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Land Use and Remedy Selection: Experience from the Field – The Fort Ord Site

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Abstract

In September of 1994, the Army closed the Fort Ord Military Reservation, a Superfund site of some 28,000 acres located in Monterey County, California. Under the Base Closure and Realignment Act, nearly all of this land will be transferred to federal and state entities and to a number of cities of the Monterey peninsula that border the base. A good deal of this property is valuable real estate -- coastal dunes, golf courses, and barracks that can be converted to apartments or dormitories. For the beneficiaries of these property transfers the Fort Ord cleanup is a modern day gold rush that is taking place as part of a Superfund cleanup. What effect have economic development pressures had on the cleanup process and on decisions about cleanup standards? This case study addresses this question by examining: (i) how the legal requirements regulating cleanup, community involvement and reuse have been implemented by the Army and the U. S. Environmental Protection Agency; and (ii) the effectiveness of two groups created by legislation to integrate reuse planning and cleanup -- the Fort Ord Reuse Authority, an economic planning authority representing the area's local governments, and the Fort Ord Restoration Advisory Board, a citizens group mandated to advise the Army about the cleanup process.

Key Words: Superfund, land use, economic development

JEL Classification Nos.: Q24, Q28, R52

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Preface

As the United States Congress debates revisions to the federal Superfund law, one of the most important topics of discussion is the degree to which cleanups at Superfund sites should be based on their expected future land use. This discussion has engaged the Superfund community for several years. Despite this apparent interest in linking cleanup with land use, however, surprisingly little analysis has been done on what role land use already plays in selecting remedies. RFF researchers have addressed the shortfall with case studies at three Superfund sites--Abex Corporation in Portsmouth, Virginia, Industri-Plex in Woburn, Massachusetts, and Fort Ord near Monterey, California--where land use has played a prominent role in the remedy selection process. Each of the case studies includes a description of: the contamination at the site; the different stakeholders involved in the remedy selection process; and the influence that land use considerations have had on this process.

The three case studies are part of a larger RFF research project on land use and remedy selection that was funded in part under a grant from the U.S. Environmental Protection Agency. The final report for that project, *Linking Land Use and Superfund Cleanups: Uncharted Territory*, is available from RFF's publications office (202-328-5000) or on RFF's web page (www.rff.org).

Land Use and Remedy Selection: Experience from the Field – The Fort Ord Site

Kris Wernstedt and Robert Hersh¹

1. INTRODUCTION²

The former Fort Ord Military Reservation is as unusual a Superfund site as one can find. An ex-Army base that employed more than 17,000 military personnel and 5,000 civilians prior to its closure in 1994, it occupies an enormous piece of California coastal real estate -- nearly 28,000 acres (44 square miles) of land north and east of Monterey, including almost 900 acres of dunes fronting on Monterey Bay (see Figure 1, below).³ As a closing base under the Base Closure and Realignment Act, the transfer to non-defense entities of over forty square miles of this Superfund property, much of it with little or no serious contamination, has spawned tremendous interest from a wide array of representatives of federal, state, and local public and private groups. For many in the area, including the local media, the fact that Fort Ord is a federal Superfund site and its cleanup thus governed by the federal Superfund statute apparently has attracted little more than ancillary interest.

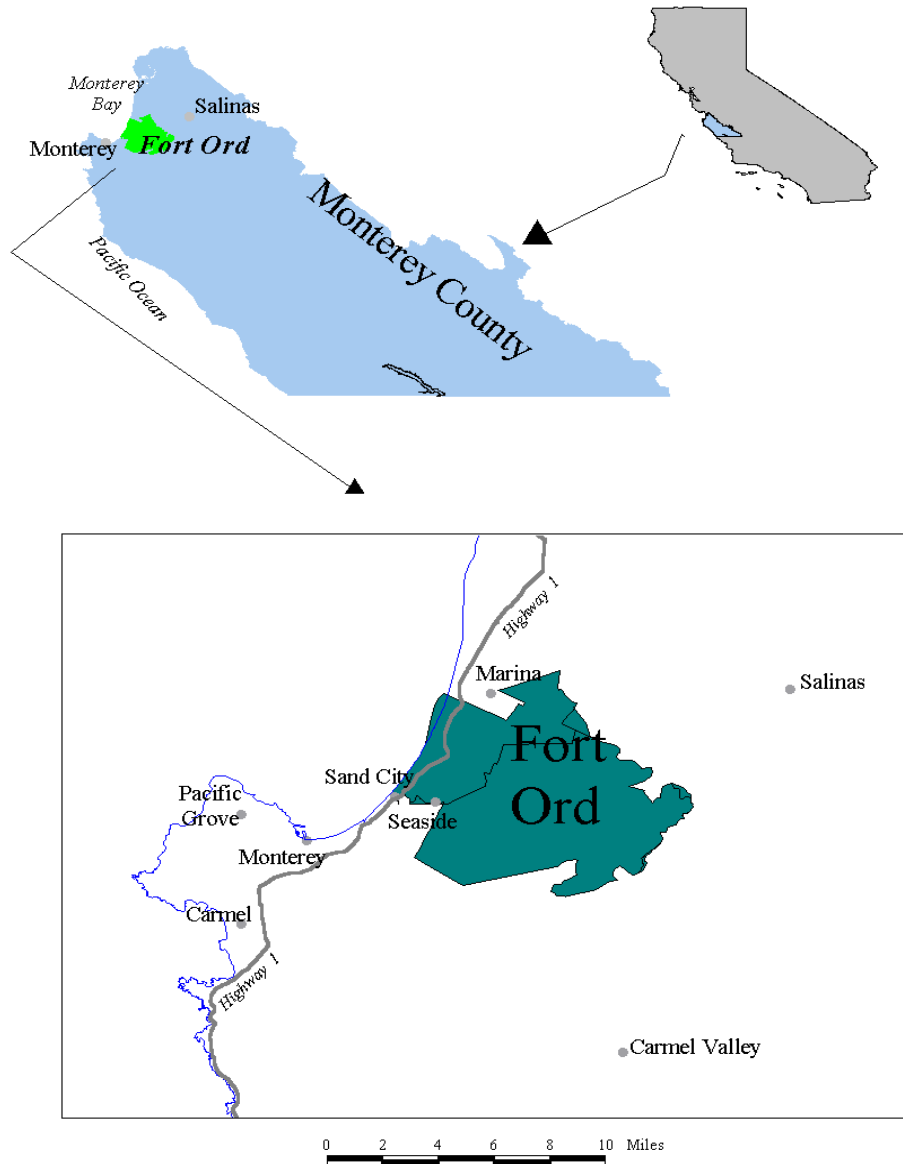
Why then have we chosen it -- an enormous federal facility with investigation and cleanup costs in the hundreds of millions of dollars, new owners eagerly lining up to get a shot at the property, and much of the environmental community seemingly more occupied with the development of a habitat management plan to protect conservation values than with cleanup or contamination per se -- for a case study of land use and remedy selection in Superfund? The answer is that we believe the site to exemplify the tensions that can result from linking land use and remedy selection. Fort Ord provides a wonderful example of the interplay of cleanup, economic development, and public involvement. It is precisely because it is a closing military installation and a Superfund property that the site must follow a specific formalized process for promoting community involvement, planning reuse, and cleanup. And because it is so large and touches so many different local communities, it brings to attention a reality often ignored in discussions about linking Superfund and land use; namely, the highly charged nature of land use in American society. Fort Ord illuminates how

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² Interviews for this case study were conducted between July 1995 and December 1996. Information from these interviews is incorporated in the text and is cited as personal communications. However, to protect the interviewees, we have not cited the specific individuals who provided the information except as a group in Appendix B. Our discussion of the Fort Ord site is generally current as of December, 1996.

³ U.S. Army Corps of Engineers. 1992: *Final Land Use Baseline Study of Fort Ord, California*. p. 22.

Figure 1. Location of Fort Ord, California



linking land use and remediation at Superfund sites can ensnare a wide range of stakeholders on both the cleanup and development sides.

Our objective in this case study is to provide the reader with a deeper, empirically grounded understanding of how incorporating land use into Superfund cleanups has played out at one site and a hint of how it might play out at others. At Fort Ord, it is clear that linking cleanup to land use has fundamentally altered the dynamics of the Superfund cleanup process. To tip our hand a bit, Fort Ord illustrates the difficulties that can result when multiple “publics” have a stake in cleanup or reuse.

We have organized the case study as follows. In section 2, we provide background on events leading up to the Fort Ord closure and initial environmental investigations at the base. As part of this background, we touch on early efforts by the U.S. Army Corps of Engineers to work with local reuse planners and development advocates, as well as briefly describe the contamination and remediation at the site. (We include a more complete description of the contamination and remedial alternatives in Appendix A.) We also examine several of the new or planned reuses for the former army base, including a recently opened campus of the California State University system.

In section 3, we turn to a discussion of the legislative and regulatory context in which cleanup and reuse at Fort Ord are taking place. Because Fort Ord is a closing military installation and a Superfund site, it is subject to special cleanup and reuse procedures under the Superfund law (known more formally as CERCLA, the Comprehensive Environmental Response, Compensation, and Liability Act), the Community Environmental Response Facilitation Act, the Base Closure and Realignment Act, and various annual Defense Authorization bills. Other important pieces of federal legislation such as the McKinney Homeless Assistance Act and the Endangered Species Act influence which groups have priority for gaining access and title to Fort Ord property and control habitat alteration and environmental impacts (on both the land and in Monterey Bay), while California state legislation has established the redevelopment authority responsible for reuse planning at the site.

In section 4, we discuss the central players in cleanup and reuse. These include the U.S. Environmental Protection Agency (EPA), two state agencies with regulatory oversight, the U.S. Army, and two local groups. The first of these local groups, the Fort Ord Reuse Authority, is the local redevelopment agency that has developed the reuse plan for the base. Its governing board consists of representatives from surrounding cities and Monterey County. The second local group, the Fort Ord Restoration Advisory Board, is responsible for providing advice to the Army on cleanup. Its members include representatives of state and local agencies as well as the general public. The relationships within and between all of these players, particularly the multiple communities that are represented within the two local groups, are the most interesting aspect of the cleanup and reuse. We have found that these relationships provide a powerful lens through which we can view the dynamics of land use and remedy selection.

Finally, in section 5 we conclude by highlighting the central lessons that we take away from Fort Ord with respect to cleanup and land use. These are that incorporating land use may make it much more critical to understand the interplay of players at a site, because

these relationships shape the on-the-ground implementation of the Superfund program; that it can regionalize a cleanup problem beyond the boundaries of a site; and that the multiple publics that reuse encourages to come to the table can enlarge the scope and shift the locus of decision making at a Superfund property.

2. BACKGROUND

Investigation, cleanup, and reuse are all occurring simultaneously at Fort Ord and have been for some time. In the mid-1980s, concerns by the state of California that training activities at a fire drill area on the then-active Fort Ord Army Reservation might have contaminated soil and groundwater in the area prompted preliminary investigations, and these efforts detected residual organic compounds in the groundwater. Subsequent studies of a 150 acre landfill on the base led to the detection of volatile organic compounds (VOCs) in Fort Ord and Marina Coast Water District water supply wells. Largely in response to the detection of these VOCs, in February 1990 EPA placed Fort Ord on the National Priorities List (NPL), the formal roster of sites that are eligible for cleanup monies from the Superfund trust fund.

In the latter stages of this initial round of environmental investigations, the Department of the Army began discussions about transferring the 7th Infantry Division (Light) stationed at the base to Fort Lewis, Washington and closing Fort Ord. The arguments for doing so did not relate to suspected contamination, but rather to the limitations of the range and training facilities on the base, the high cost of off-post housing and operations, and the lack of an adequate departure airfield for quickly moving the infantry to field deployment in the event of an emergency (the on-base airfield is both small and frequently fogbound and the off-base departure field at Travis Air Force Base is not immediately adjacent to Fort Ord).⁴ In 1990, the Secretary of the Department of Defense (DOD) formally proposed the closure of Fort Ord (technically a downsizing), and this was confirmed by the 1991 base closure commission set up under the Defense Base Closure and Realignment Act of 1990 (BCRA or, more colloquially, BRAC, the acronym that we will use in this paper). In September 1994, the Army closed Fort Ord. Although no army division remains at the base, the Army will retain roughly 700 acres of the site (the Presidio of Monterey annex and a small reserve center) as housing for military personnel stationed at the Defense Language Institute, the Naval Postgraduate School, and the Monterey Coast Guard station.⁵ However, the bulk of the remaining 27,000 acres of the site have been or

⁴ U.S. Army Corps of Engineers, 1992. p. 10.

⁵ Fort Ord Reuse Authority. 1996: *Reuse Update/News*, No. 2. Marina, California: FORA. p. 3.

will be transferred to local, state, and other federal agencies, with a relatively small amount targeted for sale to private parties.^{6,7}

Prior to the official closure of Fort Ord, the U. S. Army Corps of Engineers (Corps) prepared an Environmental Impact Statement (EIS) in 1993 to assess the environmental impacts of disposing of the base's property. The Corps earlier had been asked to prepare an EIS in 1990, when the possibility of closing Fort Ord was announced, but at that time community leaders and then local Congressman Leon Panetta had resisted work on such a study because many local residents opposed the closure. Moreover, the BRAC legislation specifies that the National Environmental Policy Act (NEPA) applies to base closures during property transfers only *after* the base closure decision has been reached; that is, in order to facilitate base closures, NEPA considerations are not to be taken into account in making the decision on whether to close a military base. Thus, prior to 1994, the Corps had limited their EIS investigations to the collection of base line data that could be used in continued operation or in closure. When the closure decision became final, Congressman Panetta added a rider to a congressional bill to require the EIS to be completed within 18 months (rather than in the normal 2½ to 3 year time frame that typically would required) and to broaden the scope to include social and economic impacts as well as environmental impacts.

As part of the EIS process, the Corps worked with local planning entities in five surrounding cities and the county to help define alternative land use scenarios. These entities included both planning offices existing prior to closure (*i.e.*, the offices of surrounding jurisdictions) as well as regional groups and authorities set up specifically to plan for reuse of the base, such as the Fort Ord Reuse Group (which we discuss in more detail in section 4). The Corps held several public meetings and sent out mailings to garner attention in the Fort Ord property, and 100 federal and local agencies showed interest in facilities on 25,000 of the 28,000 acres of the base. Although the plans of local entities received consideration, the Corps ultimately rejected the Initial Base Reuse Plan put forward by the Fort Ord Reuse Group, claiming that the EIS already had a wide range of alternatives and that the development envisioned in the Initial Base Reuse plan would generate too many adverse impacts. In addition, the Corps said that the Reuse Plan could not be implemented because it did not reflect the requests from federal and local agencies for land. Instead, the Corps

⁶ As noted in subsection 3.3, public entities can receive Fort Ord property at no cost under a public benefits conveyance. In some cases, however, they may have to pay for this land. For instance, in 1992 a local municipality in the area offered the Army nearly \$200 million to relocate some Army facilities and buy 980 acres of the base for developers. Although the Army rejected that proposed deal, it did recently accept an \$11 million offer from that same municipality for two golf courses at the former base.

⁷ Harding Lawson Associates. 1995: *Basewide Remedial Investigation/Feasibility Study, Fort Ord, California*. Volume I: Background and Executive Summary. p. ES-11; Akeman, Thom. "Army Spells Out its Plan for Ord." *Monterey County Herald*. November 21, 1992. p. 1A; *Monterey County Herald*. October 30, 1996.

identified six reuse alternatives in the EIS, and designated its own scenario of the most likely land use at the site to serve as the preferred alternative in the EIS.^{8,9}

2.1 Site Description

Fort Ord epitomizes the problem of placing a large parcel of property in its entirety on the NPL, since by nearly all accounts large portions of the nearly 28,000 acre site have no or relatively little contamination that poses a threat to human health or the environment. The most compelling evidence of this is that up until the early 1990's, over 30,000 people resided on the base. The base had over 8,000 buildings, including four schools, a hospital, military and family housing, offices, shopping areas, restaurants, and machine shops, plus an airfield, two golf courses, and other recreation areas. As noted at several points in this paper, the relatively low levels of contamination and the opportunity to gain sizable and potentially valuable parcels of land have conspired to galvanize interest in Fort Ord. Its placement on the NPL and subsequent investigations and cleanup arguably have attracted much less attention from most quarters.

