

**When Curiosity Killed The Statistical Trend, And Maybe The Cat;
But Preserved The Military Veteran: A Brief Survey of Side-Effect Phenomenon Occurring
During A Time of National Trauma, And The Subsequent Impact of Statistical Projection**

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The National Cemetery Administration and, of course, the entire Department of Veterans Affairs, have always been subject to statistical fluctuation of its customer base, the projections of which are vulnerable to the irregular tides of peace and war. Major conflict or military call-ups may occur wherein millions of veterans are introduced into a system which a few years prior had no inkling that so many “customers” would be in existence. Think of the statistician projecting 30-year figures during the first administration of President Woodrow Wilson (1912-1916). Within that 30-year period were launched two unprecedented world wars, generating for the United States of America over 340,000 battle deaths, and almost 21-million veterans - plus attendant spouses and dependents. Who could know?

But of course not every conflict is major, and not every violent happenstance produces any greater a military force than that standard normally maintained by the nation. Many variations of action and response are possible as history compiles its daily record. And so it has come to pass, through recent circumstances, that historical evolution has formulated yet another variation. An incident of major non-military violence has unexpectedly produced an impact upon a military-oriented organization, shaking up its large body of experience and precedent-rich statistical prognostications. Through a great cataclysm, mass destruction has combined with mass media to produce a new and unpredicted effect which has acted upon an organization normally quite used to events creating high yields of fatal carnage.

Specifically, the event alluded to was the terrorist assault on America on September 11, 2001. The organization affected in such a secondary, but pronounced manner by this event was the National Cemetery Administration. However... the primary subject within this famous context is not that of death. Ironically, within this dark and bitter moment has arisen surprising evidence of a seeming statistical tribute to some fundamental, stubborn, and possibly noble facets of human nature. Herein lies a paean to life, and to a dedication to purpose inherent within the living. It is a subject for which no statistic may account, nor be employed to foresee.

In September of 2001, the National Cemetery Administration, or NCA, was projected to host 7,000 burials within its system of national cemeteries. The average interment rate, the number of burials per month, had been 7,165 for the prior 11 months within the fiscal year.

But September, 2001, was not to be an average month, or even a reasonably predictable month of any kind. This was the month of the infamous terrorist attacks in New York City and in Washington, D.C. While daily records are not available to highlight intra-month activity, specifically September 1st to 10th versus the period of September 11th to 30th, the month as a whole fell short of projection by 996: A 14.2% plunge (to 6,004) from statistical expectation. This one anomalous month alone, the last month of the fiscal year, not only concluded far from estimate, but threw the entire year’s projection off target by a considerable margin.

Was this trough, this shortfall statistical hiccup, a mutual coincidence within a tragic month, or was it truly related to events of the month? With a remaining World War II population of some 5 million veterans at a median age of 78, along with 3.5 million Korean Conflict veterans only a few years younger, was there really the possibility that even a tremendous news event could impede the tide of nature and natural mortality for the better part of a month?

To give an idea of the magnitude of this subject deviation, and defining this month as more than just the occasional anomaly, several factors need to be considered. First of all, September, statistically, is already a month of low interment expectation. Only three other months are expected annually to have a lower yield of interments. Therefore, the projection, the planned figure, was reasonably set at a low number (relative to the rest of its companion year) by virtue of long prior-year precedent. In such months, in this age when interments have been consistently increasing each year since the early 1980’s, the occasional surprise is generally in achieving even greater figures than a normal progression would call for. And yet, September 2001 yielded for the NCA considerably less “business” than planned.

In other words, not only were interments under projection, calculated as they were for normal conditions, but were uncommonly low in the face of an incident of uncommonly high death. National mortality was suddenly augmented by 3,000+ deaths, many of whom may be expected to have been military veterans. In fact, open national cemeteries lay within close proximity of each target city, and were ready to make emergency accommodations.

Historically, within regular NCA projections, acceptable-range interment-rate anomalies do occur - with actuals occasionally missing projection by four, five or even six hundred in a month. However, such activity is always in the unstable winter

months (December to March) wherein weather, interacting with old and weary bones, can become a very capricious, powerful and deadly variable. The final third of the Federal fiscal year, June to September, is a time of generally friendly late spring and summer weather, reliably unfolding each year in a very stable way, statistically speaking. With little variance from month to month within this seasonal period, there is again no precedent for any wild departure from the norm.

