The research described in this report was prepared for the U.S. Department of Defense. The research was conducted within the Forces and Resources Policy Center of the RAND National Defense Research Institute, a federally funded research and development center sponsored by the Office of the Secretary of Defense, the Joint Staff, the Unified Combatant Commands, the Navy, the Marine Corps, the defense agencies, and the defense Intelligence Community.

Library of Congress Cataloging-in-Publication Data
Lippiatt, Thomas F., 1940-
Leadership stability in Army Reserve component units / Thomas F. Lippiatt, J. Michael Polich.
pages cm.
Includes bibliographical references.

UB413.L57 2013
355.3'3041—dc23 2013009891

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Published 2013 by the RAND Corporation
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1200 South Hayes Street, Arlington, VA 22202-5050
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The Issue: Leader Instability in Deploying Units

Personnel stability is highly valued by all military forces, especially in units that are preparing to deploy to a theater of operations. Yet deploying units typically experience personnel instability (often described as “turbulence”): the departure of some unit members and their replacement by others who enter the unit to reach its target for deploying strength. This inflow of personnel undercuts the effectiveness of training, consumes resources and time, and impedes training of higher echelons or more-difficult tasks that require simpler skills as a foundation.

Previous RAND research (Lippiatt and Polich, 2010) documented this personnel instability and showed that it was widespread in many types of units—Active Component (AC) and Reserve Component (RC)—as they prepared for deployment. It also suggested that instability would be difficult to control because it arose from numerous discrete causes and that the U.S. Department of Defense (DoD) would have to live with considerable personnel turbulence in the future.

That result posed a series of issues for DoD. An important concern was the ability of unit leadership to cope with personnel turbulence. Commanders would prefer to have the leaders (officers and noncommissioned officers [NCOs]) in place before the point at which new arrivals enter the unit in large numbers. However, preliminary analysis suggested substantial personnel turbulence even among the leadership.

Given this uncertainty and its potential implications, senior DoD officials asked RAND to conduct a study to nail down the actual level of turbulence among unit leadership and, if the rates were high, to address several follow-on questions: What causes leader turbulence? What effects might it have on unit training and preparation? And what steps, if any, could be taken to mitigate it?

A further issue concerns the implications of personnel turbulence for future defense planning. Official planning assumptions envision a shift away from rotational deployments involving large-scale stability and counterinsurgency operations. That would mean a less predictable environment with a smaller demand for RC units and a different set of missions for those that are in demand. However, with uncertainty also comes the possibility that some RC units might be needed on short notice. That prospect raises two questions: How much time may future scenarios allow for RC units to prepare? And how would personnel turbulence affect the preparation process if the timelines are pressing?
Data Sources

To address these issues, we expanded a database that had previously been accumulated through collaboration of RAND and the Defense Manpower Data Center. The database included monthly individual records for all personnel who were in any Army component during the period from 2003 through 2011. It represented soldiers’ military characteristics and history, dates of activation and deployment, and monthly pay records for each individual. The file permitted longitudinal analysis of individuals and units, during “normal operations” and the run-up to mobilization and deployment.

The analysis included deployments of units in the Army National Guard (ARNG) and U.S. Army Reserve (USAR), provided they had deployed essentially as “full units” during the period from 2007 through 2010. It focused on three types of units:

- **Infantry battalions** within separate brigades (ARNG)
- **Military Police companies**, “combat support” type (ARNG and USAR)
- **Truck companies**, “medium cargo” type (ARNG and USAR).

Key Findings: High Rates of Personnel Instability

The data show that RC units approaching mobilization experienced high levels of personnel instability among both the unit leadership and the more junior members. As a broad measure of instability, we calculated the fraction of leaders in the deploying unit who were “new arrivals” (those who had less than 12 months in the unit at the time of mobilization). By that measure, on average,

- approximately 50 percent of officers were new arrivals
- approximately 40 percent of NCOs were new arrivals.¹

These results are in parallel with previous analyses of the entire membership (Lippiatt and Polich, 2010). The same patterns are evident in active units, but they have their members available full time and can therefore recover more quickly than part-time RC soldiers. Nevertheless, RC forces proved resilient; their units achieved a stable cohort of personnel by the mobilization point, and no units missed their planned arrival dates in theater.

