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THESIS

DEFINING AND COPING WITH WICKED PROBLEMS: THE CASE OF FORT ORD BUILDING REMOVAL

by

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March 2001

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Globalization and interdependencies have given rise to a new type of problem—some call them "wicked." Wicked problems are confounding experts in many disciplines of study. They are inherent to policy and strategic planning issues in civilian and military settings. The traditional, linear methods of problem solving are inadequate to address the complexity of wicked problems, and thus require new methods of problem solving. This thesis begins with a review of the definitions of wicked problems and strategies for coping with them.

In order to demonstrate the utility of these concepts to a military audience, the building removal aspect of the Fort Ord base closure is utilized as an illustration of a wicked problem. The thesis first identifies the characteristics of a wicked problem in the Fort Ord case, and then proposes a strategy for coping with Fort Ord building removal. The Fort Ord example is not unique within the Department of Defense, and lessons learned from this illustration are applicable not only to other closed bases and to future rounds of base closure, but also to other issues marked by complexity and interdependence.

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DEFINING AND COPING WITH WICKED PROBLEMS: THE CASE OF FORT ORD BUILDING REMOVAL

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In order to demonstrate the utility of these concepts to a military audience, the building removal aspect of the Fort Ord base closure is utilized as an illustration of a wicked problem. The thesis first identifies the characteristics of a wicked problem in the Fort Ord case, and then proposes a strategy for coping with Fort Ord building removal. The Fort Ord example is not unique within the Department of Defense, and lessons learned from this illustration are applicable not only to other closed bases and to future rounds of base closure, but also to other issues marked by complexity and interdependence.

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EXECUTIVE SUMMARY

Globalization and interdependencies have given rise to a new type of problem—some call them "wicked." Wicked problems are confounding experts in many disciplines of study. They find that the traditional, linear methods of problem solving are inadequate to address the complexity of wicked problems, and thus require new methods of problem solving. This thesis begins with a review of the definitions of wicked problems and the strategies for coping with them.

The U.S. Environmental Protection Agency (EPA) identified Fort Ord as a federal Superfund site in 1990 due to groundwater contamination discovered on the base. Shortly thereafter, in 1991, the Defense Base Realignment and Closure Commission recommended the closure of Fort Ord. In 1994, the California State Senate created the Fort Ord Reuse Authority (FORA) by special legislation to handle all aspects of the base closure, from building removal to assisting local cities with acquiring land. The local civilian community faces a daunting task of handling over 7,000 buildings on more than 28,000 acres (44 square miles) left behind by the closure of the Ford Ord Military Reservation.

Today, closure and reutilization of the former Fort Ord has reached a stalemate. The process continues to drain off scarce Department of Defense resources without resolution. It is in the nation's best interest to identify the obstacles to reutilization and to develop an efficient strategy to turnover the land at closed military bases to the local civilian community.

Building removal at Fort Ord is an excellent example of a wicked problem and the strategies devised to cope with it can provide a useful template for officers to follow in the future. The challenges at Fort Ord are not unique within the Department of Defense, and lessons learned from this case are applicable, not only to other closed bases and to future rounds of base closure, but also to other issues marked by complexity and interdependence.

LIST OF ACRONYMS

AEPI	Army Environmental Policy Institute
ARB	Air Resources Board
BLM	Bureau of Land Management
BRAC	Base Realignment and Closure
BRACO	Base Realignment and Closure Office
Cal EPA	California Environmental Protection Agency
Cal OSHA	California Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CCRWQCB	Central Coast Regional Water Quality Control Board
CIWMB	California Integrated Waste Management Board
CRMP	Coordinated Resource Management Planning
CSU	California State University
CSUMB	California State University Monterey Bay
DFAS	Defense Finance and Accounting Service
DHS	Department of Health Services
DoD	Department of Defense
DPR	Department of Pesticide Regulation
DTSC	Department of Toxic Substances Control
EDA	Economic Development Administration
EDC	Economic Development Conveyance
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FAAF	Fritzsche Army Air Field
FOCTF	Fort Ord Community Task Force
FOEDA	Fort Ord Economic Development Authority
FORA	Fort Ord Reuse Authority
FORG	Fort Ord Reuse Group
FOST	Finding of Suitability to Transfer
FOTF	Fort Ord Task Force
FOTP	Fort Ord Toxics Project
FTE	Full-Time Equivalent
HMP	Habitat Management Plan
HUD	Housing and Urban Development
INSS	Institute of National Security Studies
LBP	lead-based paint
LRA	Local Reuse Authority
MPC	Monterey Peninsula College
MST	Monterey Salinas Transit
NEPA	National Environmental Policy Act
MBUAPCD	Monterey Bay Unified Air Pollution Control District
MILCON	Military Construction
MOA	Memorandum of Agreement