So... How much less was this particular September figure from the norm that should make it so remarkable? As previously stated, each year - through almost two decades, has shown continually increasing interments. In fiscal year 2001, this trend produced record high months in October, November, January, February, March, April, June, July and August. Did September merely look less significant in a relative sense when compared to this large collection of record months? An already statistically unremarkable month coupled, coincidentally, with a statistical trough could highlight that month as unusually low. So what factors exist to qualify as advancing beyond the unusual and into the realm of the remarkable?

As it turned out, September of 2001 recorded the lowest September interment rate since 1997 - a four year old figure which, incidentally, 2001 only managed to just surpass by 29 interments. Special note should be taken that the NCA world of 1997 was more than just a time a few years removed from the present. There have been many changes, including considerable construction in the intervening years. In 1997, there were five fewer national cemeteries in the National Cemetery Administration. Since that 1997 figure was recorded, national cemeteries have been built to serve the major metropolitan areas of Albany, Chicago, Cleveland, Dallas/Ft. Worth, and Seattle/Tacoma. In NCA facility terms, those 5 new national cemeteries represented an 8% increase in the category of fully open (all grave-space types available) national cemeteries. The new cemeteries tabulated huge population advances in service benefit, adding millions of veterans to NCA-creditable service areas since 1997.

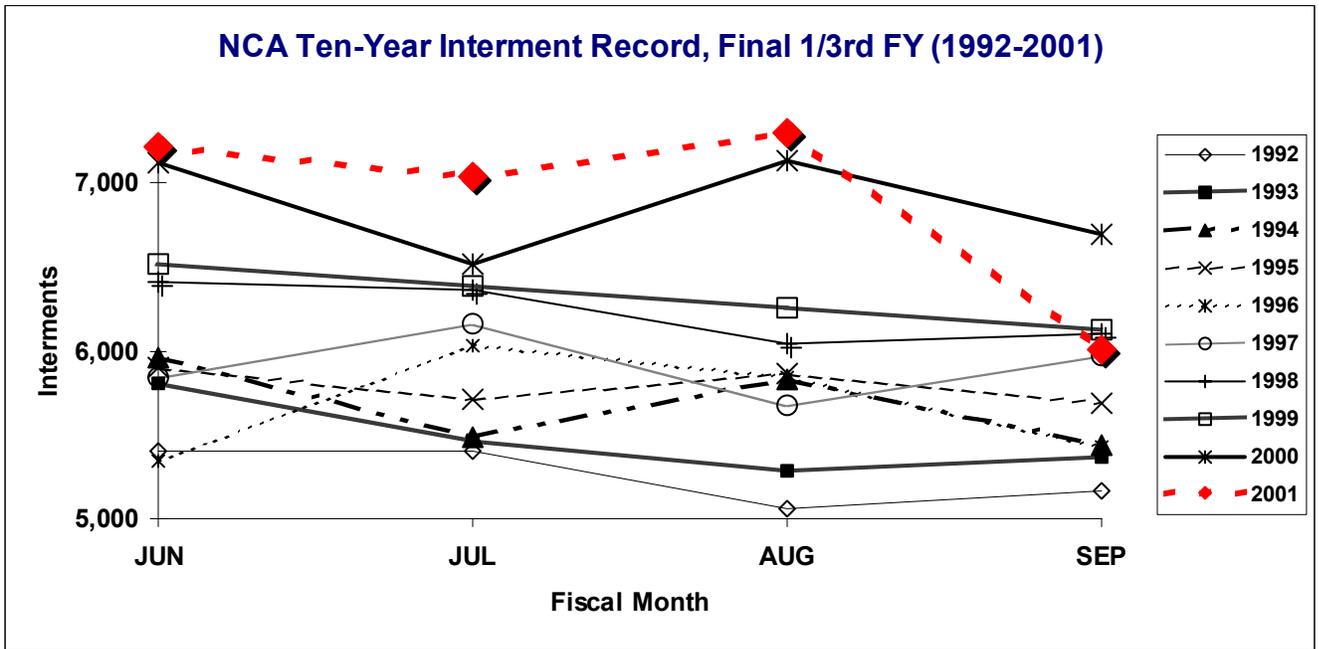
Furthermore, columbaria - memorial walls in which cremated remains may be placed, increased in number from seven to seventeen within the NCA, widening the availability of this option for large segments of the ever-increasing segment of the population who favor this burial preference.