The base has over 22,000 acres of undeveloped land that the Army used for training and kept as open space. This includes a mixture of 11 types of plant habitats or plant communities, including central maritime chaparral (12,500 acres), oak woodlands (5,000 acres), and four grassland communities (4,500 acres); the California Department of Fish and game considers maritime chaparral and one of the grassland communities as rare or declining.¹⁰ Federal, state, and local laws have given special protective status to over forty species of flora and fauna on the base.¹¹

The three major developed areas at the base are the East Garrison (on the northeast edge of the base), Fritzsche Army Airfield (in the northern area of the base), and the Main Garrison (on the western edge of the base just east of the Southern Pacific Railroad and California Highway 1), as seen in Figure 1. Residential use, military industrial use, and local services use accounted for roughly three-quarters of the roughly 5,000 acres of developed land use on the base. The Main Garrison, the largest developed area, had the most diverse set of uses, and not coincidentally, is the target of most of the post-closure development interest.¹²

⁸ This preferred alternative in the EIS also essentially became the basis for the Army's Record of Decision in 1993 on the disposition of Fort Ord property. Somewhat unusually (for NPL sites), this reuse alternative also became the base for risk assessments in the remedial investigation and feasibility study of the site's contamination and cleanup.

⁹ "Chronology Lists Milestones on Road to Enactment." *Monterey County Herald*. May 10, 1995. p. 10A; Langton, Stuart. "An Organizational Assessment of the U. S. Corps of Engineers in regard to Public Involvement Practices and Challenges. January, 1994 (http://www.cpn.org/sections/topics/environment/stories-studies/armycorps_langton1-2.html).

¹⁰ Harding Lawson Associates. 1995: *Basewide Remedial Investigation/Feasibility Study, Fort Ord, California*. Volume 1: Background and Executive Summary. p. ES-8.

¹¹ U. S. Army Corps of Engineers. 1994: *Installation-Wide Multispecies Habitat Management Plan for Fort Ord, California*. p. 1-1.

¹² U.S. Army Corps of Engineers, 1992. p. 18.

Both Fort Ord and the adjoining community of Marina obtain water from groundwater wells on or adjacent to Fort Ord. The base overlies two groundwater basins, the larger and more critical of which, the Salinas basin, extends far beyond Fort Ord into the Salinas valley. This basin includes five layers of aquifers.¹³ Because of extensive irrigation pumping in the valley and growing municipal demands, new water supplies will be needed in the eventuality of extensive new development.^{14,15} Already, several of the aquifers in the area have experienced salt-water intrusion. Furthermore, although no wells currently draw drinking water from contaminated areas, remedial investigations at Fort Ord have identified current chemical contamination (trichloroethenes [TCE] and other VOCs) in the A- and 180-foot aquifers (as isolated plumes) and, in the past, contamination in the 400-foot aquifer in two wells that lie near the landfill.

Both the limited availability of water and the existence of the special status animal and plant species at Fort Ord constrain potential development and reuse at Fort Ord. As noted below, several development proposals for the site have been roundly criticized or dismissed in part because such proposals have ignored concerns about the adequacy of local water supplies. Furthermore, the requirements imposed by federal, state, and local species protection laws strongly influence the scale and type of reuse that the site will support.

2.2 Site Contamination

As part of the remedial investigation and feasibility study (RI/FS) process required at Superfund sites, the Army has identified forty-three sites across the 28,000-acre base that potentially require remediation. We discuss these in detail in Appendix A, but briefly they include:

- the two areas or operable units (OUs) identified in initial, pre-NPL investigations as having soil and groundwater contamination -- these are OU 1, the fire drill area at the airfield (which has a 1996 Record of Decision, or ROD), and OU 2, the landfill (which has an August 1994 signed ROD);
- sites that preliminary field work in the RI/FS suggests need a full remedial investigation, baseline risk assessment (human health and ecological), and feasibility study;

¹³ These include the uppermost A-aquifer, upper 180-foot aquifer, lower 180-foot aquifer, 400-foot aquifer, and 900-foot aquifer.

¹⁴ In late 1995, citizens in the Monterey Peninsula Water Management District voted down a measure to approve financing for the construction of the Carmel Valley Dam, reportedly in part because they perceived that the enhanced water supply provided by the dam would induce growth in the area. Reports in the media indicate that uncertainty about the future availability of water have stymied some development at Fort Ord.

¹⁵ Monterey County Election Department. 1995: *Official Statement of Votes Cast at the UDEL Election*. November 7, 1995; Akeman, Thom. 1996: "Lack of Water Stymies Plans for Fort Ord." *Monterey County Herald*. January 16, 1996. p. 1C; Personal Communication, February, 1996.

- sites with a limited extent and volume of surficial soil contamination (petroleum hydrocarbons, solvents, oils, metals, and pesticides) that can be addressed with an “interim” action of excavation and treatment at a soil treatment facility on the base (Interim Action ROD was signed in February 1994); and
- sites designated as “no action” sites (which are covered under a 1995 no action ROD), where existing contamination poses no current or potential threat to human health or the environment under CERCLA authority.

In addition, with regulatory approval from the EPA, the Army has taken several quick removal actions at sites that have presented immediate threats to human health or the environment. These have included removal of unexploded ordnance and containers with petroleum hydrocarbons, lead, and VOCs. Unexploded ordnance (UXO) has been a particularly nettlesome issue, both because it occurs in scattered parcels across the base (with a high concentration in one 8,000 acre parcel in the southwestern part of the base) and because the Army, EPA, and state regulators have disagreed whether it should be treated as a CERCLA *removal* action rather than covered under CERCLA *remediation* (see subsection 4.1).

Of the forty-three sites that the Army has identified at Fort Ord as potentially requiring remediation, seven fall into the category of sites that need a full remedial investigation (plus the two OUs that have been investigated previously). The Army has consolidated several of these seven sites and established five full RI/FS sites. Concerns at these five sites included soil with unexploded ordnance and chemical contaminants such as petroleum hydrocarbons, cyclotrimethylenetrinitramine (an explosive compound), and lead, and groundwater with VOCs. The Army completed a basewide ROD, which incorporate the interim action and “no action” RODs mentioned above, in 1996. The cleanup outlined in the ROD is expected to be finished by 1998, but ordnance removal likely will not be complete until at least several years after the turn of the millennium. Estimates of the final bill for site investigations and cleanup (including ordnance) range from \$230 million to \$300 million.¹⁶

2.3 Proposals for Reuse

Although contamination at Fort Ord significantly shapes the interaction of stakeholders at the base, one should keep in mind the point made earlier; namely, that although exceptions exist, the acquisition of the valuable Fort Ord property has attracted the most interest from the parties involved in post-closure affairs at Fort Ord. In the prescient words of one state planning official prior to the closing of Fort Ord, “I’ll bet there are a lot of real estate people just licking

¹⁶ Akeman, Thom. 1996: “Army Awards Ord Cleanup Contract.” *Monterey County Herald*. July 10, 1996. p. 1A; Akeman, Thom. 1996: “Army Adds \$50 million to Ord Cleanup.” *Monterey County Herald*. March 2, 1996. p. 1A; Akeman, Thom. 1995: “Ord Cleanup About 2 Years from Completion.” *Monterey County Herald*. December 11, 1995. p. 1A; Personal Communications, September 29, 1995, September 27, 1995.

their lips over this. This could well turn into a real battle royal.”¹⁷ Furthermore, the desire to soften the local economic impacts of closing the base certainly have added urgency to the task of finding viable reuses for the site. Although a number of parcels have been or shortly will be transferred by deed or lease to various parties (including golf courses, an airfield, housing for homeless service providers, and, in the classic irony for those familiar with Superfund clichés, a child-care center), we draw on three reuses that exemplify some of the main features and problems of Fort Ord’s modern-day Oklahoma land rush.

The first of these, a university campus, has been promoted in one form or another ever since higher education emerged as a preferred reuse in the first plans for post-closure use of Fort Ord. Proponents of college and post-secondary educational facility development at Fort Ord claim that such development offers the single best strategy to recoup some of the job and other economic losses associated with the closure of the base -- it holds the promise of bringing in outside (*i.e.*, not from Monterey County) money to the area, generating high paying jobs, furnishing a good residential property tax base, and yielding secondary spin-offs. In addition, it would draw on educational resources (*e.g.*, the Defense Language Institute) that already exist in the area and provide the nearly 400,000 plus Monterey County residents with their first in-county four-year college.^{18,19}

Although reuse planning documents have mentioned a number of universities, colleges, or institutes as possible recipients of Fort Ord property, California State University and the University of California at Santa Cruz have moved the fastest and furthest on obtaining property. These two state universities have received gratis from the Army over 1,500 acres, land with a reported value of between \$400 million and \$1 billion.²⁰ Other than a few extension classes in one of its buildings, the University of California at Santa Cruz is still exploring markets and is largely in the planning phases of a research center for its property.²¹ California State University, on the other hand, has located a new campus (California State University at Monterey Bay) on roughly 800 acres in the Main Garrison and, with surprising speed, started classes in September, 1995 with 55 newly hired faculty and

¹⁷ Stein, Mark A. 1989: “Folding the Fort: County Dependent on Ft. Ord Ponders What Future May Hold Without Base.” *Los Angeles Times*. December 31, 1989. p. A-3.

¹⁸ However, planned university development has not enjoyed unanimous acclaim. During a state Coastal Commission hearing on the Army’s Fort Ord land disposal plans in 1994, several Carmel residents were concerned about a new campus at the base, and one Carmel City Council member suggested that the students would not stay in barracks housing, but “[t]hey’re going to look at our cute cottages in Carmel, Pacific Grove and Monterey, and four to six are going to go in on them.” It is fair to say, though, that notwithstanding this kind of resistance, most Peninsula residents seem to think that a new educational institution would offer a kind of development that appears compatible with the quality-of-life that has attracted many new residents to the area.

¹⁹ Akeman, Thom. 1994: “Coastal Panel OKs Ord Land Disposal Plan.” *Monterey County Herald*. March 18, p. 1A.

²⁰ Akeman, Thom. 1994: “Army Turns Over Ord Land.” *Monterey County Herald*. July 9, 1994. p. 1A; Garcia, Kenneth J. 1994: “Fort Ord Conversion on Fast Track.” *San Francisco Chronicle*. April 25, 1994. p. A15.

²¹ Akeman, Thom. 1996: “Lack of Water Stymies Plans for Fort Ord.” *Monterey County Herald*. Jan. 16, 1996. p. 1C.

over 600 students. It has occupied mostly existing structures on the base, but additional support has been necessary to utilize these buildings and the campus reportedly has received roughly \$50 million in federal funds (including FY97 appropriations) for capital improvements (*e.g.*, to convert the Army buildings into classrooms and dormitories). The state has provided over \$20 million more for operating expenses.^{22,23}

A second reuse of the former base's property has involved the transfer of land from the Army to another federal entity, the U. S. Bureau of Land Management (BLM). The BLM has received one-quarter of the land at the base, roughly 7,200 acres, in 1996 and stands to gain title in the future to roughly 8,000 acres of former training ranges in the southwestern part of Fort Ord (site 39, described in Appendix A). It will use the bulk of these properties for public recreational use (hiking, horseback riding, and mountain biking) and as a natural resource management area to preserve a maritime chaparral plant community, a habitat that supports several special status species. Access to the 7,200 parcel already has been provided to the public, and the BLM has helped to organize volunteer bike and horseback patrols that cover more than fifty miles of trails and provide emergency health assistance, monitoring of illegal trail use, and public education for safer biking and riding.²⁴

As noted earlier, the major known concentration of unexploded ordnance (UXO) at Fort Ord occurs at the southwestern 8,000-acre parcel slated for the BLM. Even after a UXO removal action, public access almost certainly will be restricted to designated trails and roads in this area because some unexploded ordnance likely will remain at the site.²⁵ Within this area, the BLM may need to fence off from the public a 1,700 acre parcel of high density UXO land entirely (to completely clear this land would require an implausibly massive excavation of soil ten to twelve feet deep, rather than the three feet needed elsewhere). Although it may in fact find it easier to manage an area where the public is excluded, in the past the BLM has expressed reservations about this, fearing that a fence imposing enough to keep out the public also will keep out wildlife and destroy some of the very reasons for managing the land as a natural area. On the other hand, others argue that the fence must rigorously prevent (not just

²² During ceremonies for the land transfer in 1994, the Chancellor of California State University system reminded the audience that the system wants an additional \$135 to \$150 million from DOD in the next ten years to convert additional buildings. Recent estimates of the cost of necessary capital improvements to campus buildings and infrastructure are \$200 million.

²³ Akeman, Thom. 1995: "FORA Ready to Ask for Own Water Agency." *Monterey County Herald*. August 12, 1995. p. 1A; Schultz, Ken. 1995: "Seaside Emerges from Ord Loss with Bright Future." *Monterey County Herald*. December 3, 1995. p. 1A; Akeman, Thom. 1994: "Monterey Offers Plan to Save DLI." *Monterey County Herald*. July 9, 1994. p. 1A; "Current Status of California Base Reuse: Fort Ord." 1996: Available at http://www.cedar.ca.gov/military/current_reuse/fort_ord.htm. [hereinafter "Current Status" 1996].

²⁴ Lordan, Betsy. 1996: "Patrols Scouring Ord Trails." *Monterey County Herald*. December 16, 1996. p. A1.

²⁵ To explore for ordnance within this tract, roughly 800-acre units will be randomly sampled for UXO. If no UXO is found within an 800 acre unit, that unit will be considered free of UXO (although because one can not be certain that UXO is not in the unit even if the sampling does not reveal it, restrictions will be imposed on the use of the parcel). This approach will take ten to fifteen years to implement, due in part to restrictions imposed by a habitat management plan described in subsection 3.3.

discourage) public trespass, since the remaining land may present a threat to public safety. One local citizen recently amplified this concern by pointing out that trespassers had cut the Fort Ord property fence (which borders the 8,000 acre parcel) and brought in a minidozer to contour the terrain for dirt bike riding.^{26,27}

A third recipient of land, the State of California Department of Parks and Recreation (State Parks), represents another post-closure recreational and conservation reuse. The three and one-half miles of relatively undeveloped beachfront at Fort Ord have made many mouths water among potential Fort Ord property transferees. The City of Seaside presented an early reuse plan that placed large-scale tourism and entertainment complexes along this gem, but this was viewed by most as unrealistic from the beginning. Given the power of the California Coastal Commission to control development and the Commission's preferences for preserving access to the beach and natural coastal features, the entities with the best prospects for gaining title and development control over the land likely were resource or conservation agencies. State Parks probably has had a particularly strong claim on the property from the beginning, since it has a good track record on managing parks in the county and considerable expertise in restoring dunes.²⁸ It also has initiated a planning process to develop a State Park General Plan before the land is transferred.

As State Parks gains control of the property and develops a campground and recreation area, however, it faces three problems. First, some contamination will remain at the site under almost any scenario. Even after remediation, lead will be present in different concentrations around the site.^{29,30} Furthermore, if the Army does not demolish and cart away assorted small structures, State Parks may face an asbestos removal problem. Second, the agency may not have the money to manage the site. It faces the likely prospect of continuing budget cuts, and already has lost a total of \$30 million over the last four years. State voters rejected bond issues to fund land acquisition and development of the State Park system in 1992 and 1994. Finally, the cities of Marina and Sand City want to extend an existing beachfront road through the planned recreation area to provide an alternative route to Highway 1, arguing that a through road is necessary to complement other development (e.g.,

²⁶ According to minutes of the Restoration Advisory Board, the Army and its contractors currently are improving the fence around the 8,000 acre parcel, installing signs to keep out trespassers, and working with the BLM to educate the public about the dangers of collecting ordnance. The Army notes, however, that "[t]here remains a certain level of personal responsibility on the part of the public to avoid these things."

²⁷ RAB Meeting Minutes. August 22, 1996; Akeman, Thom. 1995: "Fort Ord Transfer Nearer." *Monterey County Herald*. November 1, 1995. p. 1A; Personal Communication, September 28, 1995.

²⁸ The beachfront property will require significant restoration, both because remediation at one of the full RI/FS sites that lies along the beach (site 3 in Appendix A) may remove 60,000 cubic yards of sand, and because the non-native, dune stabilizing vegetation currently on the parcel needs to be replaced with native stabilizing vegetation that can support special status species.

²⁹ Parties have signed off on the permissible lead levels for human health at the site, but discussions are continuing on the appropriate level for ecological risk.

³⁰ Personal Communication, September 15, 1997.

hotels) in the area and to garner a slice of the Monterey Peninsula tourist industry that other jurisdictions already enjoy. However, according to State Parks, a new through road would significantly decrease the agency's capability to manage the new park and to limit access to sensitive areas, and in this context the agency is concerned about the proposed road's impact on both recreation and habitat, two planned uses that are shaping cleanup standards and remedial alternatives.³¹

The State Parks proposal, as well as the other two examples of reuse, illustrate two characteristics of linking land use and Superfund cleanup, characteristics that are scarcely revelations but nonetheless warrant emphasis. First, individuals often may disagree with each other about the appropriate uses of a Superfund site after cleanup, and therefore have different notions about the appropriate level of cleanup. These differences often may be difficult to reconcile, and linking land use to remedy selection thus may become much more problematic than it might initially appear to many. At Fort Ord, individuals and groups clearly don't share identical visions of what the next use of the forty plus square mile property should be. The community has many different voices. Of the three examples in this section, this appears most acutely for the State Parks parcel, but as we will see later conflicting visions of reuse have permeated reuse planning since the base was announced for closure.