Factors Generating Instability

Personnel instability arises from several different factors: vacancies, personnel losses, and personnel who remain in the unit but do not deploy.

Vacancies

Many units were filled to less than 100 percent, leaving some vacancies to be filled before deployment. However, vacancies were not the primary driver of instability. At 12 months

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¹ The averages listed here include four of the five unit types studied. In this calculation, we exclude USAR truck companies, which had especially high rates of instability.
before mobilization, NCO fill in most units was above 90 percent, and officer fill was above 80 percent. Those vacancies were filled by new personnel who were “cross-leveled” into the unit, creating some turbulence. However, for most types of units, the effect of vacancies was far less than the effect of personnel losses and nondeployers.

**Personnel Losses**
The typical unit lost 30 to 50 percent of its officers and 25 percent of its NCOs during the 12-month period before mobilization. These loss rates are not unusual; they are similar to loss rates in preceding years. So it did not appear that unit leaders were leaving the units in anticipation of the approaching mobilization. Nor were those losses necessarily bad for the service. Many of the losses were departures from the unit but not from the Army. In fact, a majority of leaders who left a unit transferred to another unit within the same component, and many of those deployed with their new units.

**Nondeployers**
The third factor was the presence of personnel who remained in the unit but did not deploy. In the typical unit, about 30 percent of officers and 20 percent of NCOs who were in the unit at deployment (D-day) did not deploy. We traced the disposition of these nondeployers and found that many different conditions contributed to their status. Some deployed later to join the unit in theater. Some were activated but remained behind at home; we inferred that they may have been part of a rear detachment. Among those who were not activated, a sizable number had previously been activated and were probably exempted from reactivation under rules in effect at the time. Finally, some who were not activated moved to a new unit (about half of whom later deployed), and some left the service altogether.

The overall picture for nondeployers—and for losses—reveals a multiplicity of causes and conditions. Moreover, each condition accounts for only a small part of the overall instability rate. Some conditions are probably not things the Army would want to prevent (such as moving to a new unit and deploying with that unit). Some cases probably represent an Army accommodation to a soldier’s preferences or personal hardship; the Army may have preferred to defer a member’s deployment or permit movement to another unit rather than risk losing the person altogether.

**Effects of Instability**
The immediate effect of the above phenomena was to create a large influx of new leaders entering the unit. Indeed, we observed a steep buildup curve of eventual deployers entering the unit, beginning about six months before mobilization. For example, about 40 percent of infantry officers and 35 percent of infantry NCOs who deployed had arrived during the six months before mobilization.

The arrival of these newcomers had two ramifications. First, many of the new leaders had missed training events that had been executed before they joined the unit. As a result, they had to undergo that training if it had not already been done in their previously assigned units.

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2 The range represents variation in median loss rates across different types of units.
Furthermore, they had not been able to supervise or train with their subordinates during much of the premobilization (premob) year, causing a lack of continuity in the units’ leadership. Second, to counter the effects of personnel turnover, most units scheduled “contiguous” training just before mobilization. For example, in earlier research (Reserve Affairs, 2010), we saw that the typical unit conducted half of its Annual Training (AT) days during the mobilization month or the month immediately preceding mobilization. Units thereby avoided deleterious effects of personnel turnover and learning decay, and they ensured that unit members had met prescribed standards for some key training events (e.g., weapons qualification within six months of deployment).

What are the prospects for DoD actions to counter leader instability? We conclude that DoD has limited options to adapt and that it may, in fact, need to live with instability. For one thing, instability is persistent, not only in the RCs but also in the active forces. Loss rates, for example, were virtually the same in previous years as in the premob year. Furthermore, many different conditions contribute to the picture, and most would be difficult to affect by policy. Even if policy interventions were successful, they would reduce turbulence by only a few percentage points.

Finally, there is little information to assess the potential effectiveness and cost of possible policy initiatives. The customary approach would be to offer bonuses to keep people in the unit. Past evaluations have shown that bonuses have been effective in other circumstances for other purposes—for example, for retaining active personnel in the service. But we found no evidence on how much bonuses would increase retention of RC leaders in the unit or how much it would cost to achieve a desired effect.