In sum, all of the tens of millions of dollars of construction effort and the newly acquired millions in service-area population gains apparently ceased to exist - at least in gross interment numbers, for this extraordinary month of September 2001. September 2001: The month when terrorists ignited the earth and sky, and murdered some 3,000+ people. Has anyone forwarded the insane postulation that such events were so horrible and so gut-wrenchingly dynamic and so perversely interesting that people refused to die just so they could see what would happen? Curiosity is indeed a powerful motivating force.

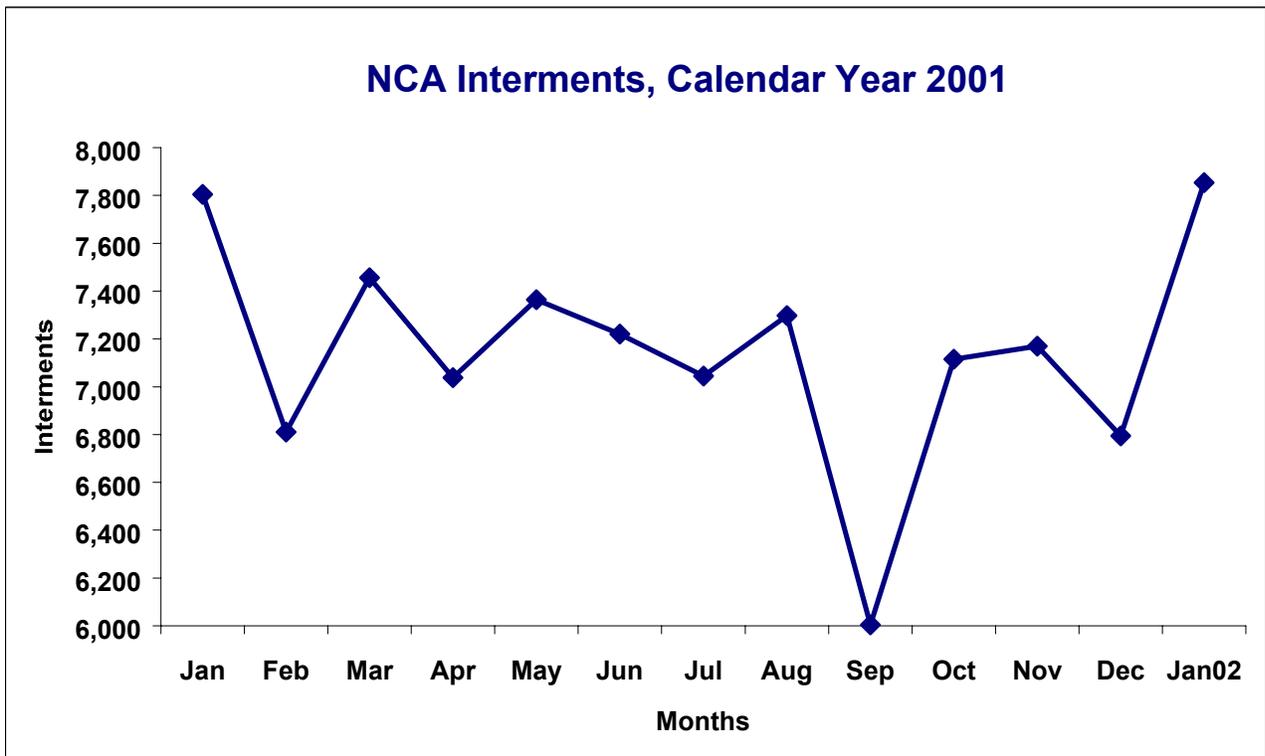
And nobler elements within human nature are also worthy of serious consideration. Is it not possible that this particular class of statistical sampling - that we in the NCA call military veterans (and their spouses and dependents), felt once again, strongly and patriotically, the call of their country? Did their country once again need them - their stability, their experience? A nation in alarm, in danger: September 2001 exhibited mass examples of patriotism, with the American flag raising and waving everywhere. It is not known whether such observations were highlighted at the time, but possibly the same effect occurred in December of 1941, when a similarly costly and shocking national challenge took place. And perhaps last September the old call to service was once again sounding, and nature, an inexorable pull of gravity and time, was resisted that that call might yet again be answered.