Second, when a future use of a site is uncertain or when it is restricted (*e.g.*, when deed restrictions are placed on its use), it often is more difficult to reach broad public agreement on cleanup standards. It is no coincidence that the RI/FS sites at Fort Ord that are being cleaned up to unrestricted use standards (the majority of the sites) have attracted little attention or controversy on the cleanup front, while those that are being cleaned up to a less-conservative level (*i.e.*, those that have more use restrictions) have generated more heat. For example, many in the public continue to express some discomfort with the standards and planned cleanup of the BLM's 8,000 acre parcel and the State Parks beachfront property, both of which will continue to have residual contamination after a partial remediation.

3. LEGISLATIVE AND REGULATORY BACKGROUND

A closing Department of Defense facility, such as Fort Ord, that has been placed on the NPL faces a number of statutes and regulations that affect remediation and reuse. These include CERCLA itself and related statutes, language in DOD fiscal year authorization bills, other federal legislation, and legislation and regulations issued by the State of California.

3.1 CERCLA and CERFA

Section 120 of CERCLA, as amended by the 1986 Superfund Amendments and Reauthorization Act, requires that the EPA and relevant state regulatory authorities supervise NPL cleanup activities at DOD sites. As a result, at most such sites a federal facilities agreement (FFA) among the relevant DOD service, EPA, and the state governs cleanup. For

³¹ Akeman, Thom. 1995: "Mayors Split on Scenic Ord Road." *Monterey County Herald*. October 14, 1995. p. 1A; Personal Communication, September 29, 1995.

Fort Ord, this agreement was signed by the U. S. Army, EPA, and two departments of the California Environmental Protection Agency (the California Department of Health Services, since reorganized as the Department of Toxic Substances Control, and the Central Coast Regional Water Quality Control Board) in 1990. The agreement outlines the process by which the parties establish RI/FS and cleanup requirements and response actions and implement and complete remedial actions, and it includes a dispute resolution mechanism in the event of disagreement among the parties.

One of the stated purposes of the Fort Ord FFA is to expedite the cleanup process.^{32,33} This reflects section 120 (CERCLA) requirements that federal facilities start a RI/FS within six months of being listed on the NPL and commence onsite remedial actions not later than fifteen months after completion of the investigation and study. Probably not coincidentally, the language in the Fort Ord FFA also provided a preview of requirements to speed remedial investigations that Leon Panetta, then Congressman from Monterey, introduced to the Defense Authorization Bill signed in 1991, the year after the principal parties signed the FFA.

Congressman Panetta also introduced the Community Environmental Response Facilitation Act (CERFA), which the 102nd Congress passed in 1992, to amend Section 120(h) of CERCLA. CERFA formalizes a process at closing bases on the NPL for separating individual clean parcels from contaminated ones, so that the clean ones can be transferred (with EPA approval) before the RI/FS for the entire site is completed. Furthermore, under this legislation, remedial action at closing federally owned NPL sites can be considered to have been taken if the parties have completed the construction and installation of an approved remedial design and demonstrated to EPA that the remedy is operating properly and successfully. Thus, the carrying out of long-term pumping and treating and operation and maintenance of the remedy does not preclude transferring the property.^{34,35}

3.2 Department of Defense Legislation and Regulation

In addition to CERCLA, CERFA, and other statutes and regulations directly related to hazardous waste and cleanup (*e.g.*, the Resource Conservation and Recovery Act), a number of federal laws and regulations have played important roles in shaping the reuse and remediation process at Fort Ord. Most obviously, the 1988 Base Closure and Realignment

³² For example, the Fort Ord FFA established a timetable for the delivery of documents relevant to OU 1 and OU 2, the two OUs which predated NPL listing, and to basewide activities.

³³ *Federal Facilities Agreement*. US EPA, State of California, and US Army. Administrative Docket Number 90-14. p. 5.

³⁴ This is particularly important at a federal facility such as Fort Ord, because it allows some portions of the base to be released for reuse while others are still under investigation.

³⁵ GAO. 1995: *Military Bases: Environmental Impact at Closing Installations*. GAO/NSIAD-95-70. p. 22; U.S. Army. 1993: *Advance*, 3 (Winter). p. 4; Swenson, R. T. 1995a: "Military Base Closures: Remediation and Compliance Issues are Major Challenges to Civilian Redevelopment." *Journal of Environmental Law and Practice*, Jan/Feb. p. 30.

Act (BRAC) and its subsequent amendments bear directly on cleanup and reuse at closing bases in two major ways.

First, the base closure legislation provides for the designation of a local redevelopment authority, or LRA, at each closing military installation. The LRA is the local entity that DOD will lease or transfer land to. (At Fort Ord, the designated LRA is the Fort Ord Reuse Authority, although California State University--Monterey Bay and the University of California--Santa Cruz also qualify as redevelopment authorities.³⁶) The requirement for the formation and designation of an LRA at each site in part reflects DOD's desire to avoid prolonged and contentious negotiations with multiple local jurisdictions, each potentially with a competing vision of what reuse is appropriate for the closing facility.

Second, BRAC severely restricts the role that the National Environmental Policy Act can play in decisions about whether to close a base by exempting the Base Closure Commission closure decision from environmental impact statement requirements; that is, while an EIS is required for redevelopment and property transfers at closing bases, the decision by the Commission on *whether* to close the base does not require an EIS. This exemption reflects the recognition that requirements under the National Environmental Policy Act had made it quite difficult to close bases prior to passage of BRAC. Although not directed at reuse per se, the removal of this hurdle for base closure decisions nonetheless has effectively accelerated the long process of developing new uses at closing bases.

Other, more direct mechanisms for accelerating reuse of closing bases have come from language in several annual Defense Authorization bills. As already noted in the previous subsection, then-Congressman Panetta of Monterey played a substantial role in accelerating cleanup and reuse at Fort Ord and other closing military facilities in CERFA and in the 1991 Defense Authorization Bill. In the 1992 Fiscal Year Defense Authorization Bill, the Congressman introduced additional language -- known as the Panetta legislation -- to require closing military bases on the NPL list to complete RI/FSs within 36 months of the passage of the law or, for installations listed for closure subsequently, within 36 months of listing.^{37,38} Furthermore, the Pryor amendments to the 1994 Fiscal Year Defense Authorization Bill require that the EIS needed for redevelopment and property transfers be completed within 12 months of submission of the reuse plan by the local governments. The amendment also specifies that DOD must include the reuse plan developed by the designated LRA as the

³⁶ Akeman, T. "Fort Ord's Government is Created." *Monterey County Herald*. May 21, 1994. p. 12A.

³⁷ The EPA expressed some concern about data quality at Fort Ord if the tight Panetta schedule were strictly adhered to. RAB members also have expressed some concern. Ultimately, an extension was given for meeting the 36-month deadline.

³⁸ Harding Lawson Associates. 1995: *Basewide Remedial Investigation/Feasibility Study, Fort Ord, California*. Volume 1: Background and Executive Summary. p. ES-1; Project Managers Meeting Minutes, May 31, 1994; Transcript of RAB Meeting, October 20, 1994. p. 103.

principal proposed action for analysis in the EIS.³⁹ The strong imprint of Congressional legislators in speeding cleanups promoting reuse is clear.

Despite the central importance of LRAs in reuse, these redevelopment authorities have no official role in the cleanup process. Rather, amendments to the 1995 Fiscal Year Defense Authorization Bill provide DOD funding and a statutory base for Restoration Advisory Boards (RABs) to comment on the cleanup process at each site. Each RAB consists of technical personnel from relevant federal, state, and local agencies, as well as citizen members from the community. In marked contrast to the LRAs, RABs are supposed to have a substantive role in cleanup decisions, but little or no direct or official input on reuse. Congress effectively has set up two parallel, only loosely connected processes, with local redevelopment authorities concentrating on redevelopment, and local restoration advisory boards on cleanup.

3.3 Other Federal Legislation

Two other pieces of federal legislation that shape cleanup and reuse at Fort Ord are the 1949 Federal Property and Administrative Services Act and the 1987 McKinney Homeless Assistance Act. The former gives priority to other federal agencies' claims on DOD property, but allows transfers to local groups at less than market values (or free) if they provide public recreational or educational benefits or airport uses (a "public benefit conveyance"). The McKinney Act gives priority to organizations that provide services and housing to the homeless.^{40,41}

Subsequent additional legislation and regulations have modified both of these acts. Language contained in the above-mentioned Pryor amendments and subsequent regulatory changes provide DOD with the authority to transfer federal property at closing installations to LRAs at less-than-market value via an "economic development conveyance," if the LRA can show that such a conveyance likely would promote economic development by creating jobs.⁴² The Pryor amendments also have loosened the influence of homeless providers, and in 1994 the Base Closure Community Redevelopment and Homeless Assistance Act went further by

³⁹ As noted earlier, the Corps rejected the early reuse plan put together by the Fort Ord Reuse Group. However, prior to releasing the EIS in June 1993, the Corps and the FORG group agreed that while the Corps would not substantially alter the EIS, it would work with FORG and other parties in supplemental environmental agreements. Since the 1993 EIS, local governments have formed a new regional authority and developed a more realistic reuse plan, most of which the Army has accommodated in a supplemental EIS.

⁴⁰ Some commentators have remarked that this Act has allowed homeless assistance organizations (as represented by the Department of Housing and Urban Development) to override the LRA's reuse plan. The Secretary of the Department of Housing and Urban Development can object to the local reuse plan if he or she believes that is unfair to the homeless. If revisions to the plan in response to these objections are still unsatisfactory, the Secretary can override the plan and designate properties to be reserved for the homeless.

⁴¹ Swenson. 1995a: p. 28; Swenson, R. T. 1995b: "A Modest Proposal: Reforming Base Reuse Law." (notes for presentation to Senate Committee on Environment and Public Works). p. 8.

⁴² Swenson 1995b: p. 6.

requiring that homeless providers submit their land and facilities requests to the LRA, which then must “incorporate some reasonable accommodation” of those needs in the reuse plan.⁴³

In addition to these two statutes that directly affect reuse and cleanup, two other pieces of federal legislation have played a role. First, under the Marine Protection, Research, and Sanctuaries Act of 1972 (as amended), the National Oceanic and Atmospheric Administration designated over 4,000 square nautical miles of Monterey Bay as a National Marine Sanctuary in 1992, including the four mile long Fort Ord coastline. Because of the sanctuary designation, investigation and remediation activities by the Army must be carried out “ . . . in a manner that avoids to the maximum extent practicable any adverse impacts on Sanctuary resources and qualities.”⁴⁴ This affects investigations and remediation at the two full RI/FS sites (site 2/12 and site 3, described in Appendix A) and several interim action sites that fall within the coastal area.^{45,46}

A final piece of federal legislation that significantly influences cleanup and reuse at Fort Ord is the Endangered Species Act. The decision to close Fort Ord constitutes a major federal action that could affect three species of plant and four species of wildlife listed as threatened or endangered (or proposed for such federal listing). Under section 7 of the Act, the Army must consult with the U.S. Fish and Wildlife Service and make a biological assessment of the potential impacts to threatened or endangered species resulting from the transfer and reuse of property on the base.

The Army submitted the biological assessment for Fort Ord in 1993 and, following consultations with the U.S. Fish and Wildlife Service and others, has developed and implemented a habitat management plan to protect both federal and state listed and petitioned species. The goal of this plan “is to promote preservation, enhancement, and restoration of habitat and populations of [habitat management plan] species *while allowing implementation of a community-based reuse plan that promotes economic recovery after closure of Fort Ord.*”⁴⁷ (emphasis added) The plan provides parcel-by-parcel guidelines for reuse. Depending on the parcel, these guidelines can invoke no habitat-related restrictions on development, entail

⁴³ Swenson, R. T. 1995c: “The Role of Public Finance in Military Base Closure and Redevelopment.” Notes from Ballard Spahr Andrews & Ingersoll.

⁴⁴ 15 *CFR* §944.5(d)(1).

⁴⁵ The Army so far has not accepted an argument that it needs to undertake an full investigation (and perhaps cleanup) in Monterey Bay. However, it has provided \$60,000 to the National Oceanic and Atmospheric Administration and the U. S. Geological Survey to take sediment samples in the Bay, since contaminated sediments in the Bay may have come from storm drainage and sewer discharges from Fort Ord. The Army also supported a side scan sonar survey of portions of the bay to look for UXO, but the only blips revealed appear to be artifacts of the sonar equipment. Although discussions of the possibility of unexploded ordnance in the Bay have taken place on several occasions over the last several years, even if UXO is found in the Bay in large quantities, it is not clear whether removal or remediation under CERCLA would take place.

⁴⁶ Personal Communications, February, 1996, September 27, 1995, September 15, 1995.

⁴⁷ U. S. Army Corps of Engineers. 1994: *Installation-Wide Multispecies Habitat Management Plan for Fort Ord, California*. p. S-4.

requirements to implement certain management or preservation practices related to the development, or set aside habitat preserves or corridors in lieu of development. Although the plan does not exempt future landowners from complying with relevant federal, state, or local environmental regulations, it does simplify compliance since it provides mitigation for potential impacts on federally listed species and a grounding for future landowners to apply for relevant permits under the Endangered Species Act. Furthermore, because the California Department of Fish and Game has played a role in the development of the plan, it likely will consider the mitigation efforts described in the plan (which also covers species listed under the state's endangered species act) when it reviews development plans for compliance with the state's endangered species act and the California Environmental Quality Act.

3.4 State Legislation

In addition to the influence of the state-level environmental quality and endangered species acts, two other pieces of state legislation have played prominent roles in reuse at Fort Ord. First, in May, 1994, the governor of California signed into law Senate Bill 899, which created the Fort Ord Reuse Authority (FORA), the designated local redevelopment agency for the closing base. FORA was established as the central civilian planning board to prepare, adopt, finance, and implement a plan for redevelopment of the base. Although the vote to establish FORA was unanimous in both the state assembly and state senate, the unanimity belies a six-month long process of "negotiating, arguing, bickering, lobbying, and threatening" over the creation of FORA,⁴⁸ and a longer history of prior false starts. (We discuss this further in subsections 4.2 and 4.3.) Second, at the same time as the creation of FORA, the governor also signed into law Senate Bill 900, which designated California State University--Monterey Bay and the University of California--Santa Cruz as redevelopment authorities. As such, they qualify to receive land at Fort Ord directly from the Army rather than through FORA.

3.5 The Realpolitick of Fort Ord

With the exception of the two state bills that established the Fort Ord Reuse Authority and designated the universities as redevelopment authorities, none of the statutes or regulations that we have presented in this legislative background section explicitly mention Fort Ord. Nonetheless, it is important to note that federal, state, and local stakeholders in Fort Ord have benefited directly from the legislation and, in some cases, were instrumental in its passage. Without question, the redevelopment potential has provided an incentive and in some cases a wedge for some powerful players to involve themselves in Fort Ord activities more intensely than they might have absent such potential.

An obvious manifestation of this is the effort by the Monterey area's Congressional representative to promote federal legislation to facilitate reuse at Fort Ord and elsewhere.

⁴⁸Akeman, T. "Fort Ord's Government is Created." *Monterey County Herald*. May 21, 1994.

Although the representative's actions have directly effected a wide range of federal facilities, it is probable that his actions had a genesis in Fort Ord. In addition, although left largely unexplored in this case study, partisan politics at the national level also likely have infiltrated reuse at Fort Ord.⁴⁹ The statutory base also has catalyzed a complex mix of protection and reuse interests at the state level. The California regulatory agencies, the Department of Toxic Substances Control and the Central Coast Regional Water Quality Control Board, are charged with representing environmental interests, including the protection of habitat from reuse that might threaten imperiled species of plants and wildlife. At the same time, other state agencies or creations of the state that have gained ownership of large tracts at Fort Ord -- California State University at Monterey Bay, the University of California at Santa Cruz, and the State of California Department of Parks and Recreation -- together have requested over 3,500 acres of land in the base reuse plan developed by FORA, an entity that owes its existence to state legislation.⁵⁰

However, the most visible and interesting interplay between reuse and redevelopment has occurred at the local level, adding testimony yet again to the late Speaker of the House Tip O'Neill oft-repeated adage, "all politics is local." Both FORA and the Fort Ord RAB represent local interests, and even though much of their agendas may appear compatible, conflict has arisen. FORA typically has argued for rapid transfers of land to new owners and uses. Some members of the RAB have expressed continued frustration with the rapid pace of these transfers, arguing on several occasions for stopping or slowing down deed transfers. For example, the RAB water committee argued that contaminant levels in certain wells could be interpreted to mean that the groundwater near the Main Garrison contained contaminants above background, which in principle could expose some property scheduled for transfer to Golden State University to a potential hazard under CERCLA. Although the Army already had recognized that it needed to put a treatment system in place prior to the transfer, the water committee slowed the transfer a bit more by asking that a deed restriction be put on the property so that the university could never drill a well at the site.^{51,52} Such interactions between reuse and cleanup lie at the core of this case study.