**Implications for Future Missions**

Do these findings suggest potential difficulties in mobilizing and deploying RC units in the future, in light of the changing security environment and defense strategy? The answer depends on the amount of time it takes units to prepare for deployment, compared with the amount of time that would be available under potential scenarios that could demand RC forces.

**What It Takes to Prepare Units for Deployment**

We estimated the amount of time required to prepare units for deployment based on recent experience—the most extensive body of empirical data on RC mobilizations in the past 50 years. That experience shows, first, that units approaching mobilization face many detailed training requirements, articulated by the Army and the combatant commanders who supervise operations in overseas theaters.

Almost all of units’ available premob time was focused on completing individual training and soldier readiness tasks. The list of tasks was extensive. In addition to personnel readiness actions (e.g., family plans, financial arrangements, wills, schooling, medical and dental exams), individuals had to receive some 30 briefings, training on 32 Army Warrior Training tasks, 12 battle drills, and other things. To perform those tasks, typical units used their week-

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3 However, that did not mean that the unit was short of leaders to oversee premob training. A mitigating factor was the presence of many nondeploying leaders who had long tenure in the unit. Those leaders were available to plan and manage training even though they did not deploy.
end drill time plus about 35 AT days during the premob year. Those 35 AT days represent an increment of 20 days beyond the normal 15-day AT conducted by a unit that is not preparing for deployment.

During the premob period, units accomplished quite a lot of individual training and preparation: Seventy to 80 percent of soldiers in the typical unit had completed all of the prescribed tasks. However, that left 20 to 30 percent of personnel who still needed some individual training after mobilization. In addition, units needed to accomplish their collective training and much of their theater-specific training during the postmobilization (postmob) period. As a result, the postmob training period for a typical brigade combat team (BCT) included 74 elapsed days, from mobilization until arrival in theater. For companies, the postmob period typically took 50 to 60 days.

What does this say about the amount of time that a typical unit would need, if alerted for an operation in the future? We calculated the potential time required, assuming that a unit were called during its one-year period in the Army Force Generation (ARFORGEN) availability window. Under ARFORGEN, the unit would already have executed its normal 15-day AT within approximately the past year. So if the unit required the same amount of preparation as observed in recent operations, it would still need the equivalent of the additional 20 AT days plus postmob time. That would imply these amounts of time from alert to availability in theater:

- 94 days for a BCT
- 70 to 80 days for a company.

These estimates are derived from a particular era and set of circumstances, so it could be argued that they might not apply to future mobilizations. Nevertheless, they are based on real experience and, in our view, offer the best empirically based information on what has actually been possible in the past. Therefore, we used them as a guide to judge whether various potential future situations would allow sufficient time to prepare RC units for deployment.

**Time Urgency of Future Missions**

How much time will foreseeable future missions allow for RC units to prepare? We reviewed four types of missions considered in current defense planning and made these observations about them.

**Allocated for Definite Missions**

If a unit is designated for a definite upcoming operation (usually an ongoing rotation, such as Kosovo or Multinational Force and Observers), it will be notified well in advance. The normal planning process allows one year. So units could prepare along the same lines as recent practice, and they would have ample time.

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4 It is not surprising that units were unable to complete 100 percent of their training, given the limitations often present in the premob environment. For example, units may not have access to specialized personal equipment, weapons, or vehicles in use in the theater. Not all personnel are able to attend AT, where much field training is done. And personnel turnover brings new soldiers into the unit with attendant training demands.
Regionally Aligned Forces
Some units will be oriented to specific regions, typically for security cooperation and engagement missions, such as training and advising, security force assistance, or exercises. Those relatively benign missions will be planned well in advance, and RC units would have time to prepare. In the event that unplanned missions arise, particularly if they involve the potential for confronting organized opposition, active units or special forces would go first, and RC units would probably go only as follow-on or rotational forces—allowing enough time for preparation.

