Chapter 5

A SURVEY OF THE NORTH WATERFRONT PARK

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Introduction

Since the early 1930's, Berkeley has been disposing of its solid waste debris by means of the sanitary landfill method. Licensed as a Class II dump (i.e., only clean domestic and city-wide refuse could be deposited; no hazardous or toxic wastes), the disposal area encompassed several dike and fill projects along the mudflats and intertidal areas of the Berkeley waterfront. By 1967, the Berkeley City Council had begun efforts to develop a preliminary land use plan in anticipation of the conversion of the sanitary landfill. The 90 acres of the Berkeley Sanitary Landfill is one of only three remaining areas suitable for park construction along the East Bay shoreline. The other two are privately owned by Santa Fe Land Co., Inc. Given the proximity and morphology of the garbage fill area, it has been generally agreed that, in terms of future utilization of the land, the area is best suited for unstructured, open space design. The ultimate goal of the City of Berkeley, in terms of the conversion, is to continue in the preservation of the unique and delicate ecosystem that is particular to the bay environment.

With the progression of time, and a series of actions involving the Berkeley City Council, the Bay Conservation and Development Commission, the U.S. Armp Corps of Engineers, and the Regional Water Quality Control Board, a preliminary concept of the landfill site was formulated. "The design included: (1) a wildlife refuge area, (2) development of a seven acre pond, (3) maximum public access to the surrounding water, and (4) features and facilities to enhance an unstructured recreational theme" (City of Berkeley, 1976, p. 5). Here unstructured is defined as a flat, open area meant for such activities as frisbee throwing and picnicking, versus the construction of basketball courts, baseball diamonds, or concession stands. The focus here is that these prerequisites would eventually take on visibility as three major zones (FIGURE 1): (1) a Recreation Zone - the most important of all three, because it is specifically meant for human utilization, as evidenced by its having the greatest accessibility; (2) a Wildlife Zone - nonstructural; meant to be

as close to the natural state as possible, as seen in the lack of pathways for human access, and fencing; this area to serve mainly as a wildlife refuge, especially for birds; (3) a Transition Zone - an area of transition between the recreation and wildlife refuge areas.

The uniqueness of the North Waterfront Park (NWP) plan is that it was designed to be monitored by a team of park design specialists, a group of five licensed landscape architects. This team now forms the Parks Design Section of the City of Berkeley. In spite of the fact that up until this point the entire project had been subject to obligations brought on by a host of regulatory and citizen action groups, in order to secure Corps of Engineers certification, there still remained room for the innovative design of a unique and imaginative design team.

Before any designs for the NWP project could be formulated, the compilation of a Land Use Plan, an Environmental Impact Report, and a Final Closure Plan for the dump were required. The Final Closure Plan was scheduled to have been submitted by March 15, 1982, with the actual closure of the site itself scheduled for approximately 1983-84. The Land Use Plan simply states how the land is scheduled to be utilized.

The EIR explains what effect the conversion will have on the surrounding physical environment. The Final Closure Plan is designed to insure that all parties responsible for the operation of the dump site comply with all state and federal rules and regulations for a Class II dump closure. Prior to these three steps, the Parks Design team was hired by the City of Berkeley to begin designing plans for the conversion of the 90-acre dump site to an unstructured recreation area.

Simultaneously, administrators of the Berkeley Parks Department, based at the Berkeley Marina, began work to generate funding for the NWP project. This was to be accomplished by means reflecting the least cost to the City of Berkeley, which has had " . . . zero funds available to cover the development of any new parks" (Brenner, 1982, pers. comm.). In essence, this meant that not only would external funding be essential, but also that the funding would have to be generated solely by the efforts of the Marina section of the Berkeley Park Department. When necessary, Marina-generated revenues are used for matching, dollar for dollar, these external sources of funding. Therefore, due to these factors and the large estimated cost of converting the park, plus the fact that the dump is still in operation today, it was decided that the best possible course of action would be to break the project up into a multiphased venture, based on a non-rigid timetable for completion. To date, designs have been completed for three projected phases. Each

phase encompasses from six to ten acres.

Upon examination of the diversity and complexity of the conversion process itself, it becomes clear that conversion is more than merely a question of financial support. This is true because the ultimate design of the project has to take into account not only the question of funding availability, but also a host of physical and social factors that will strongly determine the use rate after completion. Given this background, in terms of the entire conversion picture, my original inclination, to determine just the overall cost and worth of the conversion of the Berkeley sanitary landfill to an unstructured park for recreational use, evolved into an effort to contend also with the question of the actual "likelihood," in light of all of the details involved, of your and my ever seeing a completed 90-acre North Waterfront Park within our lifetimes. This report is an attempt to explore, and therefore clarify, some of the issues of the conversion that are important today. It is necessary to bear in mind here that these very issues could, in all likelihood, shift in some unforseeable manner over the next 5-10 years, hinging on such diverse factors as the policies and goals of our present Republican Administration.