4. PLAYERS

With over 40 square miles of land to dispose of at Fort Ord, the Army's cleanup of the site and other entities' reuse planning and active redevelopment have touched the lives of literally tens of thousands of individuals and scores of organized groups. In this section, we

⁴⁹ Fort Ord has been held up a national model for base conversion and President Clinton's 1995 visit to the base probably evidences a concerted effort to make a political gain from a successful reuse effort at Fort Ord. California has the dual distinction of being one of the states most affected by base closures and having the highest number of electoral votes.

⁵⁰ Fort Ord Reuse Authority. 1994: *Fort Ord Base Reuse Plan*. Marina, California: FORA. Section III.

⁵¹ This restriction would control surface activities from being exposed to the potential hazard.

⁵² Personal Communications, February, 1996.

focus on the organizations or groups that have played highly visible or significant roles in shaping cleanup and reuse at Fort Ord.

4.1 The Principals: Three Regulators and a Regulatee

As noted earlier, the EPA, two state agencies of California (the California Department of Health Services^{53,54} and the California Regional Water Quality Board--Central Coast Region), and the U.S Army are signatories to the Fort Ord Federal Facilities Agreement. Each of these agencies has designated a Project Manager, who is responsible on a daily basis for moving along the RI/FS and the Remedial Design/Remedial Action in accordance with the terms of the FFA.

The general process for review of documents is that the Army submits draft documents of the RI/FS and Remedial Design/Remedial Action to the other project managers for review and comments, responds to the comments furnished by the project managers' agencies, and issues a draft final document. If project managers from the regulating agencies dispute aspects of the draft final document and can not resolve their disputes informally, the dispute is referred to a higher-level Dispute Resolution Committee, whose members are policy-level (Senior Executive Service or equivalent) representatives from each of the four signatories to the agreement. If the Dispute Resolution Committee can not unanimously resolve the dispute,⁵⁵ the matter passes to an even higher-level Senior Executive Committee. This latter committee's representatives include EPA's Regional Administrator (Region 9), the Deputy Assistant Secretary of the Army for Environment, Safety, and Occupational Health, and the Chief Deputy Director and Executive Officer for the two California agencies. If this committee can not reach a unanimous resolution of the dispute, EPA's Regional Administrator shall issue a position on the dispute, subject to appeal by the Army or the state and ultimate determination by the Administrator of EPA in Washington. The dispute resolution process thus provides a formal backstop for negotiation and politicking among project managers who largely are, after all, the conveyors of their respective agencies' positions. Because the agencies negotiate and resolve disputes informally and pass on the resolution of these negotiations to project managers for implementation, no disagreement has yet required exercise of the dispute resolution process.

This does not mean, however, that the parties do not have serious differences. For example, as hinted at earlier, substantial disagreement has emerged on how to address unexploded ordnance at the site. The Army has argued that it should be able to remove UXO

⁵³ After signing Fort Ord's FFA, the Department of Health Services became the Department of Toxic Substances Control (DTSC). In 1993, to better control the federal dollars delivered to California to pay for the oversight of federal sites, the DTSC designated itself as the lead state agency for such sites, with other agencies reporting to it.

⁵⁴ Personal Communication, February, 1996.

⁵⁵ For purposes of unanimity of decision in the dispute resolution process, the two California agencies have one vote between them. If they disagree, they must determine which agency will cast their vote.

under CERCLA *removal* guidelines, which are less strenuous than *remediation* guidelines. Without resolving the issue of whether it should be formally subject to authority under CERCLA or the Resource Conservation and Recovery Act, the Army proposes to remove UXO (primarily from the 8,000 acre high impact area in the southern part of the base, but also from thirty-five other sites on the base^{56,57}) under the mantle of an Engineering Evaluation/Cost Analysis. The requirements for such an analysis, which resembles a streamlined feasibility study and include a 30-day public comment period, are outlined in the discussion of CERCLA removal actions in the National Contingency Plan.⁵⁸ Because the area in question falls under the habitat management plan discussed earlier, which limits burning to 800 acres per year, the UXO removal will take at least 10 years (certainly a non-time-critical removal action!).

The regulatory agencies disagree with the Army's position on UXO and believe that removal of UXO at Fort Ord should be conducted consistent with CERCLA remediation guidelines. This would require the filing of a Record of Decision for the unexploded ordnance. According to the agencies, such a CERCLA-required ROD would yield more public benefits. Moreover, the agencies hope to get the UXO subject to authority under the Resource Conservation and Recovery Act, since they believe that discarded ordnance qualifies as a waste under the statute. This is an unresolved controversy at the national policy level, however. EPA issued a final munitions rule in February 1997 outlining when conventional and chemical military munitions become a hazardous waste under the Resource Conservation and Recovery Act, but in the rule the Agency postponed final action on the status of military munitions left on closed or transferred ranges.⁵⁹ In any case, in July 1996 the Army announced that it awarded a nearly \$30 million contract to a private contractor to start a UXO search and cleanup operation in the high impact area. Recent estimates place the expected total cost of removing ordnance and explosives at the former base between \$100 and \$120 million.⁶⁰

⁵⁶ The nearly seventy person crew of ordnance removal workers at Fort Ord has found more than a half million rounds of small-arms ammunition through the summer of 1996, as well as an assortment of artillery shells, mortar shells, and grenades. According to the supervisor of the crew, the main concern in the removal process has not been the explosives, but rather the poison oak that grows rampantly across the base.

⁵⁷ Akeman, Thom. 1996: "Army Awards Ord Cleanup Contract." *Monterey County Herald*. July 10, 1996. p. 1A.

⁵⁸ Personal Communication, February, 1996.

⁵⁹ Not surprisingly, some have suggested that the Army has vigorously resisted placing UXO under the authority of CERCLA and the Resource Conservation and Recovery Act at Fort Ord, precisely because it has 9 million other acres of firing ranges scattered across the country with potential UXO problems. It may not want to set a precedent for EPA oversight and statutory responsibilities for such a widespread contamination problem.

⁶⁰ Akeman, Thom. 1996: "Army Awards Ord Cleanup Contract." *Monterey County Herald*. July 10, 1996. p. 1A; Akeman, Thom. 1996: "Army Adds \$50 Million to Ord Cleanup." *Monterey County Herald*. March 2, 1996. p. 1A; Akeman, Thom. 1995: "Ord Cleanup About 2 Years from Completion." *Monterey County Herald*. December 11, 1995. p. 1A; "OE – The Biggest Challenge" *Advance: News About the Environmental Cleanup at Fort Ord*. Summer 1996. Environmental and Natural Resources Management Directorate, Presidio of Monterey Annex, U.S. Army.

4.2 Local Jurisdictions: Different Visions of the Ideal

When the Department of Defense proposed the closure of Fort Ord, elected county supervisors and mayors and several community representatives from surrounding jurisdictions gathered together to form a Community Task Force to evaluate the impact on the local area of closing the base. Although some residents in the county who believed that the military presence detracted from the area's quality of life likely welcomed the DOD closure proposal, by and large the well-established community representatives on the Task Force joined forces to fight the closure. The base directly provided over 15,000 jobs (civilian and military employees at Fort Ord alone) and the residential population of Fort Ord (military and family members) constituted roughly 8 percent of the county's total population. It was clear that the closure would have dramatic short-run economic effects, and the specter of the closing united the jurisdictions. In some ways, this proved to be the high point of cooperation among jurisdictions, as once it became clear that the base would close, infighting broke out. This infighting derived from the different expectations, demographics, and economic alternatives among the surrounding jurisdictions.

The two communities hit hardest by the closure are Marina and Seaside (see Figure 1). Portions of the Fort Ord property and the base's military population were within each of these cities' borders (3,360 acres with 5,300 military personnel in Marina, and 4,120 acres with 9,000 military personnel in Seaside), so post-closure development of these portions of the base falls under their jurisdiction (as well as responsibility for provision of fire, police, and other services).^{61,62} Marina (in the northwestern part of the base and including portions of the Fritzsche Army Air Field and the Main Garrison) faced losing half of its residents and having its rental unit vacancy rate jump to over 35 percent,⁶³ while Seaside (in the southwestern part of the base, with large portions of the Main Garrison) faced a 25 percent drop in population. Unemployment rates in Marina and Seaside already were both over 9 percent in 1990, roughly half a percentage point over the county average and 3½ percentage points over the Monterey City and the statewide average. The diverse population of Seaside (about one-half of the city's population is Black, Asian, or Hispanic, the highest proportion in

⁶¹ The rest of Fort Ord (nearly three-quarters of the 28,000 acres) lies in unincorporated Monterey County, and thus the County may need to provide police and fire services to this area unless the land is transferred to another entity or retained by the Army (for instance, the BLM provides policing on its own land, but it has a mutual fire agreement with surrounding jurisdictions for the closest fire department to respond to smaller fires, as well as one with the California Department of Forestry and Fire Protection to provide fire fighting services for larger fires). Perhaps because much of the area going to the county lies in the eastern, less developed portions of the former base and has more habitat restrictions, the county has taken a more cautious approach to planning for reuse and is waiting for studies of the contamination and environmental constraints to development.

⁶² Personal Communication, September, 1997.

⁶³ "Stand by Your Plan." 1993: *Coast Weekly*. March 11, 1993. p. 14.

the Monterey Peninsula) adds an additional layer of complexity to the interactions between the city and other entities.⁶⁴

In 1991, Marina and Seaside joined forces to plan reuse, as described in the next subsection. Both cities were more interested in larger-scale development than much of the rest of the Peninsula, and Seaside in particular emphasized intensive developments such as an international jetport, high rise hotels, commercial and business parks, a mammoth campground along the coast, a theme park, and “executive-style” golf courses. Clearly, the two jurisdictions wanted a larger piece of the roughly 1.2 billion dollars that visitors spent annually in the county (1989 data). With 18 percent of the county’s population, Marina and Seaside together had only 1,000 of the county’s more than 10,000 hotel rooms, and with generally lower end hotel rooms, they received only 3 percent of the transit occupancy taxes generated in the county.⁶⁵

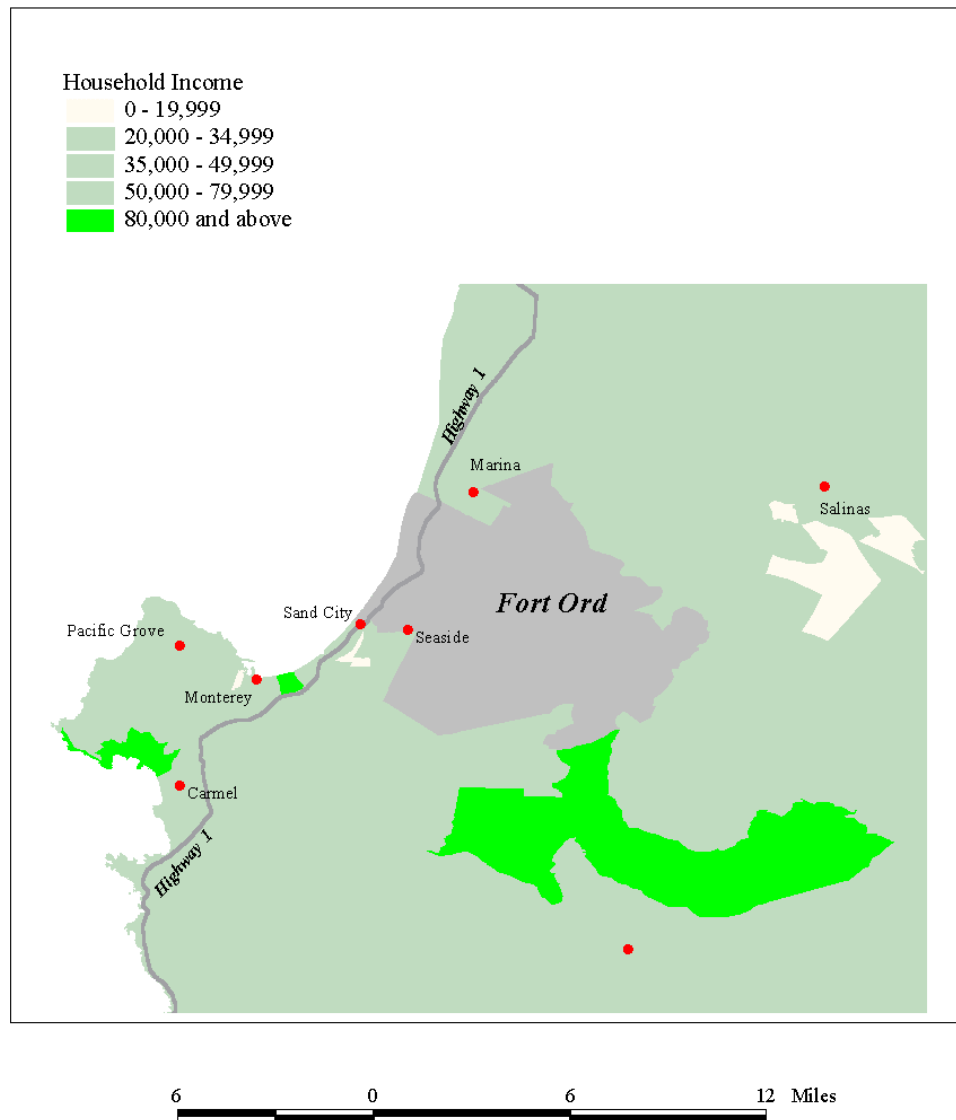
Some county residents, particularly those in the higher income and more environmentally active communities of Monterey, Carmel, Pacific Grove, and Pebble Beach, roundly criticized many of the development proposals of the two cities, however. The opposition of residents in these other communities in part reflected the fact that many wanted the Fort Ord land preserved or kept largely free of higher intensity development. Although it can be overly simplistic and misleading to equate lower income with a pro-growth, pro-job consciousness, the distribution of proxy variables for these factors is illuminating.

As Figures 2 and 3 show, both the racial composition and household income of areas varies greatly around Monterey County, with the areas immediately adjacent to the base generally showing both lower incomes (lighter shading) and a higher proportion of people of color (darker shading). Conversely, Carmel, Pacific Grove, and Monterey City, a small part of which abuts the southern edge of the base, generally have a higher-income population and lower proportion of residents of color. These communities have been less vulnerable to the drastic effects of the base’s closure, particularly Monterey City which has a more diversified economy. These different levels of concern over development prospects appears when we look at voting patterns for Proposition 180, a state-level environmental bill that California residents turned down in 1994. This bill would have authorized a bond issue for park acquisition and conservation. Figure 4 shows that support for the initiative, which garnered about 46 percent of the countywide vote, was generally lower (darker shading) in areas closest to the base than in more affluent parts of the Peninsula further to the south and west of the base. The support for environmental-friendly measures is not entirely predictable, however. For example, in the 1995 vote for building and financing the Carmel Valley Dam -- a project that would have provided more water for Peninsula residents and businesses and conceivably facilitated more intensive development of the Peninsula -- the association between income

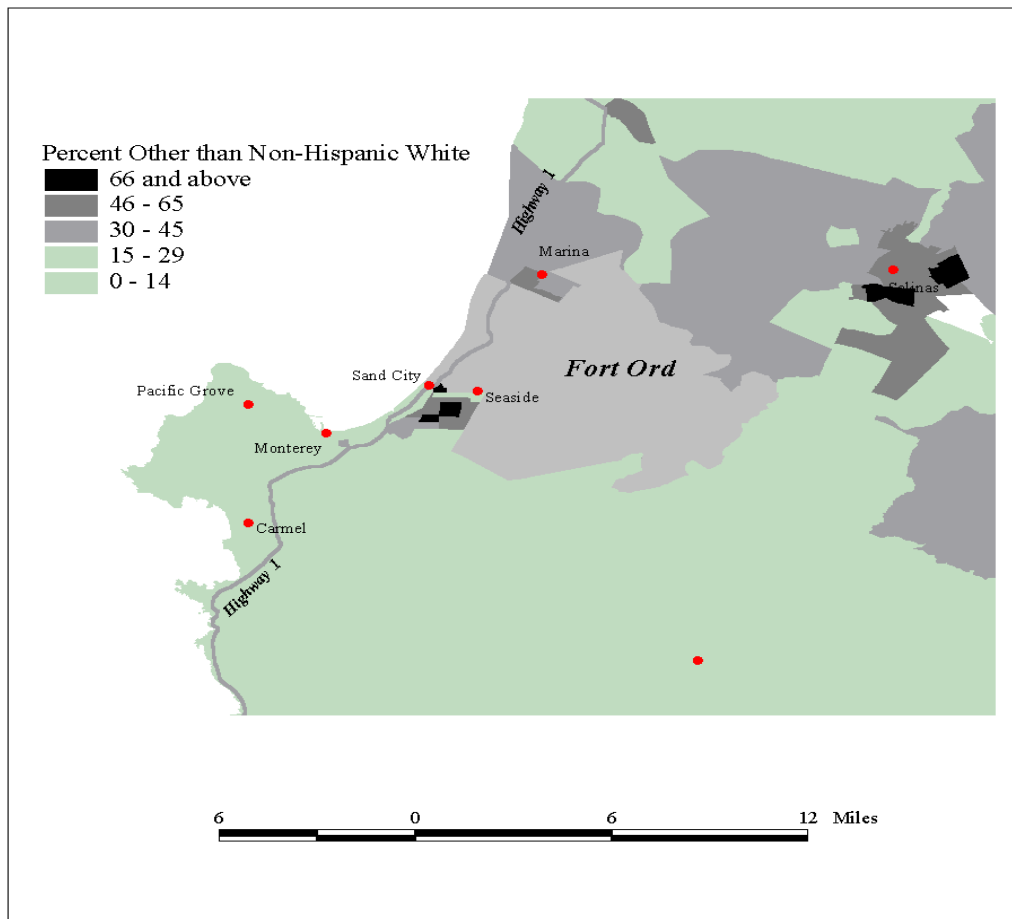
⁶⁴ “Stand by Your Plan.” 1993: *Coast Weekly*. March 11, 1993. p. 14; “Black Mayor Says Base Closing Will Ruin California City.” *Jet*. March 29, 1993; Fort Ord Economic Development Authority. 1992: *Economic Adjustment Plan*. Final report (September). Prepared by Williams-Kuebelbech & Associates. pp. 8-11.