Upon consideration, it seems unlikely during such a moment of very much heightened national patriotism that the projected people populating NCA's missing thousand truly did expire - but did so only after alternately choosing to be buried at a place other than a national cemetery.

Be such as it may, through the range of bold philosophies and red-white-and-blue suppositions, a fine set of annual and September-month calculations found themselves in the trash... a solid trend lost in the inscrutable motives of those 1,000 shortfall numbers. These statistics are displayed graphically below. The initial graph presented shows that touted June-to-September time of relative stability, as represented by the last ten years. The progressive tracks, when followed individually below, exhibit fairly small variance as they make their way through the final third of their respective fiscal years. September, 2001, however, fairly plunges through the graph, atypical of its month category, seasonal pattern, and ultimately, year-long summary.



Visual clarity may be enhanced through the following 13-month chart of NCA interment activity. Vouching for a wide body of NCA statistics, the September trough, as displayed in Graph Two is indeed a one-of-a-kind statistical occurrence. Again, the strength of statements concerning trend validity rest both within the 10-year sample, and in light of organizational evolution which has seen the addition of millions of veterans to the service-benefit system.



In this second graph, calendar-year interments for the NCA in 2001 are shown, each month relative to the whole. Two-thirds of the months occupy a narrow range within 400 interments of each other. As may be seen, if September had followed the pattern, registering traditionally within that narrow-window range, the stability normally inherent in the late Spring to early autumn would be evident. After September, numbers generally resumed their precedent-established patterns. October,

November, and January of the new year 2002, all continued to support long-running trends of not only high interment numbers, but record high interments for their months: continuing that reliable 18-year progressive death-rate pattern.

Reviewing Graph Two, an inventory of graph troughs from January through July would reveal nothing significant. February is always a trough, having two or three less production days available than regular months. The April and July troughs are mild enough to be attributable to favorable weather ...or even that gently capricious variation in the life-clocks of a very large population of veterans (plus spouses and dependents) which is possible at any time.

However, December of 2001 has some further interesting qualities which may possibly relate to the terrorist attack of the previous September. This particular December (2001) was the first December in eleven years (when data began to be published within monthly reports) which registered less interments than its prior companion month of November. Generally, national weather becomes more severe and challenging to health as late autumn progresses into early winter. Historically, as far as the statistical record runs for an organization containing numerous northern installations experiencing true winter, December registers more interments than November, and January registers more interments than December.

The December graph trough is far less severe than September's, but it may be seen to concurrently exist across the various cemetery-source graphs presented within this paper. However many non-NCA installations are cited though, this December phenomenon can only be accredited as a documented and unique event for the NCA alone. Long-running and corroborating data for the other source groups is not available. Nonetheless, a brief attempt will be made to advance and explain possible causes for this December interment trough as experienced in the NCA, and in possible conjunction with other examined industry partners.

Specifically, the month contained several possible motivating reasons, the impact of which could have translated as a lesser interment rate from an expected norm. In December of 2001, after a month of fact-gathering anticipation through September and half of October, plus a month-and-a-half of spectacular military retribution through mid-October and November, the conflict in Afghanistan came to a decisive first-phase conclusion. The terrorist and terror-supporting organizations in control of Afghanistan, the originators of the attack on New York City and Washington were, dramatically and publicly, ousted from national power. Further, within the month was hosted the sentimental and widely publicized 90-day commemoration of the September 11th attack. This was a major milestone of national reflection and healing.

