staff Installation Management and Headquarters Installation Management Agency for their willingness to provide information on this subject. The AWC Library staff members were tremendously instrumental in my research efforts. Finally, I wish to thank the staff at the Installation Management Agency, Northwest Region, whose advice, guidance, and support have greatly contributed to this project.
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ARMY INSTALLATIONS: MOBILIZATION AND MANAGEMENT STRATEGIES OF STRATEGIC
CONSEQUENCE

BACKGROUND

“For all your days prepare,
And meet them alike:
When you are the anvil, bear-
When you are the hammer, strike.”

- Edwin Markman

At the strategic level, perhaps the most recognized image of military power is the rapid assembly and projection of well-equipped ready forces to a distant theater of operations. In the U.S. national psyche, images of U.S. Reserve Component (RC) forces mobilizing and deploying both RC and Active Component (AC) forces domestically or abroad to confront our enemies, to fight terrorism in places such as Afghanistan and Iraq, to conduct peacekeeping operations, and to provide humanitarian or disaster relief are one of our nation’s foremost and enduring symbols of power and commitment to national security. This reality unequivocally demonstrates the nation's capability to react in times of crisis to address threats to our national security and global interests.

Mobilization, however, is much broader than just calling up or deploying troop units; instead it is:

The process whereby a nation makes the transition from a normal state of peacetime preparedness to a war-fighting posture. It involves the assembly, organization, and application of the nation’s resources for national defense. The mobilization process encompasses all activities necessary to prepare systematically and selectively for war. The ability to mobilize effectively contributes to the deterrence of war.²

Thus, when initiated, mobilization provides a systematic methodology to harness the means chosen by our government’s senior leaders to leverage a key element of our national power through the use of the military option. The U.S. Army is currently engaged in its most protracted mobilization effort since the end of World War II.³ Mobilization of our military assets is indeed an essential element of our National Military Strategy (NMS).⁴

Enabling the nation’s armed forces to mobilize in a decisive manner requires substantial sustaining infrastructure, including a multitude of resources and management systems, power projection and support facilities, and equipment located outside operational theaters. This infrastructure creates, provides, and sustains the combatant commander’s joint and
multinational force. Without this sustaining infrastructure, there is no access to national assets to support the NMS. At Army installations, the sustaining base provides the fundamental level of this support. Army installations are a critical component of this infrastructure. In fact, 83 percent of all forces supporting Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) were projected from and continue to be supported by Army installations in some fashion or another.

Unfortunately, the mobilization effort that the Army has been involved in since the terrorist attacks on 11 September 2001 has also revealed the dreadful state of its aging infrastructure and installation readiness. Indeed, the Army’s ability to take care of its troops has been questioned at the highest levels of our leadership. Army installations have struggled to sustain their infrastructure while supporting current and ongoing missions, and simultaneously provide facilities and support to mobilizing forces engaged in Operation Noble Eagle (ONE), OEF, and OIF. For example, the mobilization dilemma at many Army installations resulted in Senator Co-chairs Kit Bond (R-Mo.), and Patrick Leahy (D-Vt.) of the U.S. Senate National Guard Caucus to request a comprehensive study by the Government Accountability Office (GAO) to determine the severity of the housing problem for both AC and RC personnel at all Army mobilization sites. The GAO report cited disparities in the Army's mobilization process, and also concluded that the Army’s current approach to address many of their mobilization challenges does not coordinate all the support costs across its’ mobilization infrastructure in order to most efficiently support the Global War on Terrorism (GWOT). Without question, the current mobilization effort has additionally stressed an aging installation infrastructure.

However, stress on our military infrastructure from the current national crisis is not the only indicator pointing to a long-recognized need for improving infrastructure management. The concept of a modular Army, known as the Army Modular Force, and the permanent return of forces [Restationing] from overseas add to the Army's installation challenges. Together with the GWOT, these simultaneous changes severely compound the installation infrastructure readiness challenge.

The modular Army concept reorganizes the force, creating an additional ten to fifteen maneuver brigade size units, made up of approximately 3,000 to 3,800 Soldiers each. These modular formations will be established in the AC, supplemented by a yet-to-be-determined number of formations that will be distributed across the Reserve and National Guard components. The strategy will produce the force depth and unit flexibility necessary to meet the challenges of the 21st century, and are designed to be a self-supporting component of the force structure designed; to meet the challenges of asymmetric warfare, to reduce the
deployment cycle on Army units, and to support the NMS. The concept does not increase the overall Army endstrength, but given the impact it's had on Army installations thus far, the reorganization could significantly impact both installation infrastructure, and sustaining base requirements.

Most recently, at Fort Stewart, Georgia, the location of the first modular unit, installation managers, Army Corps of Engineers, and construction workers are engaged in a race against time. The Fort will be home to the first modularized unit, but basic installation infrastructure must be built to accommodate this new organization. To accomplish the task, funding streams form Military Construction Army (MCA), Operations and Maintenance Army (OMA), and Other Procurement Army (OPA) have been used to finance the rapid expansion of the sustaining base to meet the Army's needs. An expedient concept used during past mobilizations to meet the nation's needs.