⁶⁵ Fort Ord Economic Development Authority. 1992. p. 15.

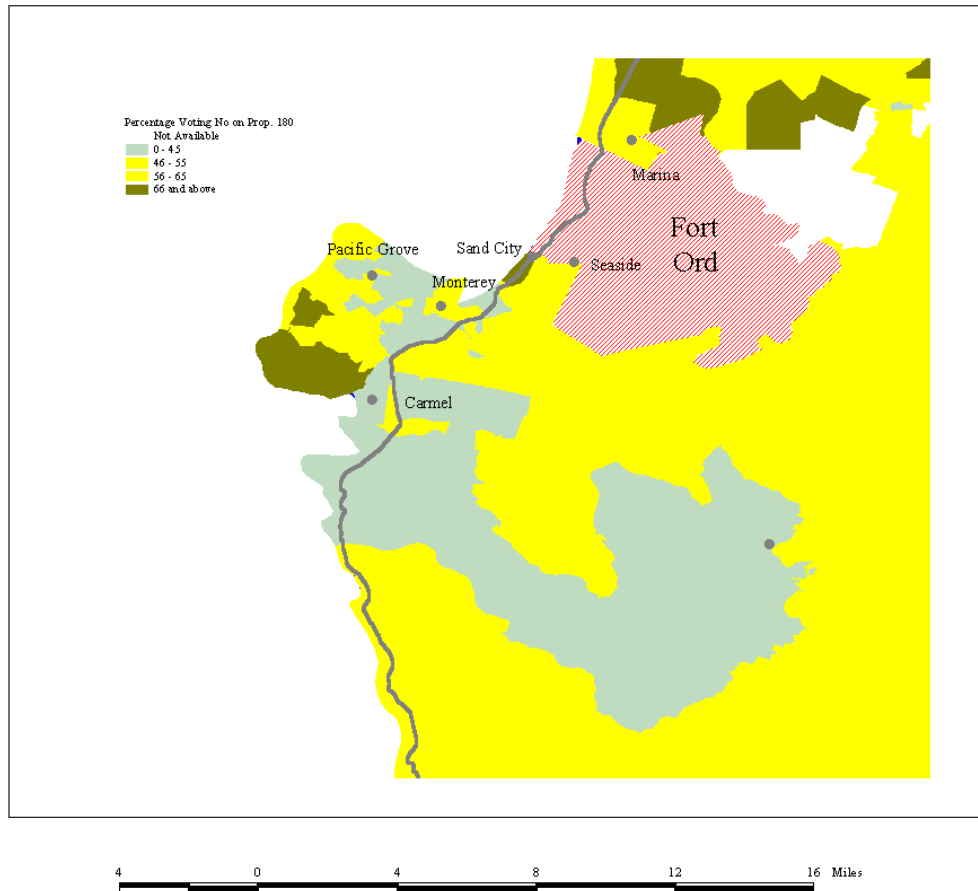
**Figure 2. Median Household Income in Fort Ord Area
(by Census Block Group)**



**Figure 3. Non-Whites as Percentage of Total Persons
(by Census Block Group)**



**Figure 4. Percentage of Electorate Voting for 1994 Public Parks Bonds Bill
(by Voting District)**



Note: Boundaries of Voting Districts are Estimated and May Have Changed

and environmental support is less clear. The dam was rejected by 57 percent of those voting in the Monterey Peninsula Water Management District, although strong pockets of support for the dam (darker shading) showed up in some higher-income areas along the coast and a more mixed story appeared in areas closest to the base (see Figure 5, following page).

These four figures bolster the impression gained from ample anecdotes that the communities surrounding Fort Ord are quite heterogeneous. The multiple publics surrounding the base have quite different views on what reuses of the Fort Ord Superfund site are appropriate and desirable. This is an important feature of Fort Ord that becomes particularly obvious when we look in more detail at the development of the Fort Ord Reuse Authority, the regional planning group formed in 1994.

4.3 Fort Ord Reuse Authority: An Uneasy Truce

FORA came into being in May, 1994 and set about developing a basewide reuse plan that all of FORA's constituent Board members could support.^{66,67} This resulted in the December, 1994 *Fort Ord Base Reuse Plan*, an interim plan which the group submitted to the Army. This document provides integrated plans for "land use, transportation, conservation, recreation and a five-year capital improvement program,"⁶⁸ as well as the results of an infrastructure study. It identifies planned land uses for nearly 80 individual parcels on the base. In October, 1996, the Authority issued its final proposed reuse plan after a twice-extended public comment period, and the FORA board officially approved this plan in June, 1997. This document, which closely follows the interim plan released two years earlier, is the capstone of efforts by FORA and its predecessors to develop a truly regional plan for Fort Ord.

Early Efforts at Reuse

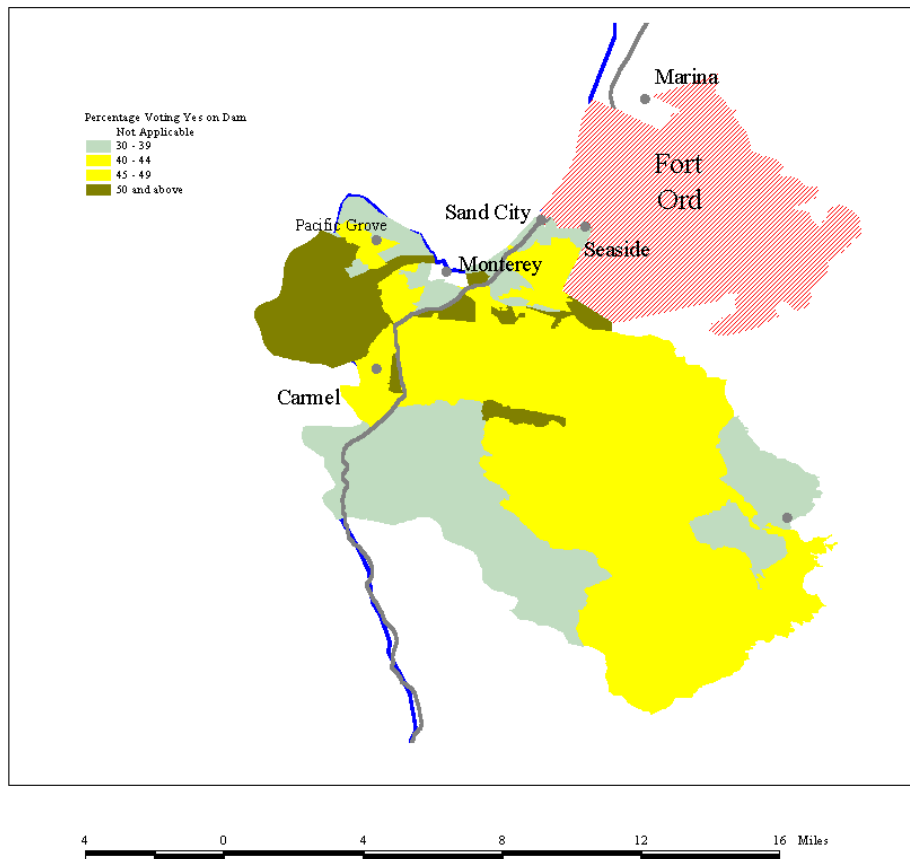
Much progress has been made in reuse planning and cleanup and in garnering community support for these activities since the Fort Ord closure announcement in the early 1990s: the development of a habitat management plan; adoption of the FORA reuse plan; implementation of the remedial actions at OU 1 and OU 2; treatment of soil from the interim action sites in the Fort Ord Soil Treatment Facility; the successful launching of the new campus of California State University; and continued monitoring of cleanup by the Fort Ord Restoration Advisory Board. However, the current progress masks a rather long and

⁶⁶ Its governing board consists of three members of the Monterey County Board of Supervisors, two city council members each from the cities of Marina and Seaside, and one city council member from each of the cities of Carmel, Del Rey Oaks, Sand City, Monterey, Pacific Grove, and Salinas, plus a number of ex-officio members. Each voting member needs to ante up \$14,000 per year, while *ex-officio* members must contribute \$7,000 annually. FORA also expects to generate money from redevelopment and property taxes when it transfers Fort Ord parcels into private hands.

⁶⁷ Akeman, Thom. 1994: "Federal Funds Approved for FORA Staffing." *Monterey County Herald*. December 20, 1996. p. 1A.

⁶⁸ Fort Ord Reuse Authority. 1994: *Fort Ord Base Reuse Plan*. Marina, California: FORA. p. 3; "FORA Talks Heating Up." *Monterey County Herald*. September 9, 1995. p. 1A.

**Figure 5. Percentage of Electorate Voting for Carmel Valley Dam
(by Voting District)**



Note: Boundaries of Voting Districts are Estimated and May Have Changed

acrimonious gestation period in the early years of reuse planning and in the creation of FORA. Notwithstanding the relatively harmonious relations of the Community Task Force mentioned earlier -- a kind of circling of the wagons to argue against closure of the base -- early local efforts to influence reuse and cleanup largely fell victim to wrangling over different visions of appropriate reuse.

By way of brief background, after the Base Realignment and Closure Commission recommended closing Fort Ord in July, 1991, the Community Task Force reconstituted itself into seven advisory groups⁶⁹ whose principal mission was to develop a “[s]trategy for the reuse and redevelopment of Fort Ord.”⁷⁰ The groups included both community and outside members, and their primary function was to provide advice to local governments that had the responsibility to plan and implement the recommendations. Later in 1991, the governments of the cities of Seaside and Marina formed a joint powers agency, which under state law is an entity in which the two cities would share powers to plan reuse. This agency, called the Fort Ord Economic Development Authority, worked to develop and promote a reuse plan for the closing base. However, Monterey County refused to join this group when invited in 1992 and when it proposed its own joint powers agency, Seaside and Marina refused to join it. Neither group wanted to cede decision-making authority to the other.

Recognizing the necessity of presenting a more integrated front, Monterey County and the cities of Marina, Seaside, Del Rey Oaks, Sand City, and Monterey formed the Fort Ord Reuse Group (FORG) in the fall of 1992. This group did not have any independent governing authority, however. Its work required approval *by consensus* of the relevant jurisdictions’ elected officials. Laboring under this requirement, the representatives of the cities and County and an outside project coordinator for the group nonetheless did manage to develop a base reuse plan, which the relevant jurisdictions approved and submitted to the Army in April 1993.

In October, 1993, FORG issued a revised reuse plan after taking into account some of the Army’s objections to the April plan. During the same period, it attempted to develop a state-approved joint powers agreement among the cities (to create an entity wherein the signatory cities would share the power and decision making authority for responsibilities covered under the agreement), but state legislators rejected this agreement in December, 1993. Shortly thereafter, a state senator from the area introduced the bill which led to the May, 1994 creation of FORA. Nearly seven months later and following the release of a nearly \$400,000 marketing report prepared for the U.S. Army Corps of Engineers, FORA released its December, 1994 reuse plan.⁷¹ Both the U.S. Army Corps of Engineers report and the interim FORA reuse plan outlined significantly less development than the FORG reuse plan, and the subsequent final version of the plan envisions an even smaller amount of new development.

⁶⁹ The seven advisory groups were land use, economic development, education, housing, health and human services, utilities and infrastructure, and pollution cleanup.

⁷⁰ “Fort Ord Community Task Force Strategy Report.” June 1992. p. xi.

⁷¹ Akeman, Thom. “Fort Ord Conversion Process Expected to be Gradual.” *The Sunday Herald*. July 17, 1994, p. 1A.

Regional Disagreements

The preceding brief and rather dry lineage of FORA obscures the tensions underlying the creation of the authority, tensions that derive from a number of sources. Perhaps most fundamentally, as with almost all regional planning efforts the evolution of FORA generated heated battles on how much local control to relinquish to the regional authority. This theme appeared early on in the refusal of Monterey County to join the Seaside/Marina joint powers agreement (and vice-versa) and in the County's later refusal in late 1993 to join an alternative joint powers agreement. As one city representative noted in response to the County's criticism of the proposed alternative agreement, "The whole thing is control. And the county wants the control."⁷² From the County's perspective, the cities were attempting to wrestle control away from it and from the cities not represented in the proposed joint powers agreement (*e.g.*, Salinas, Carmel, and Pacific Grove). With the County facing the prospect of having only two votes in the resultant joint powers agency, and able to count on at most one ally (the City of Monterey) among the cities with representation, it envisioned losing many 6-3 (at best) votes on positions where it differed from the more pro-development cities.⁷³ Ultimately, state legislators called the proposed joint powers agreement unworkable, because it did not create a central government but instead left all authority in the hands of the individual cities.

When the local state senator introduced legislation which ultimately led to the creation of FORA, the Seaside city council initially opposed the bill unanimously. This set off a chain of events which included a threat by the bill's sponsor to de-annex Seaside and Marina from Fort Ord (*i.e.*, to have the state legislature remove the portions of the base that lie within Seaside's and Marina's boundaries from the cities' jurisdiction) and an ultimatum to either join the effort to create FORA or get out of the way; a plea to the Governor by Seaside and Marina to mediate the conflict; and threats of a lawsuit by Seaside against the Army to stop land transfers and a suit to stop implementation of the proposed bill if signed into law. The Mayor of Seaside protested that the early version of the proposed bill was greedy, arguing that while it was not wrong for Seaside and Marina residents to "sweep the floors and make the beds and keep the tourist industry solid . . . it is wrong when [the rest of the Peninsula] relegate[s] us to that situation contrary to us having self-determination for our own communities." The Mayor of Marina also got into the action, firing off a letter titled "From Vision to Nightmare: CSU -- Monterey Bay" to the bill's sponsor that contended that the two cities would be adversely affected by the California State University complex slated for a portion of the site. Prior to their acquiescence to the bill, Seaside and Marina together spent \$950,000 on Fort Ord reuse issues, with lobbying and legal costs for Seaside alone near

⁷² Volpe, Nicole. 1993: "In the Rough." *Coast Weekly*. November 18, 1993. p. 15.

⁷³ Volpe. 1993: p. 13.

\$600,000 (including visits to lobby DOD in Washington).⁷⁴ Ultimately, Seaside agreed to support the bill in exchange for changing the bill's voting language.^{75,76}

A second tension underlying the process leading up to the creation and operation of FORA followed these disagreements over the scope of local control, but it related more directly to the plausibility of the initial development plans. Because the reuse planning efforts predating FORA and the December 1994 base reuse plan rested on consensus -- with something for everyone and often a lack of serious reflection on real market potential -- the plans tended to be overly optimistic dreams. For example, the consensus plan of FORG was in many ways a wish list that the FORG members could support because it did not involve hard choices. However, when FORG unveiled its preliminary reuse plan in 1993, the Army called it "unreasonable."⁷⁷ When the Army moved forward on its EIS by ignoring the plan, FORG came back with a 50-year "visionary" plan with nearly 30 high rise buildings, including five 12-story hotels, an aquaculture center, golf courses, 2,600 acres of business and commercial parks, and projections of up to 100,000 new jobs. Wags dubbed it "the plan that ate the Monterey Peninsula." It ignored the fact that the envisioned development would have required over four times the amount of water currently available at the base or, even more telling, twice as much as the entire peninsula currently uses. One representative of the Monterey Peninsula Regional Park District called the proposal for a golf course in the coastal sand dunes ridiculous, and urged the state Coastal Commission (which has jurisdiction over coastal development) to give a clear message to Sand City and FORG that the golf course idea was "dead on arrival." In calling for the construction of thousands of hotel rooms, the FORG plan also apparently ignored the already-high existing average 35 percent vacancy rate for hotel rooms in Monterey County.⁷⁸

Finally, in addition to the unwillingness of local jurisdictions to risk losing the ability to control decision-making in a regional group, the initial groups that planned reuse frequently developed plans with minimal public input. This helped to promote an unrealistic air about the plans. Since the beginning of planning for post-closure development, critics argued that the planning groups excluded some segments of the public or minimized outside scrutiny altogether. Women and Hispanic-Americans in particular challenged the representativeness

⁷⁴ Howe, Kevin. 1994: "McClair Digs in for Ord Battle." *Monterey County Herald*. March 27, 1994. p. 1A; Howe, Kevin. 1994: "Mello Issues Ultimatum on Fort Ord." *Monterey County Herald*. March 19, 1994. p. 1A; Howe, Kevin. 1994: "Two Cities List Reuse Expenses." *Monterey County Herald*. April 1, 1994. p. 1A; "Chronology Lists Milestones on Road to Enactment." *Monterey County Herald*. May 10, 1994. p. 10A; Howe, Kevin. 1994: "McClair Vows Suit Over Ord." *Monterey County Herald*. March 22, 1994. p. 1A.

