

History Article by Greg Dash

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## Seattle Won a Park in a Battle With a Missile System

**Dr. Greg Dash**

Discovery Park has approximately 644 acres of meadow, walks and trees on a high bluff overlooking Puget Sound and the Olympic Mountains. It is Seattle's largest and newest park, established on September 1, 1972.

But a few years earlier, it seemed destined to become a missile base, where radars and intercept missiles would be prepared to detect and destroy intercontinental ballistic missiles. The struggle to change that destiny took the dedicated efforts of citizens' organizations, political leaders and scientists.

On September 18, 1967 Defense Secretary Robert McNamara announced that the U.S. would build a light anti ballistic missile (ABM) system as a deterrent against expected Chinese missile attack in mid-1970's. The "Sentinel" ABM system would consist initially of ten radar and missile sites along the northern tier of states. It would be adequate to defend against a light attack by a small number of simple missiles, but it could not defend the country against a massive attack such as USSR could launch, An ABM defense against the USSR was impractical, and perhaps unnecessary in view of the effectiveness of the policy of Mutual Assured Destruction, whereby each country held the other's cities in hostage.

Skeptics thought that Sentinel might actually be the thin end of a wedge, a start for a much larger, eventually anti-Soviet system. Indeed, John Foster, Director of Defense Research and Engineering, testified that while politically the system was designed to protect against a Chinese attack, it would actually have some degree of effectiveness against Soviet missiles. And on the day after the announcement Senator Henry M. Jackson hailed the decision as a step toward a massive ABM system.

When more details of the ABM system were described, Fort Lawton in Seattle was mentioned as a possible choice for its westernmost base.

The fort was an army base originally intended for a coastal gun battery, but never activated. This came as a shock, for Seattle had been looking forward to acquiring all or a substantial part of Fort Lawton for a city park. Mayor Dorm Braman said that it was disappointing news, but if the system needed Fort Lawton to make Seattle safer, it would be worth the loss.

The idea of turning the base into a park had a long history. In 1910 the Olmsted Brothers, who designed many of the country's parks, included Fort Lawton in their plans for a Seattle park system. In 1917 an editorial in the *Seattle Post Intelligencer* called for the city to acquire the Fort, and the Mayor and city officials supported the paper's position.

In the mid 30's U.S. Representative Warren G. Magnuson proposed a bill to offer the entire site to Seattle for \$1.00. However, what might have been a gift in normal times was then seen as a liability, for it was during the worst years of the Depression. The city declined the offer because it could not afford the cost of maintenance.

In 1964 the Secretary of Defense, announced that 85% of the site would be declared surplus. The citizens voted \$3 Million in a Forward Thrust proposal to acquire the land for a public park. At the time of the Sentinel announcement it seemed that the conversion was close at hand. And so it came as a great disappointment, when a few years later the Army named Fort Lawton a prime candidate for one of the ten Sentinel bases.

Seattle's Mayor Braman, who had been trying to wrest Fort Lawton away from the Army, complained, "I am in no position and would not, under any circumstance, oppose the judgment of the qualified authorities if in fact ...Fort Lawton... is (needed to defend) the sector of the country.... On the other hand, if the mere fact that the property is currently owned by the government and that the amenities of the base in this location ...are the governing factors, I would strenuously object to the choice."

However, a Pentagon spokesman replied that "The missile hardware has to go in at Fort Lawton if it is to defend Seattle properly".

To a few scientists at the University of Washington, the case was not so obvious. Their opposition rested on two principles. The first was a conviction that missile defense was unwise. The second was that, if an ABM base were to be built in the Northwest, Fort Lawton would not be a necessary or desirable location.

The issue of missile defense had been debated within high level Defense Department advisory committees and in public for several years. The considered judgment of non-governmental defense experts was that there was no foreseeable technology for an effective antimissile system. Therefore, an ABM system built with currently available technology would be ineffective and wasteful. Furthermore it could actually increase the risk of war. At that time, we and the USSR opposed each other with thousands of intercontinental missiles. The sure knowledge that an exchange would destroy both countries led to a state of mutual deterrence.

But if one country could ward off an attack, or even if it prepared to defend against it, that would threaten the other's security. So if the Sentinel system were built, although it might be only a thin defense against a Chinese attack, it could give rise to Soviet fears that it would lead to a larger and more advanced anti Soviet ABM, and that would compromise the Soviet defense. In response to the threat, the Soviets were likely to increase the number of its missiles targeting the U.S., to be sure that an adequate number would get through.

Along with the national debate, these arguments were discussed in University of Washington seminars. Newell Mack, a Physiology graduate student, had been so concerned by signs that national policy seemed to be leading toward missile defense, that he had convinced members of a graduate seminar on Conflict Studies in the University of Washington to study the issue. He was joined in leading the discussions by Philip Ekstrom, a Physics graduate student.

The meetings had begun with one or two sessions on the technical aspects of missile defense, when the Sentinel ABM was announced, and Fort Lawton was mentioned as a possible choice for the key site for the West Coast. As a bonus, it was said to protect Seattle.