Figure 1 gives an aerial view of the new modular barracks for the 3rd Infantry Division at Fort Stewart, GA.

![Figure 1](https://via.placeholder.com/150)

**FIGURE 1.**

Figure 2 offers a close view of prefabricated materials used for modular barracks similar to the materials used in mobile homes.

![Figure 2](https://via.placeholder.com/150)

**FIGURE 2.**
The global commitments of our Army and the changing posture of our overseas basing strategy in Europe and Korea will also significantly impact installation infrastructure by increasing the number of units located on military installations in the Continental United States (CONUS) where current infrastructure capacity can not fully accommodate their return. Authorization to temporarily increase the Army's end-strength by an additional thirty-one thousand troops will further challenge installation leaders to accommodate what the Army calls "the most significant Army restructuring in the past 50 years." 16

Clearly the protracted GWOT has placed demands on both the mobilization infrastructure and sustaining base that constitutes "the largest movement of U.S. Forces since World War II." 17 Since November 2004, a total of 234,000 Army RC members have been involuntarily called to active duty and "the pace of reserve operations is expected to remain high due to the GWOT stretching indefinitely into the future." 18 What has become increasingly clear to Army leadership during this sustained mobilization effort is the requirement to provide rapid and recurring sustained mobilization support with no foreseeable end in sight. Also our leaders are now recognizing the Army's limited capabilities to provide specific support facilities for the prolonged mobilization mission in spite of excess infrastructure that will lead to another round of base closings in 2005.

In short, "the Army's industrial-age approach to mobilization will no longer suffice." 19 The Cold War model assumed that deploying units would vacate facilities and mobilizing units would fall-in on these facilities as stipulated in current Army doctrine, detailed in the most recent versions of Army Field Manuals 100-22, (Installation Management), and 100-7, (Mobilization, Deployment, Redeployment, Demobilization). 20 The vacate-and-move-in approach offered a significant improvement over the options implemented during the Second World War, when thousands of temporary wooden structures [commonly referred to today as Old World War II Wood] were erected at an incredible pace to accommodate the mobilization effort. However, relocatable structures are being used today to meet many of the Army's infrastructure and mobilization requirements, a modern version of the Old World War II Wood strategy.

In 1942 in the San Francisco Bay area, mobilization efforts turned the Bay into a citadel overnight; over 1,650,000 Soldiers, Sailors, Marines and Airmen departed for war duty from that area in a few months 21. The Bay area had nearly every kind of military base, from listening posts to supply depots. 22 "The war uprooted 15 million Americans to work in defense, and the Federal Lanham Act failed miserably to house them." 23 As a result, many American cities had to solve the housing crisis on their own. In the North Bay, Camp Stoneman was literally an instant city of 10,000 in dire need for basic services and utilities. Unoccupied areas including
parks and playgrounds were soon occupied with tents to house incoming servicemen before barracks could be built. Across the United States, the military rushed to build temporary barracks and support facilities to accommodate the mobilization effort, such as in San Francisco.

Figure 3 depicts a photo of the U.S. Army’s San Francisco Port of Embarkation, where troops awaiting overseas shipment were billeted in city parks and ball fields in 1942.

![Photo of San Francisco Port of Embarkation](Photo Courtesy of Golden Gate National Recreation Area, Park Archives and Records Center, Presidio Army Museum Collection)

**FIGURE 3**

Ironically, however, many of the Old World War II Wooden structures are still serving their original purpose - to house troops during mobilization. However, during the past decade the Army has advocated under the Facilities Reduction Program (FRP) to demolish many of the old wooden structures, and for good reason. These facilities were designed and built as temporary facilities; they are costly to maintain; and, for the most part, they have outlived their usefulness. It is not surprising the Army continues to aggressively seek funding to eliminate these inefficient, outdated facilities. At installations where FRP has not been aggressively implemented, the Old Wood has precluded such drastic housing measures as seen during World War II, as many of these facilities are filled to capacity, housing Soldiers in support of the current mobilization effort. If these installations had already removed their World II Wood, the cost for housing troops in transit would have come with a significant price tag. In fact, today there are Army installations with a primary mobilization mission that rely heavily and, in some cases, solely on the Old World War II Wood to house troops and provide square footage for various functions, from office space to maintenance facilities. At many other installations where mobilization is not considered a primary installation mission, they provide the infrastructure with the flexibility needed to accommodate the current unforeseen mobilization mission growth. But erecting
temporary facilities like the Old World War II Wood for mobilization, or for any other purpose, is no longer viable, and not even considered in today's mobilization environment. The current trend is to construct semi-permanent structures known as relocatables.

Figure 4 is a photograph of the 78th Coast Artillery Soldiers pitching camp in Golden Gate Park, only two months before the United States entered World War II in 1942.

