A Blast From The Past:

Was The Nike Missile Program Really Necessary?

By

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For close to two decades, the United States and the Soviet Union engaged in an arms race that could have easily ended with a nuclear annihilation. Both countries began producing nuclear weapons at an alarming rate, and the fear of an attack from the USSR was enough for the US Government to invest in and build the Nike Missile Program. By the end of the Cold War many missile sites would become unused. Spending close to one-and-a-third billion dollars[1] to build a missile defense system that never got used was a safety precaution for the US Military, but overall, a waste of time, money, and resources.

In the year 1945, Bell Telephone Laboratories created the Anti-Aircraft Guided Missile Report, in an attempt to create a guided surface-to-air missile system. Research was first done for the Report out of fear over the German Air Force's introduction of new aircrafts to their arsenal. Eventually, the United States government began to notice the Soviet Union's testing of atomic bombs in 1949. After the Korean War subsided, the Nike Missile program became a reality. The Nike Missile sites that were built were only to be used as a final defense against the Soviet Union; essentially, the program would only be in use if the Air Force's fighter-interceptor aircrafts failed to prevent an attack from the Soviet Union. It took until 1951 for the first Nike missile test to occur successfully. This missile, the Nike Ajax, was capable of going speeds nearing 1600 mph and reaching heights of 17,000 ft. With the Nike Ajax only having a range of twenty five miles, the military upgraded in the early 1960's to the Nike Hercules, which had a maximum speed of 2,700 mph, could reach a height of 150,000 ft, and has a range of ninety miles[2].

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[1] Loory, Stuart H. and Ubell, Earl. "The Death of Nike-Zeus." *Saturday Evening Post*, vol. 236, no. 21, 6/1/1963, pp. 15-19.
[2] Bender, Donald E. "The Nike Missile System: A Concise Historical Overview." *The Alpha System at Fairleigh Dickinson University*, Fairleigh Dickinson University, alpha.fdu.edu/~bender/N-view.html.

The Nike Missile Program ended after the Nike Zeus, the Hercules's successor, was retired in 1963 favor of Titan missiles, which can be stored in underground silos[3], and eventually left only a few Intercontinental Ballistic Missile systems in place, which still run today, such as the Minuteman III, produced by Boeing[4]. The need for guided surface-to-air missile systems diminished until there was zero threat of a Soviet attack. Defense Secretary Robert McNamara arrived at his decision to end the Nike Missile Program when he considered the following reasons:

One: It would cost the Russians a small amount of money to take down a Nike Zeus missile compared to what the cost was for the United States military to build it in the first place. In assessing the costs to maintain the Nike Missile Sites compared to the cost it would take the Soviet Union to take down one of the Nike missiles, the Assistant Secretary of Defense, Charles Hitch, stated, "As long as it appears that the Russians would only have to spend one dollar in rubles to overcome defenses that cost us ten dollars, it doesn't seem to be a very attractive exchange for us". Two: The Nike Zeus system could not keep up with a large amount of attackers. It would not be able to pick out an actual attacker in a large group of decoys. Three: In the end, the cost to produce the Nike Zeus program to its fullest could be up to 40 billion dollars; McNamara estimated a much higher amount, saying that the costs to continue the Nike Zeus program could rise from 300 to 1,000 percent the initial cost of 40 billion. McNamara, along with President John F. Kennedy's Science Advisory Committee, would find the Nike Missile Program not worth the large amounts of money, time, and resources[5].

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[3] Berhow, Mark A. *US Strategic and Defense Missile Systems 1950-2004*. Bloomsbury Publishing, 2012

[4] "Boeing." *Boeing: Minuteman III*, www.boeing.com/defense/weapons/minuteman-iii/.

[5] Loory, Stuart H. and Ubell, Earl. "The Death of Nike-Zeus."

Typically, before the Nike Missile Program ended, Nike Missile sites would be arranged and built around a state's most populated cities. The majority of sites located in the state of New York can be found surrounding New York City, which happened to have a population of 7,891,957[6] at the beginning of the Cold War in 1950. With 20 different Nike sites, each one made up of an Integrated Fire Control area and a Launcher Area, the New York Defense Area, as it was called by the United States military, was the largest Defense Area. The missiles set up in the area surrounding Washington D.C., the Washington-Baltimore Defense Area, were put into place to protect the many valuable aspects of the United States government, including members of the Executive Branch such as the President, or the entirety of Congress. This Defense Area is the second largest of the country, having 17 sites within it[7]. Of course, smaller states with smaller populations had less Nike Missile Sites. Twelve Nike Missile Sites were created in the state of Connecticut for the Bridgeport Defense Area and Hartford Defense Areas[8]. Missouri also had a relatively small number of Missile Sites, as well as a small Defense Area (the Kansas City Defense Area and the St. Louis Defense Area had a total of eight Missile Sites[9]. One of the only Nike Missile Defense Areas that surround a military operation is the Loring Air Force Base and Weapons Storage Area of Limestone, Maine[10]. This was the first storage site created to store

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[6] "New York City Population by Borough, 1950 - 2040." *New York City Population by Borough, 1950 - 2040 - Data.gov*, Data.gov, 3 Feb. 2018, catalog.data.gov/dataset/new-york-city-population-by-borough-1950-2040-d09f9.