Additionally, the parallel anthrax scare from mid-October settled from wild fear of mass annihilation to a condition of caution and watchfulness. Capping major events, and offering as great a measure of closure on this issue as America is likely to get, December was a watershed for those observing mass death and those who sacrificed in the whirlwind of mid-September. December saw a close of the retribution that followed, and also of the threat of deadly disease hanging over the nation. This month was not the beginning of the end; war would continue ...but perhaps this was a closure of the beginning. December registered upon our NCA tabulations in the fashion of an aftershock of an earthquake, a final sigh before resumption of regular patterns of normal reality.

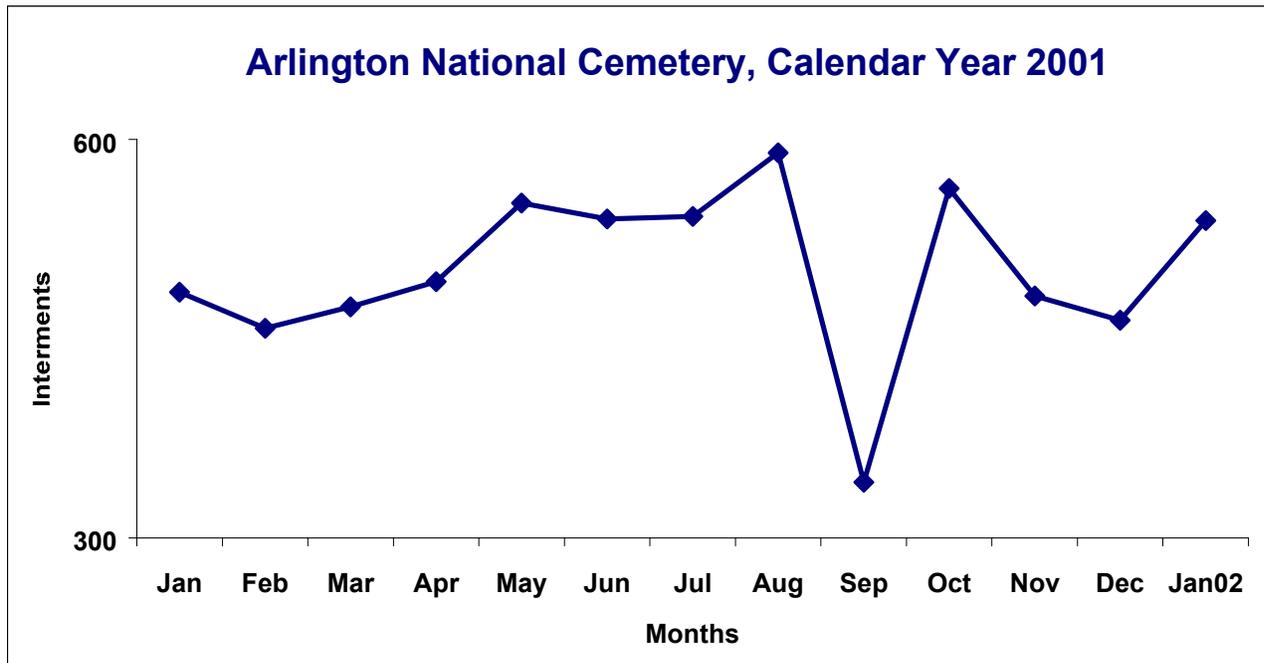
As mentioned, other organizations contributed data to this study, and their graphs may be seen below. These organizations include Arlington National Cemetery, a State veterans cemetery in New Jersey, and a collection of five Catholic cemeteries reporting as one group in the St. Paul/Minneapolis, Minnesota region. The NCA, with 120 cemeteries, forms a large sampling unto itself, but other input is advanced to broaden the base of this paper's contention. Multi-cemeterial organizations which both compile and analyze statistical data are not common. But, if possible, it was felt that a couple of non-NCA military cemeteries might lend a wider perspective, and a civilian-oriented multi-cemetery group was also found to expand the sampling field.

It may not, in the long run, be possible to corroborate our set of results with other segments of the cemetery industry. The NCA is a large organization, perhaps unique within its field for analytical potential. The NCA oversees over a hundred cemeteries, all operating under the same information-gathering scenario and serving a select segment of the national population.