![Figure 4](image)

**PHOTO COURTESY OF GOLDEN GATE NATIONAL RECREATION AREA, PARK ARCHIVES AND RECORDS CENTER, PRESIDIO ARMY MUSEUM COLLECTION**

A different model must be developed to meet today's requirements for rapid and prolonged operations. Because of the Army's poor Soldier support facility infrastructure, and inability to mobilize at installations where more suitable infrastructure exists, off-post hotels have been housing mobilized Garrison Support Unit (GSU), CONUS Support Base (CSB), and Medical Holdover (MED-HOLD) Soldiers at a cost of over $85 million since the beginning of the Army's mobilization efforts in support of the GWOT. Needs for extended medical care, for further evaluations, and for processing Soldiers arriving in a non-deployable status during the initial mobilization phase have exacerbated the situation beyond initial estimates. "This is not the strategic context for which we designed today's United States Army. Hence, our Army today confronts the supreme test of all armies: to adapt rapidly to circumstances that it could not foresee."

**ANALYSIS:**

**HOW THE TREND DEVELOPED - THE LONG AND TRAGIC PATH TO THE DECLINE OF U.S. MILITARY INSTALLATIONS**

Following the end of the Cold War, DoD methodically and deliberately reduced installation funding. The Defense Base Realignment and Closure (BRAC) Act of 1988 was the primary authority for reducing installation funding requirements; BRAC authorized closing or realigning
installations that no longer directly enhanced DoD mission capabilities or readiness. However, the arduous and often complicated process for closing or realigning excess installations continues to strain Army resources, further reducing the returns expected from the initial BRAC strategy. Many installations identified for potential BRAC action in the initial assessment by the BRAC Commission are still operating at capacities not anticipated during the initial installation assessment, essentially reducing the validity of initial BRAC cost benefit estimates.

Although the BRAC process promised to create substantial savings for the Army, the full benefits as forecasted from the original BRAC legislation have yet to be realized. In the case of the Pueblo Army Depot, now known as the Pueblo Chemical Activity, the BRAC Commission estimated that chemical demilitarization would be completed by 1997, thereby ending the installation’s final mission, which had precluded its selection for closure during the 1988 BRAC round. To date, the chemical demilitarization effort has yet to demilitarize one chemically [agent] filled round of ammunition. Many of the Army’s U.S. chemical installations identified under the BRAC process have survived under circumstances similar to those of the Pueblo Chemical Activity. From a mobilization perspective, the BRAC process succeeded in reducing much of the nation’s mobilization capability. Installations like Fort Ord, California, that played a significant role during World War II as a regional reception, training, and mobilization center are no longer part of the mobilization equation.

Today, DoD estimates that 25 percent of its current infrastructure is not needed. This infrastructure has aged beyond acceptable levels, but continues to consume infrastructure dollars for upkeep. Dollars spent to maintain these facilities should be better spent on more urgent transformation priorities. This is why Secretary Rumsfeld is calling for more reductions in facilities and installations as indicated in the 2005 BRAC announcement.

The BRAC process, however, did bring a measure of fiscal relief. From 1989 to 1997, the Department of Defense reduced total active duty military end strength by 32 percent. The 1997 Quadrennial Defense Review (QDR) forecasted a further drawdown towards the 36 percent mark. However, recent announcements of troop increases to fight the GWOT will most likely reverse that forecast. After four base-closing rounds, the CONUS military infrastructure has been reduced by 21 percent, and the Outside of the Continental United States (OCONUS) infrastructure by 60 percent. One hundred of 500 U.S. military installations have been closed. The OCONUS reduction is nine times that of CONUS: Over 900 facilities have closed. The Army in Europe alone has closed the equivalent of 12 major U.S. maneuver bases, with more closures sure to follow. The impact of the next BRAC on Army mobilization infrastructure is of
course unknown. However, given the scarcity of this infrastructure, further closures will most likely have a profound outcome.

Environmental compliance presents another barrier to final closure; environmental issues have slowed the BRAC process and ultimately consumed fiscal returns, a fundamental rationale for BRAC initiatives. Environmental cleanup costs were not included in the DoD BRAC estimates beyond 2001 net savings figures, so it is difficult to ascertain accurate environmental costs for cleaning up unneeded military installations and facilities.38

A recent USA Today article may provide a glimpse at what could become a tremendous strain and ultimately a competitor for scarce installation DoD resources: One such controversy centers on an 1800-acre track of land sold to a developer through the cities of Denver and Aurora, Colorado. The land once belonged to the Air Force, but was sold for $8 million in 1994. At the center of the controversy is the $15 million cost of removing asbestos from the soil at the former Air Force base, which is now home to hundreds who have taken up residence in over 2,800 homes that cost over $500 thousand each, on average. Parks and shopping centers have also been built on the former base.39 Other former military installations pose significant environmental liabilities. The Alameda Naval Air Station, California has similar problems. Although this property has yet to be developed, environmental cleanup costs will range from $180 million to $450 million. Here the potential land managers are not moving ahead until environmental issues are resolved. In the meantime, the Air Station and many others like it continue to threaten the environment and drain defense dollars.40