⁷⁵ In particular, the bill that was signed allowed each local government to propose its own redevelopment projects within its jurisdiction. FORA could override a local jurisdiction's plans only with a two-thirds vote.

⁷⁶ Akeman, Thom. 1994: "Senate Approves Ord Bill." *Monterey County Herald*. May 4, 1994. p. 1.

⁷⁷ "Chronology Lists Milestones on Road to Enactment." p. 10A.

⁷⁸ Volpe. 1993: p. 13,15; Akeman, Thom. 1994: "Coastal Panel OKs Ord Land Disposal Plan." *Monterey County Herald*. March 18, 1994. p. 1A.

of the advisory groups to the Community Task Force in 1991, pointing out that all chairs of the groups were male. The media also questioned why several chairpersons of the advisory groups seemingly were less connected to the affected communities around Fort Ord than they were to interests outside of the Peninsula.⁷⁹

Local county and city representatives complained publicly that the FORG planning process was “unnecessarily closed,” that FORG often did not adequately publicize the time and location of its meetings, and that it sometimes refused to take public comments or inappropriately controlled such comments during its meetings (*e.g.*, by allowing comments only at the beginning of meetings rather than during or at the end, after information has been provided).⁸⁰ The Citizen’s Action Group, a local coalition of representatives from business, agriculture, tourism, banking, and the environmental community set up to encourage the formation of a single governing authority to plan for reuse at Fort Ord, also criticized the FORG process as being too closed. The group encouraged FORG to sit down with stakeholders from federal, state, and local agencies.⁸¹ A member of the coalition, a leader of a local environmental group, claimed that he had to provide FORG documents to local agencies such as the regional office of the California Coastal Commission, since the Commission and other agencies could not get the documents from FORG directly (despite the fact that the Commission eventually would need to sign off on reuse plans). For their part, representatives of local agencies also complained that they could not obtain copies of FORG plans in advance and were discouraged from reviewing work in progress.^{82,83}

Moving to Consensus?

Since issuing the interim base reuse plan at the end of 1994, FORA has been revising the plan, developing recommendations for how to phase reuse, and preparing an environmental impact report for the plan. Relations among its member governments apparently have remained relatively smooth since its founding, even as consultants hired by FORA have proposed large decreases in the amount of development envisioned in the 1994

⁷⁹ “Panetta: Part II. *Coast Weekly*. September 12, 1991. pp. 11, 12.

⁸⁰ Volpe. 1993: p. 17.

⁸¹ Gfeller, Anne. “Better Business? Local Industry Leaders Want Something Done at Fort Ord.” *Coast Weekly*. April 29, 1993. p. 10; Volpe. 1993.

⁸² In perhaps the most ironic example of a limited public involvement effort in early reuse discussions, one Seaside City Council member who helped lobby the state senator who sponsored the bill that created FORA, noted that council members were careful to avoid having more than two council members in a room at the same time. Such a meeting would have violated legislative provisions that require decision-makers to conduct government business in public.

⁸³ Volpe. 1993: p. 17; Akeman, Thom. 1994. “Seaside OKs Fort Ord Compromise.” *Monterey County Herald*. April 15, 1994. p. 1C.

plan.⁸⁴ The plan issued in late 1996 (a draft was released in June 1996 and the final plan approved by the FORA Board in mid-1997) envisions that over the next forty to sixty years, redevelopment of the Fort Ord base will entail more than ten million square feet of additional industrial park and office space, nearly 2,000 additional hotel rooms, a half dozen new golf courses, and over 70,000 residents (including the 20,000 students expected at the new California State University campus).⁸⁵

Despite the apparent calm of inter-governmental relations, however, the plan continues to attract a modicum of controversy. Several public hearings on the June, 1996 draft plan (the hearings technically covered the environmental impact report that accompanies the plan rather than the plan itself) were held, and a number of individuals continued to express concerns about the impacts of the proposed development on freshwater resources and infrastructure.^{86,87} One citizen commented that the development envisioned in the proposed plan would “damage life on [the Monterey] Peninsula, as we know it,” another characterized it as a “slow motion explosion,” and a third begged that the Peninsula, “one of the few bastions of California life left on the coast” be left alone.⁸⁸

In a throwback to the earlier years of the war of words between different notions of development among county jurisdictions, one county supervisor said the plan’s idea of funding infrastructure improvements with a countywide half-cent sales tax was “absolutely asinine.” Another supervisor advised FORA and other involved parties to “get real” about prospects for infrastructure improvements and water and other environmental concerns.⁸⁹ The Monterey City Council recommended that the proposed plan entail a lower level of development, with only slightly more than 30,000 new residents (including university students), and more realistic funding of infrastructure improvements in concert with development. On the other hand, city officials in Marina and, most notably, Seaside (it cast

⁸⁴ FORA’s contract with consultants to finish the reuse plan, which had a price tag of \$1.2 million, was funded by DOD’s Office of Economic Adjustment (\$680,000), a special assessment of \$20,000 per voting member of the FORA Board, a \$200,000 grant from the Packard Foundation, and savings from budgeted but vacant staff positions.

⁸⁵ Akeman, Thom. 1996: “FORA Extends Reuse Plan Deadline.” *Monterey County Herald*. August 23, p. 1A.

⁸⁶ One member of the FORA Board has estimated that the cost to upgrade Fort Ord’s infrastructure (roads, water and sewer lines, stormwater collection system, *etc.*) is at least \$300 million. The Army recently reached agreement with Pacific Gas & Electric and FORA to transfer to the utility the Fort Ord gas and electric systems, in exchange for the utility upgrading the system to meet current safety codes (estimates of the costs for the electric and gas system upgrades are roughly \$12 million and \$4 million, respectively). A recent study for transportation improvements in the County to accommodate the demands of Fort Ord development by the year 2015 – improvements which would include a new four lane road to connect with inland communities, a train-right-of-way, and a bike path – envisioned \$1 billion in transportation projects.

⁸⁷ Schultz, Ken. 1995: “Seaside Emerges from Ord Loss with Bright Future.” *Monterey County Herald*. December 3, 1995. p. 1A; Hulanicki, Alex. 1996: “Study Offers Transit Plan for Fort Ord Area.” *Monterey County Herald*. September 25, 1995. p. 1A; “Current Status” 1996.

⁸⁸ Akeman, Thom. 1996: “FORA Plan Gets Extension.” *Monterey County Herald*. July 2, 1996. p. 1A.

⁸⁹ Demmon, Calvin. 1996: “Supervisors Criticize Ord Reuse Plan.” *Monterey County Herald*. October 2, p. 1C.

the only votes against a FORA decision to extend the public comment period on the June draft plan a second time) have largely supported the plan. These two communities apparently are eager to absorb a large share of the planned population and development increases, which will concentrate around the university campus.⁹⁰ As aptly opined by one county supervisor, such development may be necessary if the region wants Seaside and Marina to survive.⁹¹

The type and scale of development likely will continue to remain issues as land is transferred and plans begin to turn into reality. For example, local non-profit housing groups that have begun to gain access to land and housing within the Marina city limits under the McKinney Homeless Assistance Act have complained that Marina doesn't want them. They argue that the City, in imposing high development fees, is trying to price the homeless assistance organizations out of moving into the housing, and suggest that perhaps Marina should let go of the Fort Ord property if it has to struggle so hard to develop it. Marina, for its part, claims that it is "bending over backward" to help the groups move in, but that the city needs to impose fees to create improvements and restore police and fire services on the base. In an ironic twist for Marina that puts the reuse shoe on the other foot, the mayor of the city has noted that homelessness is a regional issue and thus deserves a regional solution.⁹²

4.4 Restoration Advisory Board: A Split Agenda?

If FORA embodies local governments and citizens hopes and dreams for economic reuse of Fort Ord, the Fort Ord Restoration Advisory Board (RAB) serves a similar function on the cleanup side of the ledger. Although the Department of Defense issued guidance which required the formation of Restoration Advisory Boards as early as September, 1993 (following its establishment of the Fast Track Cleanup program earlier that year),⁹³ the 1995 Fiscal Year Defense Authorization Bill (signed in 1994) significantly altered the potential importance and composition of RABs by more clearly defining their role and method of selection and providing a mechanism for financial support. This statutory change followed recommendations contained in a 1993 interim report issued by the Federal Facilities Environmental Restoration Dialogue Committee, a federal committee chartered by EPA (and including participants from state, local, and tribal governments, four other federal agencies including the Department of Defense, and a host of non-governmental organizations) to improve decisions about environmental restoration at federal facilities.⁹⁴

⁹⁰ "FORA Talks Heating Up." *Monterey County Herald*. September 9, 1995. p. 1A.

⁹¹ Akeman, Thom. 1996: "FORA Plan Gets Extension." *Monterey County Herald*. July 2, 1996. p. 1A.

⁹² Verduin, Pamela. 1996: "Homeless Hubbub." *Coast Weekly*. December 12-18, 1996. p. 16.

⁹³ GAO. 1995: p. 35.

⁹⁴ Notice on the Committee's final report is available at *Federal Register*, 61(152), August 6, 1996, pp. 40764-40772. See also Swenson, R. T. 1995d: "New Developments in Base-Closure Law and Regulation." *Federal Facilities Environmental Journal*, Spring 1995.

The Creation and Responsibilities of the RAB

The Fort Ord RAB, which was built from the Fort Ord Technical Review Committee in early 1994, has elements of both the 1993 DOD guidance's and the interim report's vision of RABs. The 1993 guidance outlines a process of creating the RAB through a combination of transitioning the Technical Review Committee (at Fort Ord this consisted of personnel from regulatory and local government agencies and one citizen representative,^{95,96} all of whom had been participating in discussions about cleanup at Fort Ord since the signing of the federal facilities agreement in 1990) and relying on the Base commander to appoint community representatives.⁹⁷ The guidance specifies that an Army co-chair and a community co-chair are to head the group.

In December 1993, at the request of the Army, the mayors of the surrounding communities of Fort Ord and two members of the Board of Supervisors of Monterey County who were part of the Fort Ord Reuse Group appointed a community co-chairperson to the RAB.⁹⁸ This community co-chair, a retired Army Colonel and local businessman, sat on the selection committee for the twelve community members of the RAB, along with the EPA remedial project manager, a California EPA remedial project manager, and two members of the Technical Review Committee.⁹⁹ The co-chair was present at the first meeting of the RAB -- an introductory session in February, 1994 for the general public prior to the selection of the remaining RAB community members -- and co-chaired the RAB until October, 1994, when he resigned and an election for an interim community co-chair was held. Starting in May, 1994, the first meeting of the RAB with the selected citizen members, the RAB as a whole has met on a regular basis (currently monthly).

The opportunities for the RAB to provide input to the cleanup process can occur at a number of points (Figure 6). For each of the three types of sites covered in the RI/FS -- no action sites, interim actions sites, and full RI/FS sites -- the RAB can comment on the basewide RI/FS, individual site discussions, proposed plans for each class of site or for each individual full RI/FS site, and on documents relating to property transfers such as a Finding of Suitability to Transfer. The RAB also can provide input on the approval memorandum that the Army must prepare for the regulatory agencies on the no action and interim action sites,

⁹⁵ Following the RAB by-laws, the former Technical Review Committee members who are now considered community members on the RAB include the National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife Service, U. S. Agency for Toxic Substances and Disease Registry, U. S. Bureau of Land Management, California Coastal Commission, California Department of Parks and Recreation, Monterey County Health Department, Monterey Peninsula Regional Pollution Control Agency, Monterey Peninsula Water Management District, and the Monterey Bay National Marine Sanctuary.

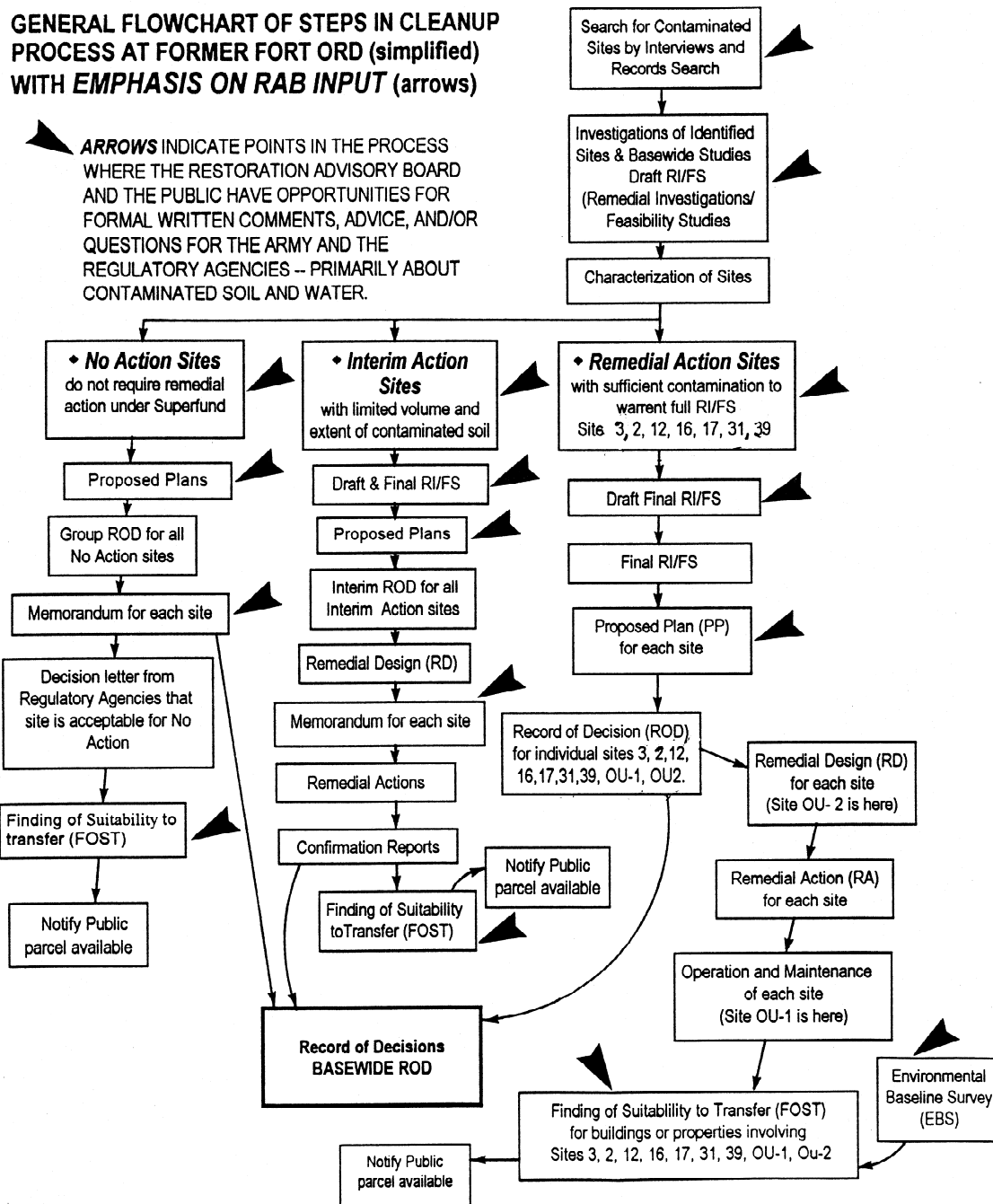
⁹⁶ Bregman & Company. 1995: "Recommendations for Possible Improvements to Functioning of Restoration Advisory Board, Fort Ord, California." Project No. 255-55. November 2, 1995. Bethesda, Maryland.

⁹⁷ Swenson. 1995d: p. 14.

⁹⁸ Transcript of RAB Meeting, February, 1994. p. 55.

⁹⁹ Transcript of RAB Meeting, February, 1994, p. 56, and May, 1994, p. 8.