For the large, disparate category of State veteran cemeteries there is little data uniformity. There exist annual, but no monthly tabulations summed amongst the group of State veteran cemeteries collaborating with the NCA. Likewise, there are no known umbrella organizations within the non-military cemetery community tracking burials on a monthly basis. It is unknown if national trends within the private cemetery business recorded similar patterns, except for the one sampling given in this report. Perhaps, or perhaps not... (Therefore, in the uncertainty of outlying data it might be presumptuous to assert that the military veteran alone constitutes a distinctly reacting sub-population to September 11. And yet, the only broad-sample, long-term documentation of a population subset reacting to events rests squarely with this group.)

Each graph is a valid representation relative and relevant within its own 13-month statistical rendition but, as will be seen, scale cannot be retained throughout all samples. Single installations and larger organizations process differing magnitudes of numbers. Interestingly, though a wide variety of single-year patterns are evident within these additional organizations, the general trend of a large September drop in interments, and a minor one in December (relative to the preceding October/November) may be observed to some degree in each case.

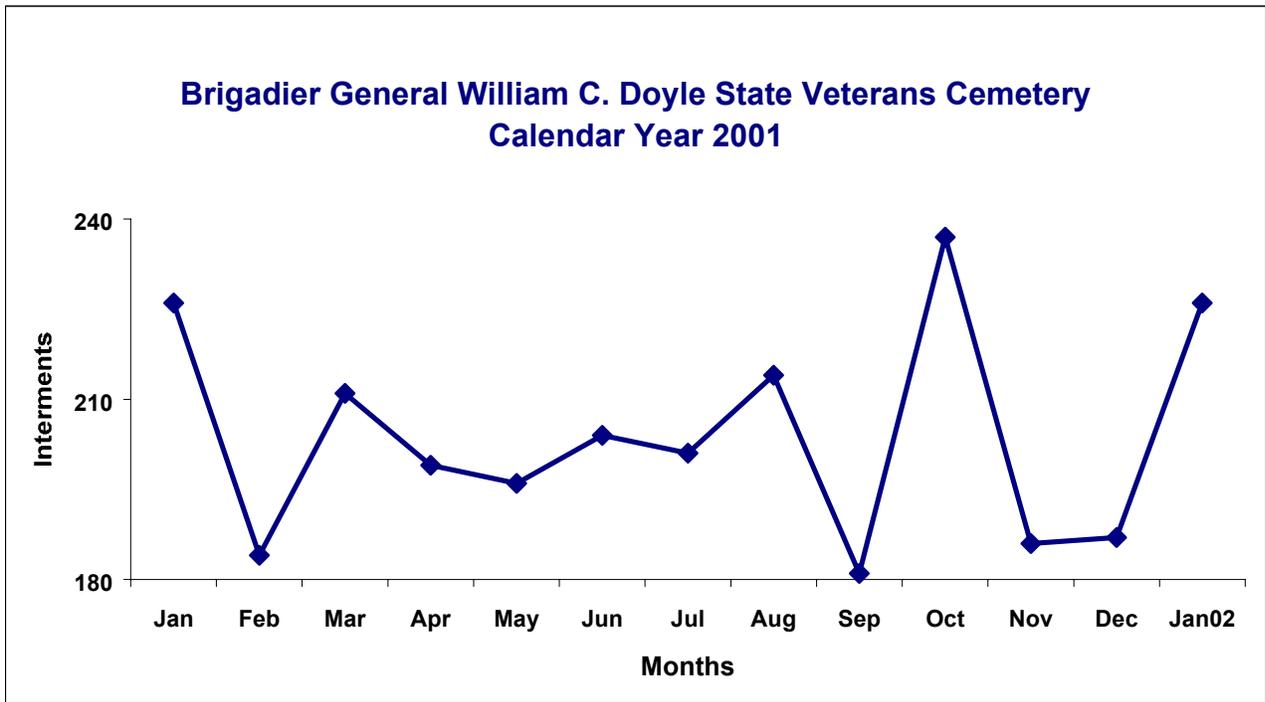
Arlington National Cemetery, a national cemetery belonging to the Department of the Army rather than the NCA within the Department of Veterans Affairs, displays a roughly similar interment pattern to the NCA model. Statistics for this military-oriented national shrine show a major shortfall in pattern for September, and December slumps after the month of November.