Under the current administration, the Services have enjoyed some fiscal relief from environmental regulators, but administration and political tides can easily reverse the current trend. If the course changes, the DoD could be facing hundreds of millions of dollars to deal with pollution on both former and active military installations.41

The environmental news does not get any better with time. According to the GAO, an estimated 15 million acres of military land is considered polluted. The costs for environmental cleanup in the 1,400 sites range from $8 billion to $35 billion. With our current annual spending at $200 million for munitions clean up alone; it could take a century to deal with environmental matters.42

The first four BRAC rounds were estimated to cost $23 billion, but they would yield a savings of $36.5 billion, creating a total net savings of $13.5 billion once the rounds where concluded.43 Other estimates projected savings of near $17 billion.44 These estimates included assumptions beyond the elusive environmental estimates as mentioned earlier. One such DoD assumption is that half of the savings will be gained from assumed savings in Operation &
Maintenance (O&M) costs. There is no indication of whether that estimate is based on the fully funded rate, which is something that is essentially unheard of in the installation business. However, the O&M savings estimates are based primarily on reductions in civilian personnel, not the reduction of infrastructure.45

Despite such measures, the nation's defense infrastructure has suffered from chronic underfunding and neglect. Defense infrastructure and facilities are supported in two ways: through sustainment and recapitalization. In recent years, sustainment was funded at 75-80 percent of the recognized requirements necessary to meet facilities and installation objectives. Since World War II, underfunding has systematically accelerated the decline of our installations' infrastructure. This underfunding came at times when there was insufficient funding to sustain existing capabilities. Likewise, during the daunting and often deliberate process of balancing mission readiness requirements and installation infrastructure sustainment, the scales persistently tipped in a direction that did not favor a robust installation sustainment program, not to mention recapitalization. From an installation manager's perspective, the signals were clear: Reduced resource streams would make effective facility management nearly impossible; in fact, strapped managers could only witness the deterioration of installation infrastructure and capabilities. Supplementing underfunded base operations with Sustainment, Restoration & Modernization (SRM) dollars also contributed to the decay. We have thus witnessed the methodical deterioration of our military facilities, with an estimated restoration backlog at over $60 billion today.46

Recapitalization has also been severely underfunded. In comparison to the private sector, with its recapitalization rate of once every 57 years, DoD has fallen well short of that standard. In fact, in 2001, the DoD recapitalization rate was 192 years, -over three times that of the private sector.47 The Army's Fiscal Year (FY) 2005 budget includes $4.3 billion to reverse their recapitalization trend, to a target rate of 67 years by FY 2008.48 This investment strategy initially lowers the Army's recapitalization rate to 107 years; it represents a significant effort to counter the rising recapitalization rate.49 To meet the Army's target rate 67-year goal, the next four budgeting cycles must sustain a recapitalization-funding rate of no less than $675 million annually.

New construction will initially reduce the recapitalization rate, but under the Valued-Engineering (VE) concept this reduction can be misleading. The Army Corps of Engineers (ACOE) formally defines VE as "the organized study of functions to satisfy user needs with a quality facility at the lowest life-cycle cost through applied creativity."50 However, too often it is used to reduce the costs of MCA projects when bids are above authorized program limits. This
short-term strategy reduces initial construction costs by decreasing subsystems' quality, which ultimately reduces the longevity of those facility subsystems. Typically, major subsystems such as roofing systems and Heating Ventilation and Air Conditioning (HVAC) systems fall victim to the VE cost-cutting process. Practices that include replacing standing seam roofs with shingle type designs and high efficient HVAC systems with less efficient models are used to ensure the up-front building costs are contained within programmed estimates. These initial short-term cost avoidance measures translate into long-term sustainment challenges that further erode the sustaining base. Many of today's installation challenges are the inevitable outcome of decades of underfunding and pushing bills into the future.

THE TRICKLE DOWN EFFECT

For the Army, adequately funding the sustaining base to support mobilization essentially comes down to the funding and management of two essential installation accounts: SRM, and Base Operations Support (BOS). These accounts are the lifeblood of the Army Installation; they sustain a detectable heart rate on existing and future installation infrastructure. The Army sustainment funding for FY04-09 was budgeted at 82 percent, far less than the previous year. Restoration and modernization for Army facilities has actually never been funded. Despite the lack of funding for these critical accounts, Army installations have managed to keep the lights on by supplementing these accounts with mission dollars. However, this practice has created the illusion that funding levels were sufficient, when in fact they are woefully underfunded. In the end this practice degraded the funding metrics used to forecast and sustain these accounts, further contributing to the neglect of installations, and the Army’s capability to assess overall installation readiness.