Figure 6. Fort Ord Cleanup Process and Opportunities for Input by the Restoration Advisory Board*



- ♦ Asbestos, lead paint, and radon contaminations do not follow the above regulatory and comment processes.
- ♦ Unexploded ordnance, at this time, does not follow the above regulatory and comment processes.
- ♦ Underground storage tanks do not follow the above regulatory and comment processes.

(Consult the Army Corps of Engineers' complete flowchart to follow other cleanup pathways.)

Prepared by RAB Community Co-Chair, July 1995

*Actual current processes may deviate slightly from the diagram.

and it can comment on the draft and final RI/FS for the interim action and full RI/FS sites. However, given that the Fort Ord RAB currently does not have funds to hire independent technical consultants, to the degree that its own members do not have the technical competence to review cleanup goals and actions (or access to those that do), its actual critical ability to comment on technical aspects of the cleanup process is limited. In addition, as noted earlier, the RAB is expressly not involved in reuse decisions.

The Fort Ord RAB in Action

The transcripts of the public RAB meetings offer perhaps the most sharply focused picture of how the public actually participates in cleanup decisions at Fort Ord. From a cursory review of the transcripts, two features stand out.

First, RAB members from the government agencies and the general public appear split on a number of issues. Many of the RAB members that represent government agencies (members of the former Technical Review Committee mentioned above) do not participate actively in RAB meetings, complaining that the RAB agenda has swerved from its original technical purpose. Some of these members have publicly expressed their dissatisfaction with the arguments about reuse of the Fort Ord property, procedural points, bylaw discussions, and queries about the public availability of documents that they believe have dominated many of the RAB meetings. For instance, one RAB member who is an official of the county's environmental health agency, commented in late 1995 that "either [the community members of the RAB] get back to what they're supposed to be doing and stop being a political committee that wants to compete with (the Fort Ord Reuse Authority), or we don't want to be part of it."¹⁰⁰ Some citizen members of the RAB also have expressed frustration, with one member (who subsequently decided not to apply for continuation on the board) noting poignantly that:¹⁰¹

. . . if we meet again to go over this procedure thing, these bylaws, this is not the work of the Restoration Advisory Board to be a bylaws committee, and that's what most of our time and effort is being put into, is to make the perfect bylaws so that we can do what with it? Forget the restoration process? Forget the real work of the Restoration Advisory Board? Forget to implement the committees that are supposed to be -- that are supposed to be working now to do outreach to the public, to invite the public so that we have a full audience, so that we can actually go into issues like lead -- lead transport, lead fibers coming from the rifle range, and other things like this. We are not coming to those issues. We are spending all of our time, it seems, arguing the procedures and the bylaws of this over and over again. I am tired of it . . .

¹⁰⁰ Akeman, Thom. 1995: "Fort Ord Squabbling Causes Rift." *Monterey County Herald*. December 2, 1995. p. 1A.

¹⁰¹ Transcript of RAB Meeting, November, 1994. pp. 117-118.

Half of the original twelve citizen members of the RAB dropped out of the group before their terms had expired.

With the remaining citizen members, some appear far more comfortable with the notion that the Army generally wants to serve the public interest (even when they disagree with specific Army positions) than do others. Activists on the board have passionately challenged some of the Army's and regulatory agencies' decisions and complained that the Army and agencies have shut them and, more generally, disenfranchised people from the cleanup and reuse process. Countering this, other community members (representing, for instance, a constituency similar to that served by the League of Women Voters), see the activist members as a hindrance to a consensual, good government process. They perceive that the activists are unwilling to work to understand the technical issues or have personal agendas irrelevant to the cleanup questions at hand.

Second, during the question and answer session at the initial RAB meeting before community members were even selected, two citizens who later became RAB members expressed concern that the RAB could not discuss questions of reuse, but rather only those that pertained directly to cleanup objectives and remediation alternatives. In response to a question about whether the RAB would have time to review properties scheduled for an early release to reuse, the Army co-chair responded that "[t]he actual issue of reuse is not a part of the Restoration Advisory Board . . . [but] that belongs on the Army side with the BRAC office and the FORG (*sic*) reuse group."¹⁰² The RAB's responsibility, he claimed, lies on the technical side of things, although it could provide inputs on reuse if, for example, the state of the land or how it had been used governed how it could be reused in the future. Realistically, the RAB has only at best a limited opportunity to tackle reuse because the bulk of the environmental restoration is targeted to achieve an unrestricted residential use standard,¹⁰³ but the rather fine distinction offered by the Army not surprisingly did not completely mollify some of the citizen members. One of these members read from the DOD guidance on the establishment of RABs, which stated that a responsibility of the RAB was to "[i]dentify applicable standards and consistent with section 121 of the Comprehensive Environmental Response Compensation and Liabilities Act, CERCLA, proposed cleanup levels consistent with planned land reuse."¹⁰⁴

Discussion of the problem of separation of reuse and cleanup have taken place at a number of RAB meetings. However, this discussion may have suffered from the intermittent participation of FORA in early RAB meetings. The ever-changing FORA reuse plan also has made coordination difficult. When the project coordinator of FORA appeared at an early RAB meeting and presented the 1994 interim reuse plan, it became painfully obvious that the contaminated sites that the RAB was interested in were not distinguished on the FORA reuse

¹⁰² Transcript of RAB Meeting, February, 1994. p. 41.

¹⁰³ Minutes of RAB Meeting, May 22, 1995; Personal Communication, September, 1995.

¹⁰⁴ Transcript of RAB Meeting, February, 1994. p. 43.

planning map, a likely bureaucratic oversight but one with chilling symbolism.¹⁰⁵ Moreover, confusion within the RAB membership has contributed to the lack of coordination between reuse and cleanup. For example, nearly a year after the reuse plan had been issued, one community member who had been on the RAB for its entire 18-month life expressed bewilderment about what the reuse plan was. And when new community members joined the RAB in 1996, apparently some thought that they would be involved in reuse or were even joining FORA.¹⁰⁶

In sum, the Fort Ord RAB has been given a circumscribed role in the decision regarding the future use of Fort Ord property. Notwithstanding the inextricable link between the future use of a site and the cleanup necessary to support this reuse, the RAB is expected to be involved only on the cleanup side.

An Odd Couple: The U.S. Army and the Fort Ord RAB

In general, the Army's (as well as EPA's and California EPA's^{107,108}) relationships with FORA have been smoother than with the RAB. This derives from three factors.

First, legislative and regulatory language discussed earlier arguably has given FORA (the local redevelopment agency) more standing than the RAB to influence the Army. As already noted, the Army must use the base reuse plan developed by the local redevelopment agency as the central alternative in its preparation of the EIS on base reuse. Furthermore, the very fact that the Army will transfer property to FORA has tended to strengthen its relationship with the group. This contrasts with the less clear-cut position of the RAB, which acts in an advisory capacity on cleanup to ensure that the degree of cleanup is consistent with the intended use. The RAB has little standing to ultimately challenge the Army's cleanup decision, although some representatives of the federal, state, and local agencies that sit on the RAB conceivably have other avenues to do so.

Second, notwithstanding the above discussion about the creation of FORA and the dissension among the jurisdictions that constitute its Board, FORA currently presents a relatively unified front on development questions and reuse plans. This facilitates the Army's relationship with the group, since the Army can focus more intently on the requests of a single redevelopment entity, rather than competing requests from multiple groups.¹⁰⁹ The relative unanimity of

¹⁰⁵ Transcript of RAB Meeting, January 26, 1995, p. 13.

¹⁰⁶ Personal Notes from RAB Meeting, September 1995; Personal Communication, February, 1996.

¹⁰⁷ For example, the minutes from a May, 1994 meeting of the BRAC cleanup team suggest an early EPA frustration with obtaining follow-up information from a member of the RAB who was protesting that his input to the team and the RAB was being ignored. The minutes indicate that if another attempt to get this information failed, that person may "be asked to keep quiet with unsubstantiated claims at public forums."

¹⁰⁸ BRAC Cleanup Team Minutes, May 18, 1994.

¹⁰⁹ Admittedly, this probably understates the degree to which the Army also must respond to pressure exerted through informal channels by the constituent jurisdictions and legislative representatives, among others. Furthermore, the unified front of FORA obviously does not mean that the jurisdictions necessarily want the same kind of development or that the development is integrated. Individual jurisdictions have an incentive to promote

purpose of getting property transferred for development contrasts markedly with the functioning of the RAB, which embodies the agendas of federal, state, and local agencies, conservation proponents, environmentalists concerned with technical hazards, and environmental justice advocates, in addition to (some claim) the ambitions of local politicians running for office.

Since inception, but particularly in 1996, the community membership of the RAB has been sharply divided. Several RAB members, alleging that by-laws were being roundly ignored, objected strenuously to the process by which more than forty new citizen representatives were brought on to the RAB, and an extremely narrow margin selected a new community co-chair shortly after this infusion of new members.¹¹⁰ Several months later, the RAB Selection Committee in a closed session recommended (in a 3 to 0 vote) that this new chair not be reappointed to the board, because his two-year term had expired and he was seen as being disruptive and not able to work effectively in the RAB.^{111,112} This recommendation was accepted at the next full RAB meeting.¹¹³ Other members have been dropped from the RAB due to unexcused absences and, in at least one case, a member has been asked to leave a RAB meeting apparently because he was perceived as being disruptive. In addition, several dissenting RAB members have called some RAB decisions invalid due to procedural flaws, and also have criticized the facilitator (who was brought on to help the RAB get through its dissension) for not remaining neutral. Public comments from the audience at RAB meetings have questioned the bias of both the community co-chair and the Army co-chair.¹¹⁴ All of this dissension, and the lack of a unified purpose among the RAB members, make it difficult for the Army and the regulatory community to sort out the disparate scripts that the crowded stage of actors read from, as well as complicate their efforts to use the RAB effectively.

A third factor that underlies the more difficult relationship that the Army has had with the RAB than with FORA is that the Army (and the regulators as well) is seeking a more bounded kind of input than the RAB may be interested in providing. At least in principle, the Army wants comments on the goals and alternatives for remediation. Through its contractors, it primarily solicits technical comments at formal RAB meetings and other venues on the merits and problems with different goals and alternatives. For instance, the Army has worked with RAB committees informally to discuss differences in levels of cleanup and, according to members of the RAB, has on occasion altered its cleanup plans in response to these

reuse that furthers their interests, which may or may not also promote reuse that is in the best interests of the region as a whole.

¹¹⁰ Personal Communication, February, 1996.

¹¹¹ Five other community members of the original RAB whose terms had expired were selected back on to the RAB, all in 3 to 0 votes.

¹¹² *Ad Hoc Selection Committee Report*, July 25, 1996 (Exhibit B of July 25, 1996 minutes).

¹¹³ RAB Minutes, July 25, 1996. Version 1.

¹¹⁴ RAB Minutes, August 22, 1996. Version 1.

discussions.¹¹⁵ In one case, the Army proposed the sewage outfalls on the beach as a no action site, but partly due to RAB comments included the outfalls in the basewide surface and stormwater study.¹¹⁶ Notwithstanding this interaction on technical issues, however, RAB meetings frequently have been used by some RAB to voice a much wider set of non-technical concerns. As already noted, process questions (*e.g.*, the structure of committees and the formulation and observance of bylaws) have dominated many meetings, and the racial and ethnic representativeness of the RAB also has been a recurrent issue. In focusing on questions of cleanup at Fort Ord, the Army understandably has not emphasized some of these latter issues. The fact that some RAB members are former Army personnel -- in fact, two of the four community co-chairs that the RAB has had since forming in 1994 have been retired from the Army -- while others have a less close relationship or, in one important case, appear implicitly to distrust the Army, also has complicated the relationships that the Army has had with the group.

Finally, because community members volunteer their time on the RAB, many find it difficult to thoroughly and quickly review documents, attend meetings, and, more generally, keep up with the technical members of the RAB who do receive compensation for much of their time. The Army furnishes logistical support for RAB activities (for document copying, for example) and funds a staff position for RAB work at Ford Ord, but it does not provide more direct financial support for RAB citizen members and their activities (to hire an independent technical consultant, for example).¹¹⁷ FORA, in contrast, enjoys financial support from its constituent members, has elected representatives of the public on its Board, and boasts several paid staff members. Not surprisingly, several of the most active and vocal community RAB members have had retirement pensions or other independent sources of income, and thus have not had to work in jobs that might interfere with the considerable time that they must devote to cleanup issues at Fort Ord.

5. CONCLUSIONS

In trying to understand how the Restoration Advisory Board, the Fort Ord Reuse Authority, and other agencies and individuals function and work to affect to cleanup and reuse, we continually have found ourselves drawn deep into each player's milieu, trying to fathom how and why the players have acted as they have. As compelling as the individual stories may be, however, we seek more generalizable observations. In this final section, we discuss three related lessons that the Fort Ord experience offers to the Superfund community *vis-à-vis* land use and remedy selection. These lessons relate to how efforts to link cleanup with land use need to be cognizant of the often complex relationships that such a link

¹¹⁵ Personal Communication, February, 1996.

¹¹⁶ Personal Communications, February, 1996, September 15, 1995.

¹¹⁷ A local group headed by a former citizen member of the RAB recently received a Technical Assistance Grant from EPA for work on Fort Ord cleanup.

suggests, how incorporating reuse into cleanup can regionalize a cleanup problem, and, finally, how disparate communities at a site can complicate what may appear initially to be a simple determination of future land use.

5.1 Relationships among the Players

The relationships among the players are complicated at any Superfund site, and any marriage of land use and cleanup that fails to understand the power of and interaction among the players risks muddling the Superfund program's goals. At Fort Ord and other closing military facilities on the NPL, these relationships are particularly complex. EPA and DOD, the two main protagonists at such facilities, both represent the federal executive branch, yet their missions are extremely disparate -- the former is charged with protection of human health and the environment, while the latter, in this context, arguably has as its primary charge the transfer of property to non-Defense entities to support economic reuse.

Perhaps the most interesting relationship to examine at Fort Ord, however, is that between FORA and the Fort Ord RAB. Neither entity would exist in its current form if Fort Ord were not a closing DOD facility, yet non-DOD Superfund sites are likely to have many of the same motivations that drive the two entities. It is easy to see how the difficulty that the two groups have experienced in coordinating their efforts might be repeated at other NPL sites, particularly if reuse receives increasing emphasis, as appears likely. The basis for this concern is that the bandwagon of reuse planning and development may well encourage faster regulatory approvals of cleanup than is typically the case.¹¹⁸ Indeed, at Fort Ord reuse has been accelerated by statute, in part because the potential immediate payoffs to prospective beneficiaries of reuse may be high. The motivations of such prospective beneficiaries, and the financial support that they may have, to keep reuse moving at all due speed may subtly shift the balance of power. In short, individuals and groups on the "cleanup" side of the ledger may not enjoy the same advantages as those on the "reuse" side.

If Fort Ord is any guide, it seems likely that at many NPL sites reuse will attract more media and public interest than will remediation. In addition, many in the public may suffer confusion about the goals of these two aspects of a site where reuse is married to cleanup. This is not necessarily detrimental, but given continuing concerns about public involvement in cleanup at Superfund sites, it is an issue that deserves more scrutiny.

5.2 Regionalization of the Site

Bringing land use to center stage in NPL cleanups may greatly enlarge the spatial locus of decision making at a Superfund site because more so than with cleanup, the economic and social impacts of reuse can quickly extend beyond the site boundaries to a much larger region. Such impacts are not limited by hydrology, erosion, air deposition, or

¹¹⁸ This is not to suggest that the current pace of NPL cleanups is desirable. Rather, we simply wish to point out that an expeditious cleanup process with tighter schedules implies that coordination between reuse and cleanup needs to be more carefully integrated.

other physical processes, but instead can be readily transmitted throughout a region and appear in such forms as taxes, congestion, economic competition, highway construction, shrinking open space, and demand for water.

The impact of the Fort Ord closure and cleanup would be widespread even were the site to be fenced in and then completely entombed -- due to the fact that the former base sprawls over forty square miles and has parts of three jurisdiction within its borders -- but it is abundantly clear that reuse of Fort Ord has made the closing base even more of a issue of regional concern. For example, residents from a city more than six air miles away from the base voiced qualms about the site, largely because they feared that certain reuses might detract from their quality of life. Similarly, local executives and legislators threatened lawsuits and lobbied intensely in both the state and national capitals, chiefly because of reuse rather than cleanup concerns. Without question, more people have joined the debate about Fort Ord because reuse is being discussed than if just cleanup were on the table.

The lesson here is that if land use is given more visibility in cleanups, then the cast of affected stakeholders becomes wider and, if a link between reuse and cleanup is to be maintained, then it may be important to include a much-enlarged array of stakeholders in cleanup discussions. Admittedly, this may not be a problem at the large majority of NPL sites where the size of a site and its economic prospects are limited. However, with more than 130 non-federal NPL sites that are 100 acres or greater in size, it still may be an important concern at a significant number of sites.