The seminar members were disappointed in the national decision, but they felt that perhaps not all was lost; Fort Lawton might be saved for a park if the Pentagon spokesman was wrong, and that Seattle's defense could be based somewhat outside of the city. To determine that, one would have to know the technical characteristics of the Sentinel system. Fortunately, the details had been published, in an issue of *Aviation Week*.

Each installation would have a large Perimeter Acquisition Radar, to detect an ICBM attack at long range, while the missiles were on their inertial trajectories well above the Earth's atmosphere. The PAR would alert the system to fire Spartan interceptor missiles, which would target the incoming ICBMs while they were still in space. The Spartans, guided to their targets by the PAR, would be able to destroy them with their 1 megaton nuclear warheads even if they didn't make contact. The PAR radars would be protected by a "last ditch defense", a battery of short-range high acceleration Sprint missiles, which could intercept and destroy ICBMs penetrating the Spartan shield. In fact, it might be necessary to hold fire until the ICBMs entered the atmosphere, so that air resistance could discriminate between actual missiles and decoys. The Sprints carried 'small' nuclear warheads, about a kiloton.

Dr. Philip Ekstrom, with help from Physics Prof. Edward Stern, calculated the "footprint" of the protected zone. Ekstrom's calculation had as input data the speed and range of the Sprints, and the probable trajectories of the attacking ICBMs. The physics problem was a bit like finding the area that can be kept dry by an umbrella in a driving rain. The footprint turned out to be so large that the ABM base could be placed well outside of Seattle, and yet include the city in its protected area. His colleague, Physics Prof. Greg Dash, described the good news in a March 31 *The Seattle Times* story; Fort Lawton could be saved for a park, and Seattle could have both missiles and picnics. Dash pointed out that the PAR site for the Northwest would be the key detection unit for the entire West Coast. If it were placed at Fort Lawton, Seattle would become a prime target. An enemy intending to attack San Francisco or Los Angeles would have to take out Seattle's radar unit in order to assure that its missiles could get through. Furthermore, having 1 kiloton warheads explode at close range could be suicidal, with fallout from airbursts.

The news gave a great boost to the public campaign, which became known as The Battle of Fort Lawton. The campaign had remarkably wide support, with twenty-five citizen and professional organizations, such as the Seattle chapters of the American Institute of Architects, the Federation of American Scientists, the Magnolia Community Club, the League of Women Voters, and The Mountaineers. They were joined into one group, Citizens for Fort Lawton Park, headed by Donald Voorhees, a prominent Seattle lawyer, who was a leader in Seattle's improvement activities. Strong support came from Senators Henry Jackson and Warren Magnuson, and Congressmen Thomas Pelly and Brock Adams, Mayor Braman, other city officials and *The Seattle Times* editor Herb Robinson and reporter Svein Gilje. The campaign was carried out in letters to newspapers, editorials, radio interviews, and personal contacts between the senators and the Sentinel system's director Gen. Alfred Starbird, for over a year. Yet the Army Defense Command and Gen. Starbird continued to claim that Seattle's defense required the an-city location.

The public campaign now was intensified by the realization that an ABM at Fort Lawton would increase the city's vulnerability.

As the criticism increased, Defense Department officials tried to explain that the dangers were overdrawn, but their arguments were unconvincing. In an October interview John Foster scoffed at the scientists' concern at having nuclear weapons based in the city. Foster claimed that the explosion of a Spartan warhead outside the atmosphere would be hardly noticeable, and the atmosphere would filter its fallout over a long period. The Sprint's one-kiloton warhead would be too low to cause damage. The group found his claims incredible and his breezy dismissal infuriating.

Senator Jackson then asked the scientists' group for detailed data showing alternative sites that could satisfy Sentinel's strategic plan. Ekstrom and Stern supplied it in late August. A few days later Jackson met with Gen. Starbird, and extracted a promise that the general would meet with a representative of the scientists and listen to arguments for alternate sites. Stern flew to Washington in mid September and offered three alternate sites.

A week later a Pentagon source informed *The Seattle Times'* reporter, Svein Gilje, that the alternate sites would not be feasible. Besides, he added, why look for others when the Army already owns a perfect site, Fort Lawton?

Senator Jackson suggested that perhaps the Army had not done all its homework. Senator Magnuson complained that Fort Lawton "would be the worst possible site that anyone could imagine."

On Dec.12, 1968 a crucial meeting was held in the Mayor's Office on the fate of "Ft. Lawton: Anti-Ballistic Missile Site or City Park?" Attending were 16 representatives of civic and environmental groups, Donald Voorhees, chairman of Citizens for Ft. Lawton Park, Senator Jackson, General Starbird, and Mayor Braman. Robert Kildall represented the Magnolia Community Club, a district surrounding Ft. Lawton. He said, in part, "General Starbird, I represent those citizens who would be most affected by an ABM site

at Ft. Lawton.... We are overwhelmingly opposed to the placement of ABMs here." "The will of our citizens- as represented by these sixteen civic and environmental organizations around this table- is that if Ft. Lawton is the only place we can defend those things that are dear to us, so be it! But if there are other sites, move it! A park represents one of those important values we have that are worth fighting for."