Without formal protection or “fencing” of installation resource, they have often been considered low-hanging fruit, ready for picking in the resources management business. Management decisions have led to easy transferring, or reduction of these dollars, often without reimbursement. These transfers were often a result of a command redirect, which essentially used these dollars as bill payers for non-SRM and BOS related requirements. Senior Mission Commanders (SMC) who also served as installation commanders made such decisions to meet short-term contingencies. In most cases such individuals were charged with keeping watch over scarce installation dollars, but they also had a mission responsibility. Given the complexities, demands, and pressures associated with mission readiness, it is neither unreasonable nor unexpected to see decisions that favored a grander strategy of unit readiness in support of the NMS. However, the lack of a holistic strategic vision for Army installations all
but eliminated the advocacy needed to secure funding in the Army's Planning, Programming, Budgeting, and Executing System (PPBES) to support the requirements the Army struggles with today, both tactically and operationally, at the installation. Indeed, the Army's decaying installation infrastructure has finally emerged as a strategic issue.

To address Army installation readiness at the strategic level, the Army developed a management tool to quantify installation readiness. The Installation Status Report (ISR) takes a significant step in the right direction. It makes installation readiness an issue at the senior levels of the Army. The ISR is now equivalent to the mission Commanders' Unit Status Report (USR). The ISR assesses the condition of installation infrastructure, environmental programs, and base support services using established Army-wide standards codified in Army Regulation 210-14, The Army ISR Program. The ISR provides executive level information to senior Army leaders to validate, prioritize, and strengthen management actions and decision-making that influence Army installation readiness. The ISR will ultimately influence Department of the Army (DA) decisions on funding for SRM, BASOPS, MCA, Army Family Housing (AFH), BRAC, stationing actions, the Focused Facility Strategy (FFS), and the Strategic Readiness System (SRS) measures.

Following the first Gulf War, the Army created the Army Strategic Mobility Program (ASMP), now referred to as the Army Power Projection Program (AP3). ASMP and AP3 were designed to ensure that critical installation infrastructure was built to enable the rapid projection of Army forces. The AP3 eliminated most of the mobilization infrastructure funding conflict at the installation level, since AP3 infrastructure programming and funding were managed directly by the newly formed AP3 organization within the Army G4. The AP3 ensured the preparedness of Army air, rail, sea, and line haul capabilities, targeting key mobilization infrastructure at the Army's Power Projection Platforms (PPP) and Power Support Platforms (PSP). However, the AP3 does not sufficiently address Soldier support facilities requirements, which are a significant challenge to today's Army. The big brother advocacy created by the AP3 is a critical necessity not only to ensure the success of these Army facilities, but also to separately manage funding outside of the SMC and Major Commands' (MACOM) circles of influence. The SMCs and their MACOMs no longer can choose between mission requirements and installation support at installations where the Army's PPPs and PSPs are located. The AP3 eliminated this conflict. However, other command complexities negatively impacted installation funding.

Under the former MACOM system, installation command tours typically did not exceed two to three years; therefore these time constraints had limited opportunity to influence the strategic direction of "their" installations. Further complicating the situation at the strategic level
was the fact that SMCs reported to one of many MACOMs within the Army. These MACOMs competed fiercely for their share of installation dollars at the Department level. More often than not, one or two of these MACOMs secured a larger share of the overall installation budget. This competition has been alleviated with the creation of the Installation Management Agency (IMA), but the Garrison Commanders (GCs) under this new organization also have limited influence on installation management, since their tours are similarly limited. At the 2003 Army Communities of Excellence Awards, General Jack Keane, Vice Chief of Staff of the Army, said he was tired of visiting installations and ‘seeing the Haves and the Have-nots.’

Further, the typical funding process for most MCA projects extends over a five-year cycle. So, given senior mission/installation commanders’ limited ability to see projects through under their watch, scarce SRM and BOS funds have often been redirected to build or supplement facilities costs and pay bills that are not in the Army’s overall strategic interest, as limited as that strategy may have been.

After extensive consideration of how to more efficiently manage Army installations, senior Army leadership created the IMA. This agency is now a critical component in the Army’s ongoing effort to transform into a more agile and responsive force. Established on 1 October 2002, the IMA is the single agency responsible for worldwide Army installation management. Although creation of the IMA may have eliminated or reduced the conflicts associated with a single chain of command for installation management, challenges remain as we have seen.

Organizationally, the IMA is aligned as a Field Operating Agency (FOA) under the Assistant Chief of Staff for Installation Management (ACSIM). Both organizations are directed by a major general. The two organizations fall under the Assistant Secretary of the Army for Installations and Environment (ASAI&E), which is under the leadership of a politically appointed Senior Executive Service (SES) Civil Servant, who, along with the senior Army leadership, sets the strategic direction of the ACSIM and subordinate organizations, including the IMA. The primary function of the ASAI&E is to approve related programming, budgeting, and annual appropriation spending plans. In my view, this hierarchal organizational relationship violates basic Army chain of command principles. If installations are to be managed as strategic assets, the IMA should be organizationally aligned to provide program visibility directly to the senior army leadership.
RECOMMENDATIONS FOR REVERSING THE TREND: SOLIDIFYING THE STRATEGIC LINK BETWEEN MOBILIZATION, INSTALLATION SUPPORT INFRASTRUCTURE, AP3 AND BEYOND