Homeland Defense and Civil Support
Some units will be designated for specialized activities in the United States, such as response after a disaster or attack or to support civil authorities in an emergency. Many ongoing civil support missions, such as border security or counterdrug operations, are planned in advance and allow time for preparation. Even many unplanned missions, such as response to natural disasters, require functions that are already well within a unit’s normal mission essential task list (such as transportation or traffic control) or do not require specialized skills. The primary exception is in response to chemical, biological, radiological, or nuclear (CBRN) incidents, for which various specialized elements are being organized. CBRN-oriented units are likely to receive specialized training and be dedicated to those missions for a designated period of time; therefore, they could be ready to perform those functions on short notice.

Apportioned to War Plans and Contingency Plans
These units are designated to support detailed plans that call for rapid deployment of forces in a crisis or conflict. Because of the potential for short notice, such missions could pose the greatest challenge for timely RC mobilization and deployment.

Many factors would affect whether or not RC units would need to deploy quickly in a crisis. For example, the situation might or might not afford advance warning. If advance warning is available, DoD might take steps to notify RC units of a potential deployment and to marshal resources, such as equipment, ranges, supplies, and trainers. Even if early warning is not received or recognized, RC units could have more time because they may appear late in the force flow, particularly if AC units go earlier or the flow is limited by transportation constraints. For units that were apportioned to a war plan, previous AT should have focused training on the theater mission, giving them a “leg up” on satisfying specific requirements.

These conditions could plausibly allow an RC unit two to three months to prepare before it must deploy. However, what if some of those conditions are absent—and therefore the unit has less time? What could DoD do to mitigate the potential risk to the deployment timeline? The conventional response would be to increase the amount of premob training to shorten the postmob period. Under the Army’s ARFORGEN program, that would mean conducting more premob training (beyond Inactive Duty Training and a normal 15-day AT) during the available year and the year preceding it.

Such a plan, however, has some disadvantages. DoD would be investing in additional training time and resources as a hedge against a possible requirement that cannot be predicted. The investment would involve not only unit members’ AT time but also full-time support, trainers, supplies, and other resources. The payoff would also be limited to a fraction of the unit’s membership because of the problems of AT attendance, personnel turnover, and nondeployers. We estimated that the combination of those three factors would mean that only about
50 percent of deployers in the unit would actually benefit from additional premob AT. The longer the lag between the AT and mobilization, the smaller that number would be.

Therefore, we conclude that routinely adding AT time in preparation for availability would not be a full solution. All of the new unit members would need to get the training that had been done during the preceding AT. The need to repeat that training could slow the preparation process and dilute any advantages that the additional AT had conferred. More generally, these considerations cast doubt on the feasibility of stretching out premob training and attempting to build unit readiness sequentially over several years. Capabilities that are built up in earlier years are likely to be eroded over time by AT absences, turnover, and nondeployment.

We recognize that this situation may pose a risk that DoD would find unacceptable, at least for some units that may be needed early in an operation. Therefore, we recommend three steps to measure and mitigate any such risk, if DoD decides to consider investing in additional premob training. First, analysis should determine which types of units would be seriously affected by short notice—those whose timelines could be at risk. There may be few such units, and they may be small, which would minimize the needed investment.

Second, if the risks appear significant, DoD could supplement the number of AT days in selected units during the availability year and the preavailability year of the ARFORGEN cycle. Those AT days would provide enhanced training experience to some unit members, although they may be a minority of the deploying unit.

Third, DoD should consider offering leaders and key members bonuses to attend AT and remain in the unit during the preavailability and availability years. As part of any bonus program, DoD should undertake a controlled experiment, offering varying bonus programs to matched, like-type units that are assigned to varying bonus levels (including no bonus, as a control group). Such experimentation would provide valuable data to reveal the true cost and benefits of a bonus program and thereby help assess the utility of premob training.

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5 The estimate assumes that 80 percent of the unit’s membership attends AT, 75 percent remain in the unit after one year, and 75 percent of members deploy with the unit. Those assumptions are consistent with the foregoing analysis and historical data.

6 If the risks appear severe, DoD could alternatively move some early-deploying units from the RC to AC, but that would involve force structure changes that we have not attempted to analyze in this monograph.