[7] "Nike Missile Washington-Baltimore Defense Area." *TheMilitaryStandard - Nike*, TheMilitaryStandard - Nike, www.themilitarystandard.com/missile/nike/wash_balt-md.php.

[8] "Where Missile Sites Once Stood in Connecticut." *Fairfield Citizen*, Hearst Media Services Connecticut, LLC, 7 Apr. 2014, 9:37 AM, www.fairfieldcitizenonline.com/news/article/Where-missile-sites-once-stood-in-Connecticut-5376947.php.

[9] "Nike Air Defense Missile: Nike Missile Locations Missouri." *TheMilitaryStandard - Nike*, TheMilitaryStandard - Nike, www.themilitarystandard.com/missile/nike/locationsmo.php.

[10] The Library Of Congress. "Loring Air Force Base, Weapons Storage Area, Northeastern Corner of Base at Northern End of Maine Road, Limestone, Aroostook County, ME." *The Library of Congress*, The Library of Congress, www.loc.gov/item/me0311/.

atomic weapons for the Strategic Air Command during the Cold War. Having such a small population compared to other states, or even other cities, the Loring Air Force Base was seen as the only area in Maine that was seen as a place that could potentially be in danger of an attack due to its military base. Besides the Maine missile sites, the only other Nike Missile Site known to surround military institutions was the Offutt AFB Defense Area, which protected the headquarters of the Strategic Air Command[11]. The amount of Nike Missile Bases located around large populations, governmental institutions, and military hubs was needed due to the flaws in the overall program itself. If the Nike Missile Sites were able to handle a large amount of attackers, the need for so many Sites would not be necessary; and since those were never put into use in the first place, it seems as if the Nike Missile Program was a waste.

Once all of the Nike Missile Sites were shut down, either redeveloped into housing, parks, educational facilities, or they were abandoned or demolished. Most of the remnants of these Sites are now gone. Some of the sites that were not completely redeveloped or destroyed, like the Sites found in the Angeles National Forest were assessed to be eligible to be a part of the National Register of Historic Places[12]. Done in February 1987, the report explained that some Nike Missile Bases, such as the Los Pinetos site or the Mt. Gleason site, were worth saving and becoming a part of the National Register of Historic Places over other sites, such as the Barley Flats site or the Magic Mountain/Lang site. As further explained by the report, the two Angeles National Forest sites that were registered were in fact registered because they, "exhibit features

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[11] Bender, Donald E. "The Nike Missile System: A Concise Historical Overview."

[12] United States, Congress, Corps of Engineers, Los Angeles District, and Roger Hatheway. "Historical Cultural Resources Survey and Evaluation of the Nike Missile Sites in the Angeles National Forest, Los Angeles County, California."*Historical Cultural Resources Survey and Evaluation of the Nike Missile Sites in the Angeles National Forest, Los Angeles County, California.*, 1987.

of exceptional importance which are unique among recorded sites in the Los Angeles area. The fact that these sites were saved is contradictory to the fact that the sites were never used to their capabilities.

The discussion about whether the Nike Missile Program was in fact historic continued in Westport, Connecticut, where discussions were held about whether the former Westport Missile Site should be considered a historical landmark or not. The Director of Westport's Public Works, Steve Edwards, claimed that designating the site a historical landmark would enforce stricter building guidelines that would not allow the site's former radar facility to be added on to. Westport's Board of Finance stated, "Why put an extra restriction on it if we don't know what the future will be—it seems unnecessary"[13]. If there are arguments today stating that the Nike Missile Program's history is not worth saving, it was most likely not an influential component of the United State's history, once again bringing up the question about whether the program was used to its fullest capabilities and whether it was a waste of resources to build.

Between the amount of money spent on the Nike Missile Program, the fact that the sites could not handle multiple attackers, the lack of use of these bases, and the lack of care towards the sites after decommission shows just how unnecessary the sites were and that ultimately, the Nike Missile Program was a waste of time, money, and resources.

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[13] Marquette, Chris. "Is Westport's Nike Missile Radar Site Historic? Opinions Differ." *Westport News*, 28 June 2016, 6:30 PM, www.westport-news.com/news/article/Is-Westport-s-Nike-missile-radar-site-historic-8330478.php.