First, the IMA and ACSIM should be consolidated and recognized as a MACOM organization. Its primary purpose is to review and integrate the fifteen different MACOM installation management philosophies into one cohesive Army installation management function. In order to do this successfully, the agencies must be organized and aligned like those with similar authoritative and fiscal responsibilities. This would better posture the organizations to accomplish its vital mission during these turbulent times. This reorganization would allow the organization to focus more on strategic matters, such as increased base support funding, GWOT support, Modular force, restationing, BRAC, Morale, Welfare and Recreation (MWR), Well-Being, competitive sourcing, privatizing utilities, housing, (family quarters, barracks and lodging) infrastructure, and managing installations as Flagships, rather than focusing on issues limited to the operational and tactical levels. A four-star general officer would determine the organizations direction and provide the advocacy necessary to work the difficult issues both inside the Pentagon and on Capitol Hill. However, the linkage between the agency, MACOMs, Senior Mission Commanders and Headquarters DA must foster a seamless relationship, affording the insight necessary to articulate priorities for critical initiatives such as modularity and Unit Set Fielding (USF). These programs and many others like them are resource intensive, which the agency must be able to provide accurate and timely information to the MACOM and SMCs regarding mandated timelines. This coordination will reduce the level of frustration currently experienced by MACOM and SMCs who see the pending missions looming with no resources coming their way. The assignment of liaison officers to MACOM, SMCs, HQ IMA, and the IMA Regions would serve to foment relationships necessary to enable the assessment and prioritization of key management decisions, including those made during ISR deliberations. They would act as the single focal point for all agency, MACOM and SMC actions, ensuring the chain of command is actively engaged in the assessment and prioritization process by providing an interface between the agencies senior leadership. These individuals would also be beneficial during periods of high Operations Tempo (OPTEMPO), closing the gap towards a more seamless relationship with the MACOM and SMCs in both day-to-day operations and during war.

Second, the Director IMA should be represented at the same level as the MACOM commanders with the same authorities and responsibilities and thus seated as a co-chair on the Installation Management Board of Directors (IMBOD). From a strategic perspective, the IMBOD is the body that provides strategic guidance and serves to adjudicate issues pertaining to
installation activities. The Vice Chief of Staff of the Army and the ASCIM, who serve as the co-chairs, heads this body. Other members include the Assistant Secretary of the Army for Manpower and Reserve Affairs (ASAMRA), senior MACOM commanders (four star generals), the Sergeant Major of the Army, Chief of Army Reserve Affairs, and Director of the Army National Guard. Currently, the Director IMA serves as the executive secretary for the board, and relies heavily on the ASAI&E and ASCIM for advocacy. The IMBOD deliberates on compelling issues related to installation management, such as the GWOT, mobilization, deployment, base support funding, and installation standards. They represent the primary policy arm of the Army’s installation and infrastructure business.59 This would grant the Director direct access to senior army leadership and adjudication authority over strategic installation matters. An additional BOD, the MWR BOD, has Senior MACOM Commanders as members and should be consolidated with the IMBOD. Doing this would allow Army senior leadership to address all base operations collectively, and centralize the IMBOD business practices. The organization, reporting to the ACSIM, that controls this BOD, and the agenda, is the Community and Family Support Center (CFSC). A portion of this organization formulates policy while the remainder of the organization is involved in the execution of operations, duplicating the IMA efforts. The CFSC could be integrated into this new MACOM easily through a transfer of function.

Third, GCs should be solely rated within the IMA chain of command. In addition to the organizational challenges, consider that two separate senior leaders who represent two different organizational elements annually rate GCs who are charged with running and managing installations. One rater is within the IMA chain of command, and the other is the SMC [typically is the primary tenant on the installation] who represents the former MACOM construct. Currently, IMA regional directors rate garrison commanders within their regional area of responsibility, and the SMC senior rates these individuals.60 This rating scheme places the GCs in a situation where they serve two senior leaders and organizations, each with different views regarding installation priorities and strategic direction. In my view, this creates a dilemma for GCs, and is inconsistent with the Army’s standard overall rating scheme. This disconnect should be realigned to reflect centralized management oversight within the IMA. This situation would most likely be corrected if the IMA were organizationally aligned as a MACOM, and further serve in clarifying the planning and execution of complex initiatives for GCs who must be responsive in their support to MACOM and SMCs installation requirements. This change would also create an organization that offers an upward mobility structure that is currently lacking for those who serve in garrison command billets. Today, GCs have limited career prospects.
beyond a GC assignment in the current organizational design. As a minimum these commanders should be managed in such a way that ensures a garrison command is not a last assignment.