The Costs of Conversion

In 1977, a conservative estimate of the total cost of converting the entire 90 acres of the Berkeley Sanitary Landfill to an unstructured park was figured at approximately $10,000,000. Today, the total budgeted costs for phases I, II, and III amounts to $1,320,000 (phase I = 10 acres at $520,000; phase II - 6^{+}_{-} acres at $500,000; phase III - 6 acres at $300,000). This could be decreased to $1,206,000 if phases II and III were combined. In 1981, the above figures were submitted to the Waterfront Advisory Board, a citizen action group, by the City of Berkeley's Parks Design Section, as representing the NWP funding breakdown (see TABLE 1). These costs were projected to cover approximately 22 acres of development. Overall, the cost of developing amounts to an average of approximately $500,000/10 acres. Presently, complete funding has been obtained for phases I and II, while that for phase III is still in the process of acquisition.

To date, the landscape design for phases I-III is complete (FIGURE 1). All three have been designed as part of the Recreation Zone. Phase I was completed and opened to the public on 2/28/82. The simplest of all 3 phases in terms of design, the cost of phase I was concentrated mainly in the purchasing of wood planks, chips, sawdust, grass, and gravel, which was used to form a circular parking

BUDGETED PHASE I

Source	Amount	
Marina Op. and Maint.	$203,000	($67,000± expended Phase I)
LWCF	203,000	($203,000 expended Phase I)
Calif. License Plate Fund	250,000	($250,000 expended Phase I)
Total	$656,000	$520,000 for Phase I

BUDGETED PHASE II

Source	Amount	
LWCF	$250,000	Approximately $136,0-0 is carryover
Marina	250,000*	from original $203,000 budgeted for Phase I.
Total	$500,000	

PROPOSED BUDGED PHASE III

Source	Amount	
Proposition I	$300,000	No match required.

*NOTE: If the Prop I grant is approved, it can be used as the match for the Phase II $250,000 LWCF grant. Consequently, use of Marina monies for Phase II may not be necessary.

PROPOSED COMBINATION OF PHASE II AND III IF PROP I GRANT APPROVED

Source	Amount	
LWCF	$250,000	
Prop I	300,000	
Marina carryover	136,000	This amount may not have to be spent.
Total	$686,000	

TABLE 1. Funding Breakdown.

lot/vista point. "Phase II will be a six acre± site directly north of phase I (FIGURE 1). The project activities include grading and drainage, an irrigation system, soil preparation and landscaping, unstructured playfields, barbeque and picnic areas, pedestrian paths, and a maintenance building" (Public Works Dept., 1979, p. 3). The phase III area will be used solely for access. "Specifically, phase III will include: site grading and soil preparation; installation of an irrigation system; landscaping; construction of bicycle and pedestrian pathways; installation of benches, picnic areas, boulders, trash receptacles and barbeque facilities" (Allen, 1981, p. 2). Parking facilities will not be developed in the phase III area. Also, no pathways will be provided solely for bicyclists. In general, "park pathways will be designed to accommodate safe use by bicyclists,