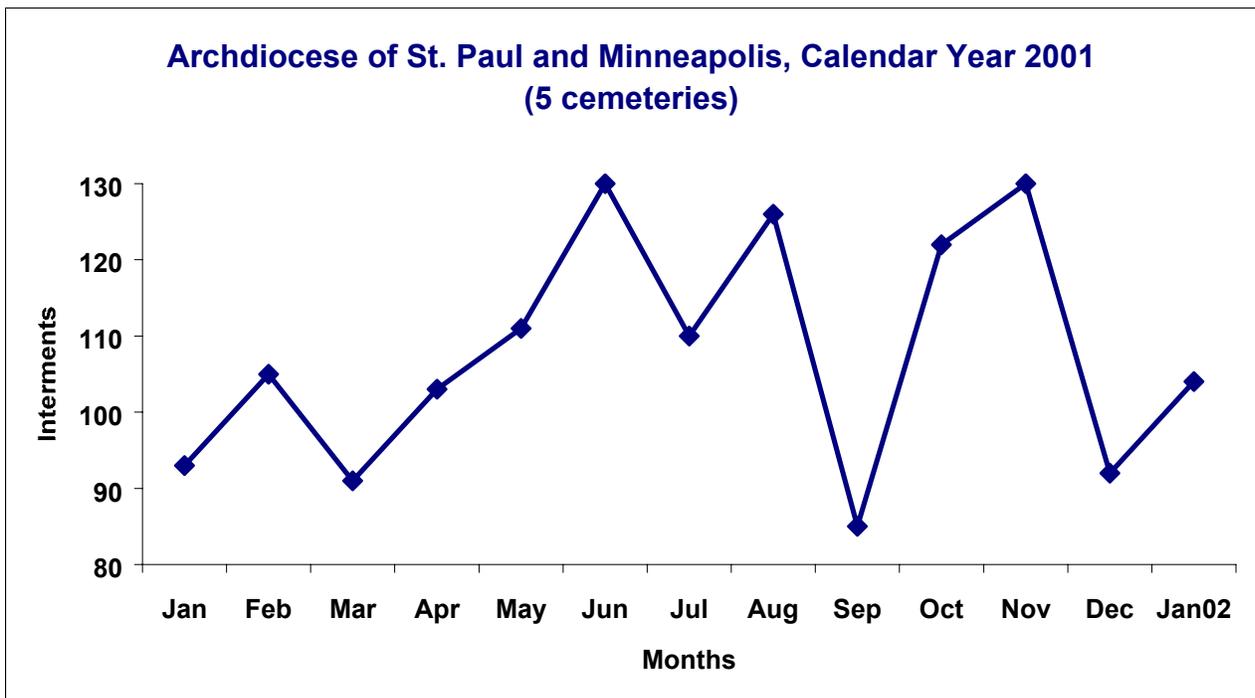
Single installations, like Arlington National Cemetery, do differ from national organizations in that such sites reflect more limited local factors. The geographically widespread system of the NCA tends to average-out the fluctuating impact of seasonal variation. For Arlington, if the local Virginia winter wasn't too harsh, winter interment numbers might display a weak showing, relatively, within the annual run of months.

Brigadier General William C. Doyle Veterans Memorial Cemetery, a State veterans cemetery in New Jersey, varies slightly in the presented scheme. September is again represented by a sharp plunge in figures, relative to its neighbor months. November, however, registered one less interment than December, though both months, like Arlington, form a collective statistical dip. If not coincidental, the reason for both November and December to form this mutual trough may lie in the proximity of these two cemeteries to the terrorist strike points near their respective locales – Brig Gen Doyle to New York City, and Arlington to Washington, D.C.

Again, these are single installations, and have no averaging affect as might be expected in a national organization. What registers on the graph happened locally. For Brig Gen Doyle and Arlington, September was the big trough, the month of shock. October became the catch-up month as nature reasserted itself. But this reassertion masked the continuing hold earthly events still held upon the mortal populace; so November/December registered a dual repeat of depressed interment figures as world events continued to dramatically sort themselves out. Populations which would likely patronize these two cemeteries would be the same as those living and working in the shadow of the attacks, with major commitment to unfolding retribution.