Fourth, the Army must assure an aggressive posture in their fight to secure Sustainment, Restoration and Modernization, and Base Operations Support budget authority. Compare the testimonies of the U.S. Army and the U.S. Air Force before the United States House of Representatives Committee on Armed Services Subcommittee on Readiness: The U.S. Air Force advanced their investment strategy for aging infrastructure that carried a price tag of $4.8 billion for FY05.\(^{61}\) During the testimony the Army representative mentioned the President's Budget, which programmed $2.5 billion for SRM to bring Sustainment up to 95 percent of requirements. Without mention of the Army's facility investment strategy, the comparison between the services during the testimonies suggests the Army requires only 52 percent of the Air Force's overall requirements.\(^{62}\) A value when you compare these Service's infrastructure inventory. Yet the Army Budget for 2005 identifies $4.3 billion for facilities with Sustainment remaining at 95 percent.\(^{63}\) The $1.8 billion difference suggests the Army does indeed have similar facilities and fiscal requirements, but the testimony did not. It is critical that our installation picture be painted with the same level of detail as seen by the other Services before our civilian governing bodies, such as the House Armed Services Committee. We simply have to do a better job when entering the resource arena.

Fifth, Army leaders should establish a cell within the Army G3 that focuses on mobilization support requirements. This organization might be called the Army Power Projection Program Support (AP3S). Its mission should be similar to that of the AP3 located in the Army G4: It would develop, manage, and advocate for the sustainment and strategic direction of the Army's PPP and PSP capabilities at AC, and RC installations. The organization would be responsible for the Army's strategic direction for matters concerning installation mobilization support beyond initial projection of equipment and troops. Primary mobilization focus as managed under the AP3 should remain with the G4. Consolidation of these programs could be subject for debate, but only after the AP3S strategic direction has been set. It would assess the impact of long-term mobilization Soldier support requirements on the sustaining base, and then develop the appropriate fiscal programming to address both the current and future mobilization sustainment support challenges. Further, it would provide clarity on complex issues such as modularity and USF, with their mandated timelines for deployment as this clearly falls within the G3 purview. Without this level of support and strategic planning, the Army is destined to repeat its mobilization history. This checkered history will be repeated due to poor mobilization planning
and programming - and an organizational mismatch that exploits underfunded SRM and BOS accounts to make up for a lack of strategic direction in this critical area. Alternately, the AP3S could be managed by the IMA as a MACOM, but it must have the support of the Army G3 in order to exploit the momentum necessary to break through the Army's own bureaucracy and then to achieve the impact necessary to implement a strategic program with purposeful longevity.

Sixth, the Army must seize the current opportunity to seek a holistic funding to support its infrastructure preparedness strategy while the administration's and public's support are high. If we do not take advantage of the current window of opportunity, we risk encountering more skepticism from the public and Congressional leaders. Inaction is simply not an option. If we fail to fund the AP3S infrastructure, the problem will only be exasperated as we continue the current protracted mobilization.

Seventh, to increase the probability for securing support, Army leaders should strongly consider the development of dual-use facilities. These facilities would provide flexibility during periods of high OPTEMPO when installation capabilities are stretched the most. Soldier Readiness Processing (SRP), USF, New Equipment Training (NET), Medical Holdover (MED HOLD), and classroom training functions are potential candidates for occupancy and functional uses of multi-use structures. Given the current high OPTEMPO, the need for and uses of this type of facility should receive strong endorsement from senior Army leaders.

Eighth, the Army should continually assess the readiness of their mobilization and mobilization support infrastructure, especially where funding is known to be inadequate, and develop a funding strategy that brings these critical assets to a fully capable status during the next major mobilization event. This would eliminate the element of surprise as experienced during World War II, and create an off the shelf plan to execute this alternative strategy should current opportunities be lost.

Lastly, as a result of recent Army installation management achievements, Army leaders should push to lead an initial service wide joint feasibility study for military installations, and provide recommendations to the SECDEF regarding the practicality of joint basing and management. The joint-basing and management feasibility study will evaluate the feasibility and strategic impact of this initiative. As a minimum, and wherever practicable, the Army should capitalize on Jointness, not only at Army installations, but other Service Component (SC) installations as well.

Duplication of effort in managing military bases by individual SCs generates redundancies that do not collectively contribute to overall readiness of the Armed Forces and the DoD.
Today, each of the Services manages their bases/installations independently with sporadic consistencies in terms of collective readiness relative to a single DoD standard. The asymmetric threats that typify the 21st Century in which our department must respond to, and ultimately our forces must operate in demand an unprecedented joint operational effort. The relevance and timeliness brought about by the Goldwaters-Nichols Act of 1986, set in motion an era of “Jointness” that now must be expanded beyond joint operational concepts, to joint base/installation management concepts to better serve the nation both abroad and in the homeland.

There are however similarities that should be managed under a single DoD wide standard. This management approach would undoubtedly reduce the unnecessary redundant expenditures of installation resources common to military base management including: environmental, utility, real estate, municipal development, training, and fiscal management. The management system should be developed to exploit both homeland security posturing and to develop the critical universal base/installation readiness indicators that are currently unavailable within the DoD. This management approach will identify, develop, and sustain joint infrastructure critical to a robust mobilization, mobilization support, and power projection capability that the Services and perhaps other federal agencies could leverage to ensure an agile ready infrastructure. This would inculcate the IMA concept across the Services and allow the SC leaders to focus fully on mission essential tasks, not base/installation management.