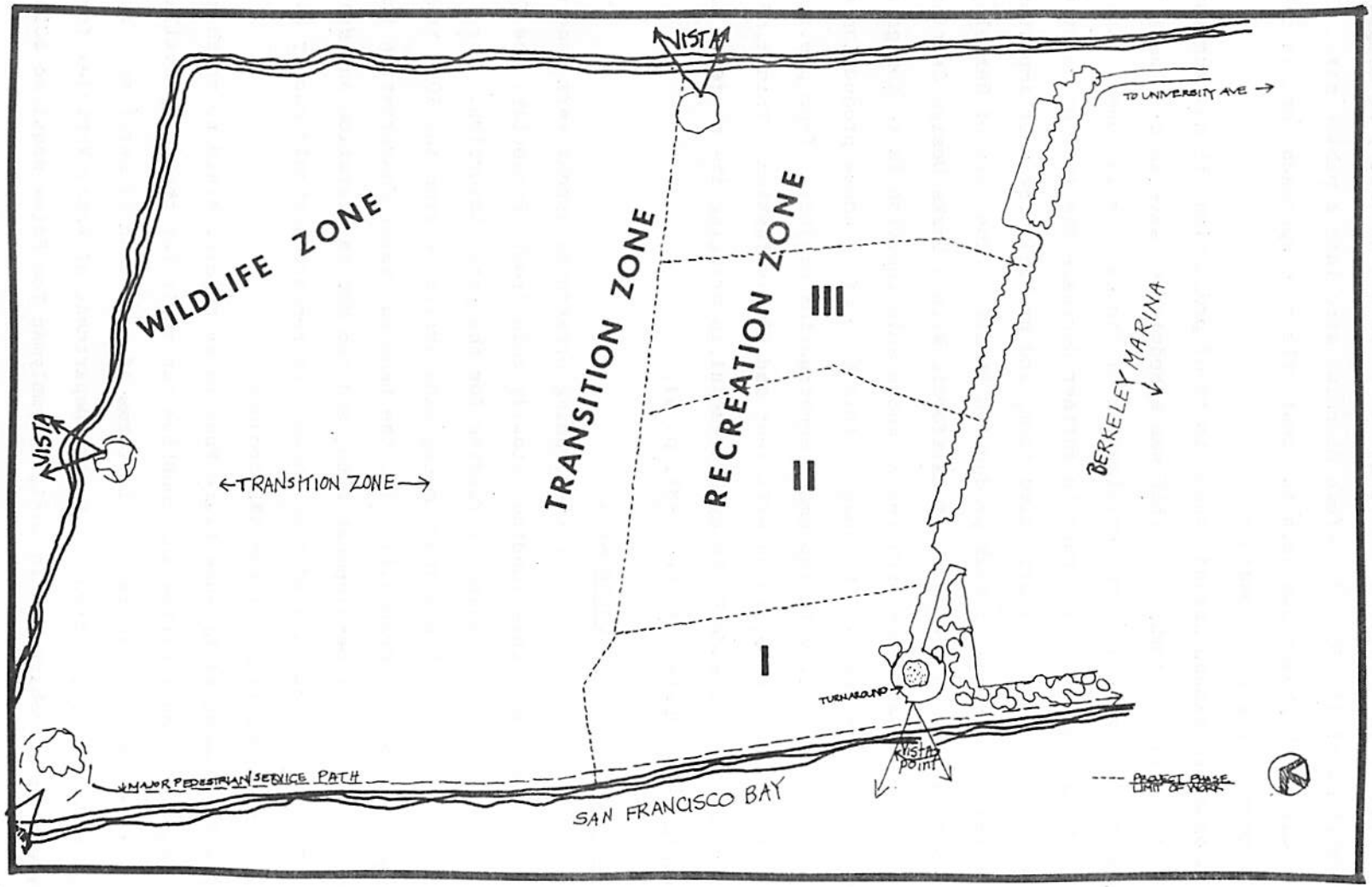

FIGURE 1. North Waterfront Park.
Source: Allen, 2/28/81.

pedestrians and service vehicles" (Public Works, 1979, p. 3). There is no exact spending budget available for any of the three phases, only a funding budget breakdown.

During this time of post Proposition 13, the City of Berkeley is experiencing some difficulty in obtaining the financial resources necessary to complete the transformation of its 90 acre refuse disposal site into a public park. The answer for the City of Berkeley has been the cost-effective approach; or, in other words, cutting corners whenever possible.

In order to expand beyond these limits of production, it was suggested that phases II and III be combined. This was scheduled to save as much as $114,000 in construction costs alone. The utilization of the California Conservation Corps has also been scheduled, in order to further decrease the cost of construction. Finally, the ultimate cost-effective item, and probably the most important, is exemplified in the area of park production itself. "The city of Berkeley is one of the only cities in the state of California with a Parks Design Section, a team of five licensed landscape architects, whose sole function is to design and construct public open spaces. Because of this type of in-house production experience, Berkeley has the ability to implement construction projects, from preliminary design through final inspection, in an efficient and timely fashion. This kind of in-house capability has made Berkeley successful in bringing its projects in on schedule and within set budgets" (Allen, 1981, p. 4).

Funding Acquisition for Conversion

The theoretical yields for the funding breakdowns appear very concise on paper, but where does this funding actually come from? Presently, the City of Berkeley relies on five means of funding for the park conversion. They are: the Environmental License Plate fund, money made available from the 1980 State Park Bonds Act Initiative (Proposition 1), the Land and Water Conservation Fund (LWCF), the Marina Waterfront Development Fund, and the Marina Operation and Maintenance Fund. It has been calculated that these five resources should supply all funds necessary for completion of the NWP project.