Reporting from the NCA, the author can most credibly give a veteran-interment slant on potential trends: Hows and Whys, with long years of numerical documentation and trend precedent. Nonetheless, in an attempt to be more inclusive, a query was made to a sampling cluster of private cemeteries. The five cemeteries that make up the Catholic cemetery system of the Archdiocese of St. Paul and Minneapolis kindly submitted their collective interment data for inclusion within this study. Minnesota has severe winters. Not only do low temperatures generally prevail, but conditions of deep snow exist. Under such circumstances, making holes in the ground is difficult, and a heavy burden is imposed upon a likely frail audience. There-fore burials, per the graph (and like many northern burials), are often delayed until Spring.



In all honesty it cannot be given as definite assurance that the pattern seen for the Archdiocese, or even the two military cemeteries, is, or is not, a normal and regularly recurring annual trend. Report years, where reports are compiled, vary along calendar and multi-choice fiscal year lines. Long-compiled monthly records are often not available, and what can and is displayed for this study is one unified, snapshot 13-month record. For non-NCA cemeteries given in example herein,

September interments graphically dip, it is true. But did the pattern dip in the year 2000? Do numbers for these installations always trough in September? Unlikely, but not known for certain. The pattern gives every indication of widespread uniformity, but... When all is summed, it can only be said for certain that, for the NCA, the September, 2001, statistical trough was remarkably contrary to long-prior NCA trend.

And yet, if this present study were to accept that the above displayed non-NCA-military and civilian graph patterns were a true event deviation, and genuinely representational of at least part of their respective categories, then the entire subject may be advanced to a conclusion of credible probability. Encompassing the myriad American cemeteries, there exists the potential that, if true for some, then true for others. Therefore, extrapolating out to the nation, many, many thousands of deaths may have been delayed by that single major September disruption.

Additionally, if valid - and the likelihood is great, not only veterans would have heard the call of their nation and steeled themselves, even against death, to offer support. ...And not only veterans would have been curious enough to remain within the fragile veil of life to find out how this tremendously significant threat to their nation might turn out.

So, in sum, what is seen on these graphs, like a heart electrocardiogram, is the pulse, the shock of a nation. The import of such a collective graph record could not fail to show people being people, reacting as a nation together, whether individually once wearing a military uniform or not. Initially, the pattern was perhaps most easily seen in military cemeteries where collective records are kept and are convenient for large-scale analysis. What the pattern revealed was a genuine reaction to a tremendous event, within an unlikely subject area - burials of the dead. But sampling of other systems would indicate that the September pattern, while unique on a nationwide basis, was not necessarily unique to any given population sub-group within that nation.

Let us freeze and examine for a moment that September juxtaposition between a national tragedy and the National Cemetery Administration. Ultimately, it may be cause to wonder that if there were 3,000 victims on that terrible day of September 11th, cannot a full 25% be sub-tracted out of the total, strictly on a statistical basis, for those veterans and their spouses and their dependents - those 1,000 who continued to live when statistics pointed otherwise? Might some psychological credit be gained to help serve as a partial balm to horrific events? Within the context of the same enormous tragedy, we are given the paradox wherein 3,000 people died who should not have died, and yet one thousand lived who should otherwise have died.

Thus, it appears, was presented to national and to NCA history a moment which stayed the natural termination of one thousand nameless numbers of a statistical September of a statistical NCA fiscal year. This event became statistical discontinuity personified. Here was a twenty-September-day-long moment when, because of great tragedy, some personal grief was ironically stayed; when thousands who might have wept did not weep, and when statistical projection in our NCA world of interments and final bugle calls took a major shift - and a curiously joyous detour, into the land of the X-factor.

Acknowledgements

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Disclaimer

While an employee of the National Cemetery Administration and the Department of Veterans Affairs, the author wishes to stress that this report is an official document of neither organization. Rather, it is a compilation and presentation of data, conclusions and potentialities formulated by the author through observation and while in the performance of NCA-related duties. The views and opinions expressed within this document are not necessarily those of the NCA or the VA.