5.3 Multiple Communities

Much of the discussion about the role of land use in remedy selection appears to assume implicitly that for any given NPL site, *a* local community needs to work with EPA to determine what land uses are appropriate for a given NPL site. According to this logic, once the land use is known, a cleanup can be provided that is consistent with this use. Missing from this equation is that recognition that often multiple publics exist within a single community. If these publics are invited to the planning table, then determining the appropriate land use may not be straightforward and thus the appropriate level of cleanup somewhat uncertain.

As noted in the Introduction, it is precisely because multiple publics exist around Fort Ord that we selected the site for a case study. For many of these publics, large-scale development of the former base threatens the quality of life on Monterey Peninsula. For others, efforts to limit reuse to relatively small-scale development threaten to permanently circumscribe local opportunities in communities that have not shared in the economic bounties of the rest of the Peninsula. This tension is abundantly obvious in the evolution toward the regional planning authority that became FORA. In addition, in discussions that have less far-reaching consequences -- the proposed extension of the beachfront road advocated by the cities of Marina and Sand City, for example -- the conflict also is clear. This is not just because reuse is on the table -- even in the RAB, where reuse ostensibly is not a focus, different members represent different publics -- but the fact that land use planning asks community members to envision how they want their community to look invites conflict.

This is not necessarily a bad thing, of course. The fact that multiple publics have conflicting viewpoints about the use of a site after cleanup may serve as a motivation to sit down and work out differences, perhaps resulting in planned reuses that are more compatible, beneficial, and realistic. This arguably is what has happened with FORA, although reuses have not moved far enough from the drawing board to the building site to be sure. However, it is not necessarily an unambiguously good situation, either. All other things being equal, more powerful interests (*i.e.*, those with deeper financial pockets, more votes, larger property holdings, or stronger working relationships with the regulator community) will be capable of influencing the direction of planned and actual reuse more than the less powerful interests, with obvious implications for traditionally under-represented publics.

This inequality among different sub-publics has not been received much attention in discussions about linking land use and remedy selection. However, as the bright lines for cleanup standards and permanent solutions currently inscribed in CERCLA potentially give way to more blurry conditional lines that lend greater emphasis to designing cleanups that are consistent with the planned reuse, some aspects of the Superfund cleanup process *could* easily become more susceptible to negotiation. Together with the need to better understand the relationships among players, particularly between those parties responsible for reuse and those responsible for cleanup, and the necessity of accommodating a larger regional public, the political locus and scope of decision making warrant considerably more attention in discussions about linking land use and remedies under Superfund.

APPENDIX A: CONTAMINATION AND REMEDIAL ALTERNATIVES

As noted in the text, the detection of groundwater contamination associated with the landfill largely prompted the NPL listing of Fort Ord. This contamination constitutes OU 2. Other sites of interest at Fort Ord include OU 1 (the Fritzsche Army Airfield Fire Drill Burn Pit) and the 41 sites (interim action sites, no action sites, and full RI/FS sites) investigated in the basewide RI/FS.

Much of the cleanup at Fort Ord involves remediation of areas contaminated with solvents (as with many closing military bases), petroleum products, commercial and residential landfill waste, lead, and unexploded ordnance. This remediation will include capping, soil excavation and treatment at an on-site treatment facility (as well as disposal off site), and groundwater pumping and treatment. For the most severe contamination problems (lead in the coastal dunes, the landfill, and the unexploded ordnance), the reuse potential is limited by both residual contamination after remediation and habitat requirements for species preservation. For most other areas, however, the residual risk after cleanup is expected to allow unrestricted residential use (typically the use with the highest exposure potential), although other uses (*e.g.*, airport, retail use, light industrial) are planned for most of the site.

In the following five subsections of this appendix, we briefly review the contamination and remedial alternatives at the operable units, interim action sites, no action sites, and full RI/FS sites at Fort Ord.

A.1 Soil and Groundwater Contamination at the Fritzsche Army Airfield (OU 1)

In 1962 the Army established a fire drill area near the Fritzsche Army Airfield to train firefighters at the base. The firefighters would spray the ground surface of the fire drill area with water, flood the surface with 150 to 200 gallons of flammable liquid (mostly helicopter fuel), ignite the fires, and use principally water to extinguish the flames. This continued until 1985, at which time the Army halted the training. Subsequent investigations found elevated concentrations of petroleum hydrocarbons, benzene, toluene, TCE, and other chemicals in the soil, as well as TCE and methyl ethyl ketone in the groundwater.

In 1988, prior to NPL listing, the Army implemented remedial alternatives for both soil and groundwater at the fire drill area. The soil alternative relied on the excavation of contaminated soil (roughly 4,000 cubic yards, at \$5 to \$10 per yard) and removal to an on-site soil bioremediation treatment facility. The Army completed this treatment in 1991. The pump and treat groundwater remediation relies on two extraction wells to prevent downgradient migration of VOCs and to extract contaminated groundwater. VOCs and hydrocarbon removal occurs via two granulated activated carbon canisters placed in series. Flow through the groundwater system through 1992 totaled over 25 million gallons, resulted in the removal of 80 percent of the contamination (over 18 pounds of VOCs), and cost roughly \$20 per 1,000 gallons.¹¹⁹

¹¹⁹ "Pump-and-Treat Technology." 1994: *Advance*, Fall 1994. p. 2.

Because the designation of OU 1 pre-dated NPL listing, the Army implemented the remedial alternative at OU 1 prior to CERCLA coverage at Fort Ord. As part of the basewide remediation effort under NPL designation, the Army issued a proposed plan for OU 1 in 1994 that proposed no further action for soil and an updating of the goals for groundwater. After a public meeting to review the OU 1 proposal in 1994, EPA, the Army, and California EPA signed the ROD the following year.

A.2 Fort Ord Landfills (OU 2)

The Fort Ord landfills, which operated for roughly 35 years, occupy two areas totaling 150 acres in the Main Garrison area. Available information suggests that the landfills received primarily residential and commercial waste, with a small amount of chemical (*e.g.*, paint and pesticides) disposal likely as well. Chemicals associated with the landfill have contaminated both the upper and 180-foot aquifers, in concentrations from 10 to 16 times the MCLs for drinking water (for TCE). Although the upper aquifer is not used for drinking water it is connected with the 180-foot aquifer, which is a potential drinking water source (although wellwater is *not* being used in the vicinity of the plume).

The Army has analyzed three remedial alternatives at OU 2, including the no-action alternative (which has an estimated \$3 million present value cost). One alternative would install an impermeable synthetic cover on the landfill and pump and treat the upper aquifer with the same technology used for OU 1 (and leave the 180-foot aquifer untouched), while the second active alternative would include this as well as an interim action of pumping and treating from the 180-foot aquifer. Under each alternative, the landfill cap would constitute the bulk of the cost of the remedy (roughly \$20 million for each alternative). Institutional controls that restrict activities on the cap would protect its integrity.¹²⁰

The Army selected the second alternative as the preferred option, which EPA and California EPA concurred with. In August, 1994, the EPA Regional Administrator signed the ROD for OU 2. In 1995, EPA, the state, and the Army subsequently signed a Explanation of Significant Differences (ESD) to the ROD to set cleanup goals for the 180-foot aquifer, and identified the interim action (pumping and stripping contaminants from the water and subsequent ultraviolet treatment) as the final action. In addition, the Army is preparing a ROD amendment for the excavation of thirty acres of the landfill that will allow a clean closure of this part of the landfill (the excavated materials will be consolidated with materials in the remaining unexcavated 120 acres of the landfill). This proposed clean closure would allow for a greater reuse potential for adjacent housing areas.¹²¹ The total landfill project, which is about one-quarter complete, will involve the movement of roughly 300,000 cubic

¹²⁰ Thus, for instance, the proposal by the adjacent municipality to construct a golf course on the cap would require seeding of a drought-resistant grass, since controls would not allow irrigation on the cap. This approach would require an amendment to the ROD and the remedial design. However, it is unlikely that such a drought resistant grass could be practical with no irrigation.

¹²¹ Personal Communication, February, 1996.

yards of cover soil and an equivalent volume of waste, the installation of more than four million square feet of cover material, and the replacement of nearly 400,000 cubic yards of clean soil. It should be complete by the end of 1997.¹²²

A.3 Interim Action Sites

Field investigations in 1991 indicated that most of the soil contamination at Fort Ord occurs in areas where the Army carried out routine activities such as vehicle maintenance at wash racks, pesticide storage, and the use of oil/water separators. As a result of this finding and with pressure to speed cleanup, the Army has implemented an accelerated program to conclude appropriate investigations, gain regulatory approval, and implement interim cleanup actions before the setting of final cleanup levels or remedial alternatives. Since this predated approval of the basewide ROD, the interim action sites could require further remedial action (although this is not expected since the interim action cleanup excavations meet the preliminary remedial goals for residential standards).¹²³

Investigations have identified approximately 15 of the 41 RI/FS sites as candidates for interim soil actions.¹²⁴ All of these have a limited volume of contaminated soil (less than 5,500 cubic yards) that lies no more than 25 feet below the ground surface. Contaminants include petroleum hydrocarbons, solvents, oils, metals, and pesticides, and depth to groundwater is high (and therefore the likelihood of groundwater contamination low). A site requiring groundwater remediation, however, does not fall under interim action guidelines.

Remedial alternatives for these sites include the standard no action case, with a present value cost of roughly \$19 million (principally for 30 years of groundwater monitoring at all of the 41 RI/FS sites), and the preferred alternative, which includes excavation with treatment, recycling, or disposal. This latter alternative involves bioremediation (similar to the OU 1 treatment) or soil vapor extraction, and has an upper-bound estimate of present value costs of \$24 million (with groundwater monitoring for two years). This cost estimate includes some soil excavation and treatment at all of the 41 RI/FS sites (some of the sites, however, may not actually require soil excavation and treatment). Under this alternative, prior to performing an interim action at any site, the Army must prepare an Approval Memorandum that demonstrates that the site meets the requirements for an interim action. EPA and California EPA must review this memorandum and approve of the action before it can proceed.

The Army, EPA, and California EPA signed the ROD for interim actions in March 1994.

¹²² Anonymous. 1996: "Talking Trash: Landfill Project Nears 25% Completion." *Advance: News About the Environmental Cleanup at Fort Ord*. Summer 1996.

¹²³ Personal Communications, February, 1996.

¹²⁴ Personal Communications, February, 1996.

A.4 No Action Sites

The no action “plug-in” ROD outlines the process by which the RI/FS sites that do not require further treatment, engineering controls, or institutional controls can be eliminated from the list of potential RI/FS sites requiring remediation. A site may be designated as no-action if it falls into one of two categories.

First, if the baseline risk assessment or screening risk evaluation based on an unrestricted reuse scenario indicates that the site does not pose an unacceptable risk to human health or the environment, or if previous actions or natural processes have eliminated all existing and potential risk to human health or the environment, the site falls into Category 1. If a site does not fall under CERCLA authority, either because CERCLA excludes the particular contaminant at the site (*e.g.*, petroleum hydrocarbons coming from a leaking underground storage tank) or because no release to the environment has occurred (*e.g.*, intact asbestos in a building), the site falls into Category 2.

When the Army proposes a site as no action, it must prepare an Approval Memorandum and demonstrate that the site meets the requirements and conditions of one of these categories. For category 1 sites, these requirements include a description of site and geologic conditions, available data, a map of the site detailing location, an evaluation of potential impacts to groundwater, and an ecological risk assessment. For category 2 sites, the requirements include a description of site conditions and data related to the investigation or remedial action undertaken under other, non-CERCLA authorities. The public has 30 days to review an Approval Memorandum before it is sent to the regulatory agencies for approval or denial.

The EPA and the California EPA signed the no-action ROD in April 1995. According to a recent issue of *Advance*, the Army’s newsletter on the Fort Ord closure and cleanup, 18 of the 41 RI/FS sites qualify for no-action status.

A.5 The Remaining RI/FS Sites

The remainder of the 41 RI/FS sites each requires a full RI/FS, including both baseline and ecological risk assessments. Upon approval of the RI/FS, the Army proposed a plan for each site, collected public comments from a public meeting and 30-day review period, and included these in the basewide ROD. Currently, five sites (including combinations) constitute the set of RI/FS sites that require a full investigation and cleanup. We briefly discuss the contamination and remedial alternatives (including estimates of the present value costs) at each of these five sites.

Sites 2 and 12

This combined site of nearly 60 acres includes the Main Garrison Sewage Treatment Plant, a former disposal site, and several industrial yards. Proposed reuses include among others an aquaculture facility or state park, research facility, transit center, retail center, and a school. Primary contaminants of concern include groundwater VOCs and petroleum hydrocarbons in the soil. Active groundwater remedial alternatives include groundwater

extraction and treatment at a conventional publicly owned treatment plant, or on-site treatment with granular activated carbon and reinjection or discharge off-site. Soil remediation alternatives include capping of soil and surface water control, and excavation of various amounts of soil and either treatment at the base's soil treatment facility or relocation of the soil to the OU 2 landfill and capping there.¹²⁵ Estimated costs of these alternatives range from \$7 million to \$9 million.

Site 3

Site 3 is a small arms firing range that extends over 3 miles along the coastline of Fort Ord. Soldiers fired from east to west (toward the ocean) and the dunes serves as a backstop for the targets. As noted in the text, the projected post-remediation use is a state park with trails, campgrounds, and other facilities. The contaminant of concern is lead (from spent ammunition) in the soil, with concentrations in sieved surface soil samples up to 46,000 mg/kg. Both active remedial alternatives include excavation of soil followed by separation of lead from the soil. One alternative would recycle the lead at a refinery and treat the soil *in-situ*, while the other would dispose of the separated lead and soil at approved landfills. Estimates of the costs for the alternatives range from \$11 million to \$16 million. More recently, the Army has proposed that some of the separated soil be used for constructing the landfill cap of OU 2. Remedial alternatives are still being evaluated, since although the Army and the agencies have agreed on lead standards for the protection of human health, discussions continue on the lead standards for ecological health.

Sites 16 and 17

The combined sites 16 and 17 occupy over 20 acres in the Main Garrison area. Past uses have included a heavy maintenance facility, dumping, stormwater discharge basin, and vehicle storage. Plans for future use include public agency corporation yards and a university campus. Primary contaminants of concern are petroleum hydrocarbons in the soil and groundwater VOCs (which should be captured and treated in the OU 2 remediation) and medical and miscellaneous debris in the disposal areas. Active remedial alternatives include a cap over the areas of debris and petroleum hydrocarbons, consolidation of debris on-site and capping, excavation of soil and treatment at the base's soil treatment facility, and removal, treatment, and disposal of debris in the OU 2 landfill. Estimated costs for these alternatives range from \$800,000 to \$5 million, although since all alternatives may involve the removal of unexploded ordnance, actual costs could increase significantly.

Site 31

Site 31, a former dump for incinerated refuse, lies in the southern part of the east Garrison. The likely use of the site post remediation is open space habitat. Lead is the

¹²⁵ Personal Communication, February, 1996.

primary contaminant of concern, with soil concentrations up to 22,000 mg/kg. Active remedial alternatives, which must be sensitive to special status species in the area, include soil excavation and screening (with possible treatment at the site 3 corrective action management unit and/or disposal at the OU 2 corrective action management unit landfill or off-site) and excavation and disposal offsite.¹²⁶ All active alternatives would include deed restrictions to limit future development. The estimated cost for each alternative is under \$500,000.

Site 39

Site 39, the granddaddy of them all, occupies over 8,000 acres in the southwestern portion of the base. This area served as an inland firing range for ordnance training (hand grenades, mortars, rockets, mines, small arms), and as discussed in the text is slated for use primarily as a natural resource management area of the U. S. Bureau of Land Management. Primary contaminants include petroleum hydrocarbons in groundwater, and cyclotri-methylenetrinitramine, petroleum hydrocarbons, and lead in soil. Active remedial alternatives include institutional controls (fencing, signing, deed restrictions), excavation of soil and treatment at the base's soil treatment facility or at site 3 (for lead), and excavation and off-site disposal. Because the site has the highest amount of UXO at Fort Ord, the latter two alternatives involving excavation require prior clearance of UXO.¹²⁷ Estimated costs range from \$150,000 to \$9.5 million.

¹²⁶ Personal Communication, February, 1996.

¹²⁷ UXO removal is not easy, nor does it necessarily rely on high technology. At Fort Ord, it entails burning off covering vegetation, using metal detectors to locate buried ordnance, and removal and detonation of the ordnance by trained personnel. Because Site 39 falls in a conservation area (described in subsection 3.3), habitat management guidelines limit burning to no more than 800 acres per year.

APPENDIX B: LIST OF PERSONS INTERVIEWED (and affiliations at time of interview)

Kathleen Ahern
Fort Ord Reuse Authority
Marina, CA

William Kilgore
California Dept. of Toxic Substances Control
Sacramento, CA

Jim Austreng
California Department of Toxic Substances Control
Sacramento, CA

Gail Youngblood
BRAC Environmental Coordinator
Fort Ord, CA

Richard Bailey
Fort Ord Restoration Advisory Board
Monterey, CA

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