The Environmental License Plate Fund is an ongoing state no-match grant. This means that individual cities and counties can apply for the money available without having to pay anything in return, in terms of hard cash or services. The City or County can either apply directly to the Department of Motor Vehicles for the grant or through an assemblyman. In 1981, Assemblyman Tom Bates acquired $250,000 by

this means for use in phase I. Because the application was late this year, this grant will not be available for utilization, in the completion of phase III. The Environmental License Plate Fund is to be used in areas that enhance the environment that we live in. It is made available from the revenues generated by the California Department of Motor Vehicles in the sale of personalized vehicle license plates.

The State Park Bonds Act Initiative of 1980 (Proposition 1) made available the bond sum of $100,000,000, which was designated to be used in the development of state shoreline parks. The money generated by the sale of these bonds goes toward the acquisition of State Parks. It is a no-match fund. In August of 1981 the City of Berkeley applied to the State Coastal Conservancy, which is responsible for administering Proposition 1 funds, for $300,000 of this bond money. This amount is budgeted into the funding breakdown for the completion of phase III (TABLE 1). As of yet, there has been no reply from the SCC.

The LWCF is federally administered by the State Department of Parks and Recreation. From there it goes to local city and county agencies. Started in 1965, the LWCF is a part of the Heritage and Conservation and Recreation Service. It is a 25 year program to be used for either the acquisition or the development of parks, but not both. This fund is a 50-50 cash match grant. If the party applying requests $200,000, then it has to be able to match that amount. It is a reimbursement-only grant, to be awarded only after completion of a major phase of construction. $203,000 of this fund was expended for phase I, while $250,000 was utilized in phase II (TABLE 1). In spite of past successful usage of this fund, the future of the LWCF is uncertain, because it has become virtually nonexistent under the present administration.

The Marina Waterfront and Development Fund is generated by garbage dumping fees collected from private citizens. This fund is mainly used for supplying the basics of construction, such as preliminary coverings and gratings. It is also used to pay the dump operator's salary. Part of the operator's duty is also to make sure that the wastes disposed of at the site are organized in a manner best suited for the conversion design of the landscape architects.

The Marina Operation and Maintenance Fund (MOMF) is presently used as a basis for the acquisition of grants that require matching. There can be no matching without this fund. The fund has been in operation since the early 1960's. It is generated from revenues collected at the Marina. The two sources of revenue there are berth rentals, and a percentage of the gross revenues collected from concessions.

These sources amount to approximately $2,000,000 yearly. Although the idea is to obtain money from outside sources whenever possible, this fund is the final fall-back, in terms of resource availability, for any interests of the Berkeley Parks Department operating out of the Marina. Without this fund, there could be no park conversion. Within the forseeable future, the money generated by this fund should continue to be enough to support completion of the NWP project.

Summary of Additional Factors Affecting Conversion

As stated in the introduction, the physical and social aspects of park development can play important roles before and after conversion, respectively. The physical factors depend on construction, for the most part. An example of this type of application is seen in the following quote: "The NWP work accomplished for phase I already serves as a model for other bay jurisdiction, and especially for those which must grapple with the considerable problems related to garbage fill. Work undertaken in the following areas has made Berkeley a resource for other bay cities: testing and growing plants on site to accommodate harsh site conditions; special path-paving specifications to accommodate soil settlement; taking special steps to design mounding for wind protection by using a lob to run wind tunnel tests on a 50-scale site model; and special planting design intended to reflect existing California coastal successional plant communities" (Allen, 1981, p. 4).

Between 1976-77, improvement such as the construction of dikes containing impervious seals were added to guard against leachate spilling into the surrounding bay environment. These dike improvements have been approved by the Regional Water Quality Control Board. To date, there is no problem with methane, because the park has been designed to withstand exposure to the types of organics found in domestic garbage. Minimization of organic-containing household refuse tends to minimize the production of methane. Given these precautions, the physical questions of leachate and methane exposure is " . . . not now, nor will it be a problem in the forseeable future" (Baughman, pers. comm., 1982). Also, the slopes of the landfill have to be at least 3%, in order to prevent occurrences such as landslides and the accumulation of surface run-off.

Compaction is also a key factor in the physical appearance of a landfill. Before the early 1970's, Berkeley was not compacting its refuse debris at the sanitary landfill site. This was because compacting meant extra costs. The outcome of this practice was an increase in the rate of differential settling. Consequently,

beginning in the early 1970's, with the recommendation of engineers, Berkeley began to utilize the compaction method. Because settling at a landfill cannot be totally eliminated over time, 3-5 inch settling is allowable. Today, the City of Berkeley can worry less about the problem of greater settling, because compaction decreases the probability of its occurrence.