The DoD IMA model would be crafted under a concept to manage the military bases/installation infrastructure, and might be called the Joint Military Basing and Installation Management (JMBIM) concept. The Services would use management philosophies and business practices established under this concept to identify and reduce unnecessary redundancies common to military base operations. The practice would synchronize efforts to develop and sustain critical capabilities across the DoD’s base/installation infrastructure, and be the prelude to a standardized DoD readiness standard that uniformly reflects accurate capabilities of our nation’s military sustaining base.

The Service Chiefs may argue that the creation of a single agency could undermine their voice on installations matters. However, the single agency concept would provide a level playing field where installations are represented by a single agency with one focus, not an ad hoc conglomeration allowing the Services to dominate the base/installation strategic balance sheet. In my view the current fragmented system limits responsiveness and hinders logical investment that ultimately places the DoD at risk during these challenging times, creating vulnerabilities in our strategic infrastructure management priorities. It simply does not strike the
advocacy balance between Service Components with similar basing and infrastructure responsibilities.

Continued inaction will only prolong inefficient installation management practices. Competing for installation funding amidst the vast array of current requirements will be no easy task. Indeed, competition may not only be limited to the Services, or other federal agencies, but may extend to individual states. The DoD leaders should explore, and where possible, exploit these funding strategies.

CONCLUSION

Creation of the Installation Management Agency (IMA) is perhaps one of the most significant business decisions the Army has ever made. “In terms of institutional transformation, the Installation Management Agency implements best business practices into how we run our installations and communities. It is simply a smarter way to do business.”

Implementing the IMA concept and transforming the way installations are managed is an extraordinary accomplishment. The IMA is a key enabler to the Army’s transformation efforts. It influences many critical aspects of the Army’s mission, including power projection, training base operations, caring for people and the environment, deployment operations for active component units, mobilizing reserve component units, supporting the modular reorganization, and Unit Set Fielding - actions all during a time of war.

“Resistance to change is a natural tendency of both humans and large organizations, but in this world characterized by accelerating change it is a strategic liability.” Knowing that pressures on organizations to change are never-ending, Army leaders should continue to seize opportunities to transform the way installations are managed as strategic assets. The IMA and Army leaders must remain ever vigilant of the forces that not only threaten the IMAs survival, but also creates vulnerabilities that threaten its timely and necessary expansion into the strategic arena. Given the current operating environment in the Army, the forces to discredit the IMA concept, or reduce it to an ineffective organization, are perhaps already upon us. Reversing the gains already made would place our nation's strategic mobilization infrastructure and the sustaining base in further jeopardy. Our nation can ill afford such a reversal.

History has shown us that defense spending declines once major demobilization operations are completed, reflecting the changes in both political and national priorities. The Army leadership should provide for the defense infrastructure funding by programming for and fully funding the future installation infrastructure. They should also seek to fully fund the Sustainment, Restoration and Modernization (SRM) and Base Operations Support (BOS)
accounts that are necessary to sustain the sustaining base beyond the wartime environment, thereby ensuring that the sustaining base does not fall into a state of preparedness that threatens the Army's readiness and ultimately our national security. “Yesterdays winning formula ossifies into today's conventional wisdom before petrifying into tomorrow's tablets of stone.”

WORD COUNT=7162
ENDNOTES


14 Ibid.
Ibid.


22 Ibid.

23 Ibid., 4.

24 Ibid.

25 Ibid., 3.

26 Ibid., 1.

27 Ernie Dumlao <ernie.dumlao@us.army.mil>. Hotel Costs, Electronic mail message to James M. Coffman <James.Coffman@carlisle.army.mil>. 4 October 2004.


30 From personal experience and observations while assigned as the Chief Chemical Surveillance Division, Pueblo Chemical Activity, Pueblo CO, 1999-2001, and recent visit to the Activity in August 2003.


33 Ibid.


37 Ibid.

38 Ibid., 4.

39 Peter Eisler, "Pollution Cleanup Pit Pentagon against Regulators," USA Today, 14 October 2004, sec. A, p. 3A.


41 Ibid., 7

42 Ibid., 7

43 Ibid.


47 Ibid.


49 Ibid.


55 Ibid., 4.

56 Ibid.

57 Ibid., 16.


60 Ibid., 18.


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Cassidy, Glenn O. *What Happened to Mobilization Planning*, *The Officer* 73 (March 1997).


Dumlao, Ernie <ernie.dumlao@us.army.mil>. Hotel Costs Electronic mail message to James M. Coffman < James.Coffman@carlisle.army.mil >. 4 October 2004.


Eisler, Peter "Pollution Cleanup Pit Pentagon against Regulators." USA Today, 14 October 2004, sec. A, p. 3A.