On the next morning, Sen. Jackson had breakfast with Defense Secretary Clark Clifford in the Secretary's office. Jackson had flown in minutes before from Seattle in a military plane. He was there to transmit the strong feelings that had been expressed in Mayor Braman's meeting. Clifford told him that he was aware of Seattle's desire to preserve the open space, but he had not yet heard from Gen. Starbird; he promised that he would ask for a report from the General over the weekend and have a decision a few days later. Starbird, in turn, was reported to have been convinced that Seattle's arguments for open space were valid, and official policies for retaining Ft. Lawton for missiles were contradicted with technical arguments showing the feasibility of alternate sites.

On Dec. 22<sup>nd</sup>, the day promised for the decision, Sen. Jackson telephoned Secretary Clifford, who told him the good news: the ABM would go to an alternate site.

But there was still one more hurdle before the Army could turn over the property; there was a question of price. Under current federal law, the city would have to pay \$37.5 million, equal to one-half of fair market value, to receive the land. The problem was solved by an amendment to the Land and Water Conservation Act, which enabled state and local governments to acquire surplus property free or at less than 50 percent of fair market cost. The Senate's bill was sponsored by Senator Jackson, and the House bill was shepherded by Congressmen Adams and Pelly. Together, the legislation became known as the 'Fort Lawton bill'.

## Epilogue

This account has focused on Seattle's campaign, but there were other local groups that waged campaigns against Sentinel. In Berkeley and the Bay Area, Minneapolis, Chicago, Detroit, New York, Pittsburgh and Boston, groups opposed the establishment of nearby sites, or fought against the system as a whole. The opponents were partially successful. In March 1969 President Nixon announced that Sentinel's city defense would be abandoned in favor a "Safeguard" system, a defense of Minuteman ICBM sites. The change, in an influential paper by Harold Agnew, the Leader of Los Alamos' Weapons Division, was advisable because "...defense installations are primarily located in areas of existing military bases thus minimizing problems presently being posed by citizens worried over safety matters or angered over dislocation problems." However, Safeguard failed to get strong political support and adequate financing, and in the end, only two sites were constructed.

In 1971 Anne Cahn earned her Political Science Ph.D. from M.I.T. with a study of the scientists' influence in the struggle. She concluded, in part, "Across the country scientists, mostly Outer (i.e. non Defense Department), younger, not scientifically prominent men took it upon themselves to alert, inform and educate the public about ballistic missile defense."

"The important event, in our opinion, was that scientists took their case to the people."

Missile defense was proposed again by President Reagan on March 23, 1983. The initial design of the Strategic Defense Initiative (SDI) was to provide a nearly perfect "astrodome" defense. It would rely on space-based laser or electron beams to disable attacking ICBMs. The system would be powered by orbiting nuclear power reactors. Vigorous opposition came from scientists. Particularly cogent criticism came from a committee of the American Physical Society, in a paper analyzing beam weapons. In an effort to answer the criticism the design was changed to "kinetic energy weapons", which would rely on direct impact. A furious national debate over the technical feasibility and the political effects of SDI eventually led to its failure to get congressional support.

In 1996, the Secretary of Defense announced a new program, National Missile Defense. NMD was begun as a technology development effort leading to deployment of system that would protect all 50 states from a limited strategic missile attack by a rogue nation. The system would detect the launch of enemy missiles and track them by surveillance satellites and ground based radars, and then guide-defending ABM's to intercept the incoming missiles. In response to the opposition to the previous two ABM system designs, nuclear warheads and nuclear reactors in orbit would be replaced by ground based defending missiles, and they would be kinetic energy, "hit-to-kill" weapons. However, a succession of tests has shown the difficulty of achieving direct impacts. Many attempts to hit the incoming missile have largely failed, in spite of advance knowledge of the launch time and trajectory of an incoming missile, even when carrying a beacon. Nevertheless, the administration of Pres. George W. Bush has decided to begin preparing the first site. But the system is already aiming at its first target: the Antiballistic Missile Treaty. In 1972 the United States and the Soviet Union agreed to forego missile defense, in order to avoid threatening each other's deterrence forces. But defense policy makers are now preparing to discard that policy for an unproven NMD system. Although the current system is far from ready, in the words of a Defense Department official. "We do not have the luxury of waiting" until the system is proven to be effective."

In a crowning bit of irony, the chairman of the Defense Science Board, reported last year that the continual test failures with the 'hit-to-kill' method has caused the Bush administration to consider putting nuclear warheads on the interceptor missiles. But meanwhile, Seattle can look back at its fight against an ABM system 38 years ago, (in 2006) and take pleasure in its victory, which won it a beautiful city park.

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