The final closure plan for the dump requires a covering of 3 feet of clean soil. This has proven to be somewhat of a major problem in itself. The soil for the covering is usually acquired from construction companies, whenever they are constructing and therefore digging up new sites. The construction companies at one time considered all the excess dirt a burden, so they were glad to give it away to anyone who would take it. Today, with this soil necessary for jobs such as landfill closures, there has been increased competition for it. Consequently, not only is one forced to wait on construction in order to obtain the necessary soil, but in addition, all of the competition has decreased its availability and increased the price.

The ultimate physical question to be dealt with, in terms of the conversion design, is that of the earthquake factor. If the Bay Area were hit by a major earthquake, the present-day landfill area along the East Bay shoreline would be subject to immense shaking. The outcome of this type of earthquake would more than likely mean large-scale damage to all landfill structures. Therefore, the question of whether the site is suitable for maintaining the support of any structures, large or small, becomes a most important one. The solution to offset large-scale damage to any structures has been to construct them on either pilings or floating foundations (see Mary Dresser's paper).

In contrast to the aforementioned physical restrictions, the social questions engulfing the conversion process pertain mainly to the question of urban need and demand. People in urban areas, such as Berkeley, enjoy having access to open-spaced, unstructured recreation areas. "The primary urban recreational need . . . is for the establishment of more parks (in the sense of an unstructured public open space suitable for all ages, for socializing as well as recreating) within the community or neighborhod" (Bureau of Outdoor Recreation, 1977, p. 5).

Aesthetic value, as well as accessibility, will determine who will take the time to visit a NWP after its completion. To this end, the design of the NWP includes several vista points allowing for a panoramic view of the bay environment (FIGURE 1). The accessibility of the park itself is also not a pertinent problem, because there is easy access to the Berkeley Marina, via AC Transit,

from most points in the East Bay. " . . . NWP development will create totally new access opportunities for Bay Area residents. Until recently, public access to this refuse disposal site was prohibited due to hazardous site conditions. New recreation opportunities such as strolling, jogging, sitting, picnicking, viewing and bicycling along the waterfront are being developed through the design and construction of the NWP. There will be 1.4 miles of unobstructed access along the site's perimeter" (Allen, 1981, p. 3). The NWP project has been recommended by the BCDC as " . . . an exceptional site in the public access supplement to the San Francisco Bay Paln and is also consistent with the public access design guidelines of BCDC and Coastal Conservancy" (Allen, 1981, p. 3). If present use of the Berkeley Marina is any indication, then it can be anticipated that the use of the completed NWP will be substantial.

Conclusion

At first glance, the process of conversion seems to be burdened with details, details that engulf more than the physical and financial aspects. Upon analysis, it becomes clear that it is not only the basic steps of construction that are involved, but also factors such as funding, a required settling time of 5-10 years for 30 acres of the dump still in use, and the availability of clean soil that determine the longevity of the conversion process.

At the current stage in development funding is a major problem, in that sometimes it can amount to a noncohesive series of events; noncohesive in the sense that the City of Berkeley virtually doesn't know where its next funding dollar will come from. This is exactly what is having a large effect on completion of the NWP project. The present neoconservative trend that we as a country are experiencing is putting a squeeze on programs, such as those that are environmentally or socially oriented, those that don't tend to promote immediate and tangible results. Or, in comparison, not as immediate and tangible as the results of tax cuts or the purchasing of ever-increasing military weapons. Given this atmosphere, we have seen the virtual abolishment of the LWCF, although at its inception in 1965 it was intended to be a 25 year program, and programs similar to it. In this wake, the strategy has been to consider alternative means of attaining the same end. One possibility is currently underway. That is a proposal by the State Department of Parks and Recreation to place the NWP under its jurisdiction, thereby creating another State park. This would be acceptable to the City of Berkeley, because they would just like to see the completion of the park as they had originally planned it.

Even if all of the previously mentioned factors were ideal, this still wouldn't guarantee rapid completion of the project. This is because the NWP project is presently not the only concern at the Berkeley Marina. The Marina is presently focusing on the erosion of not only its sewage system, but also that of its breakwater. Certainly, it becomes evident why these complications would be of more immediate concern. The sewage problem itself could amount to $500,000 easily.

These complications have caused a shift in focus, away from the NWP. In other words, the priority of the NWP has been lowered indefinitely. This has served to slow down its rate of completion.

In spite of the details, we must bear in mind that from an ideological standpoint, the NWP project is the best alternative, realistically, for utilization of Berkeley's solid waste disposal area after its closure. In addition, the NWP would also contribute to the beauty of an East Bay Shoreline Park. In light of these facts, and the inherent complications involved, what is the likelihood of ever witnessing the completion of the 90-acre NWP project? A conservative estimate might be something like . . . maybe by the year 2000.

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