Annotated Bibliography

Bender, Donald E. "The Nike Missile System: A Concise Historical Overview." *The Alpha System at Fairleigh Dickinson University*, Fairleigh Dickinson University, alpha.fdu.edu/~bender/N-view.html. This website was one of the first websites I found about the creation of the Nike Missile Program. Not only does it explain how and why the program began, but it also explains the technical aspects of the sites and missiles, and the introduction of new Nike Missile models and how they affected the program as a whole.

Berhow, Mark A. *US Strategic and Defense Missile Systems 1950-2004*. Bloomsbury Publishing, 2012. This book helped me explain a more comprehensive history of the Nike Missile Program. I was not aware of any other missile programs that took place after the Nike Missile Program was discontinued, so reading different sections of this book pertaining to the Titan missile program helped me understand this more.

"Boeing." *Boeing: Minuteman III*, www.boeing.com/defense/weapons/minuteman-iii/. The use of this website in my research as well as my research paper was minimal. This was to simply clarify that the Minuteman III missile system is one of the last ICBMs still in production (following the Nike and Titan missile systems), and that Boeing is the company who produces those missiles.

The Library Of Congress. "Loring Air Force Base, Weapons Storage Area, Northeastern Corner of Base at Northern End of Maine Road, Limestone, Aroostook County, ME." *The Library of Congress*, The Library of Congress, www.loc.gov/item/me0311/. The Loring

Air Force Base was one of the only military operations in the United States to be protected in a Nike Missile Site defense area during the Cold War.

Loory, Stuart H. and Ubell, Earl. "The Death of Nike-Zeus." *Saturday Evening Post*, vol. 236, no. 21, 6/1/1963, pp. 15-19. This article from the Saturday Evening Post was the most essential source for me to find out the reasons why the Nike Missile Program was shut down. This also made me aware of just how much money was put into the program (and how much more would be put into the program) had Robert McNamara defunded it.

Marquette, Chris. "Is Westport's Nike Missile Radar Site Historic? Opinions Differ." *Westport News*, 28 June 2016, 6:30 PM, www.westport-news.com/news/article/Is-Westport-s-Nike-missile-radar-site-historic-8330478.php. To further explain my thesis that the Nike Missile Program was probably not the most effective use of the United State government and military's money, this news article features discussions about the validity of Westport, Connecticut's former Nike Missile Site as a historical landmark.

"New York City Population by Borough, 1950 - 2040." *New York City Population by Borough, 1950 - 2040 - Data.gov*, Data.gov, 3 Feb. 2018, catalog.data.gov/dataset/new-york-city-population-by-borough-1950-2040-d09f9. I wanted to use this website because I needed to find out the population of the New York City boroughs in the 1950's and the 1960's. I wanted to find out the population to see if it was justified for there to be twenty Nike Missile Sites surrounding the city in the defense area.

"Nike Air Defense Missile: Nike Missile Locations Missouri." *TheMilitaryStandard - Nike*, TheMilitaryStandard - Nike, www.themilitarystandard.com/missile/nike/locationsmo.php. Like the census data I used to find out the population of the New York City area and therefore try to justify the twenty missile sites surrounding the area, I used this website to determine how many missile sites surrounded Missouri in what was known as the Nike Missile Kansas City-St. Louis Defense Area.

"Nike Missile Washington-Baltimore Defense Area." *TheMilitaryStandard - Nike*, TheMilitaryStandard - Nike, www.themilitarystandard.com/missile/nike/wash_balt-md.php. Like the census data I used to find out the population of the New York City area and therefore try to justify the twenty missile sites surrounding the area, I used this website to determine how many missile sites surrounded Washington D.C. in what was known as the Nike Missile Washington-Baltimore Defense Area.

United States, Congress, Corps of Engineers, Los Angeles District, and Roger Hatheway. "Historical Cultural Resources Survey and Evaluation of the Nike Missile Sites in the Angeles National Forest, Los Angeles County, California." *Historical Cultural Resources Survey and Evaluation of the Nike Missile Sites in the Angeles National Forest, Los Angeles County, California.*, 1987. This evaluation of the Nike Missile Sites in the Angeles National Forest was one of the sources I needed to show that the program was not valued, even after almost twenty years after it was decommissioned. While I believe

that the Nike Missile Program was an important part of the United States history, this was needed to show that the sites were not valued, and are considered a waste of resources.

"Where Missile Sites Once Stood in Connecticut." *Fairfield Citizen*, Hearst Media Services Connecticut, LLC, 7 Apr. 2014, 9:37 AM, www.fairfieldcitizenonline.com/news/article/Where-missile-sites-once-stood-in-Connecticut-5376947.php. To get a more in-depth look at how many Nike Missile Sites existed in Connecticut, I found this website. This online newspaper told the locations of the former Nike Missile Sites, and also explained what has happened to those sites since they were used in the 1950's through the 1960's.