MPUSD	Monterey Peninsula Unified School District
MRWMD	Monterey Regional Waste Management District
OEA	Office of Economic Adjustment
OEHHA	Office of Environmental Health Hazard Assessment
OSHA	Occupational Safety and Health Administration
PBC	Public Benefit Conveyance
POM	Presidio of Monterey
RAB	Restoration Advisory Board
RI/FS	Remedial Investigation/Feasibility Study
RWQCB	Regional Water Quality Control Board
SMART	Strategic Management, Analysis, Requirements, and Technology
SWRCB	State Water Resources Control Board
TAMC	Transportation Agency of Monterey County
TRADOC	Training and Doctrine Command
UC	University of California
UCMBEST	University of California Monterey Bay Education, Science, and Technology Center

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A vast majority of our research would not have been possible without the help of two people. Mr. Dick Wright at the Army Environmental Policy Institute opened many doors for us in the Washington, D.C. area, and Mr. Stan Cook at the Fort Ord Reuse Authority introduced us to a long list of local government officials and regulatory agencies. Our research would have taken much longer without the assistance of Mr. Wright and Mr. Cook.

We greatly appreciate the willingness of the stakeholders we interviewed to share their knowledge and experience in base closures with us.

Finally, we wish to thank our families for the patient support they provided us in completing this project.

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I. INTRODUCTION

No project leader is brilliant or experienced enough to go off and solve a wicked problem alone.

E. Jeffrey Conklin and William Weil

Due to the rapid increase in the speed of communications and transportation, globalization has become a buzzword of the age. The ease and speed with which interactions between individuals, organizations, corporations, and governments occur on a global basis have created unanticipated, yet in retrospect predictable consequences. There are two important perspectives from which to evaluate the unmistakable trend of increasing globalization. Globalization has fostered cooperation between seemingly unrelated groups and individuals separated by geography, economy, society, or culture. It has opened up a global market economy that encourages efficiency in production and trade. However, when conflicts arise, their resolution is much more difficult, because matters have become increasingly complex.

The conventional, linear problem-solving methods of the past have failed to reliably resolve conflicts rooted in the elaborate interdependencies of globalization. The rising complexity of problem solving is an inevitable consequence of globalization, and has been reflected in a broad spectrum of literature including public administration, environmental policy, strategic planning, software development, political science, landscape architecture, health care, and organizational dynamics. While the authors of this literature may not all use the phrase "wicked problem," they all write about the complexity of the problem solving process and its challenges.

A. THREE TYPES OF PROBLEMS

Nancy Roberts (2000) identified three types of problems.[1] Type I or "simple" problems are solvable utilizing traditional, linear problem solving methods. There is one correct answer to the problem. As in a mathematical equation, if you know the values of all but one of the unknown variables, then you can solve for the remaining variable. There is a "right" answer, and following mathematical or analytical rules will reveal that answer.

Type II or "complex" problems have a commonly agreed upon definition of the problem, but no consensus exists on the solution to the problem. For example, residents in a neighborhood may agree that there is a problem with speeding cars on their streets, but there might not be any consensus whether speed bumps, stop signs, or speed traps are the correct solution to the problem.

Type III or "wicked" problems have four characteristics. First, there is no consensus on the definition of the problem. The definition of the problem depends on the perspective of the analyst. For example, a casual analysis of violence in American schools can lay the blame on a host of factors ranging from easy access to guns, lack of parental involvement in children's lives, or perhaps exposure to violence on television and video games. Second, there is a vast and diverse group of stakeholders, each with different perspectives on the problem definition and problem solution. Additionally, the same stakeholders may have different resources to bring to bear on the problem solution.

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[1] Nancy Roberts, "Wicked Problems and Network Approaches to Resolution," *International Public Management Review*, Vol. 1, No. 1 (2000): 1-4.

For example, in the violence in American school theme, some want to pass laws to stop the violence and control guns, while others want to put money into community development and programs for youth. Third, the constraints within which the stakeholders must work to solve the problem are continually shifting. The funding resources may vary with budgetary cycles, and political will may vary with elections or changing personalities due to personnel transfers within a bureaucracy. Finally, the fourth characteristic is that there is no consensus on the solution to the problem. Stakeholders in the conflict have a different perspective of the problem definition that is defined by their desired solution to the problem. In the school violence example, one group may argue that the solution to the problem is strict gun control laws, while another group may argue that the solution is regulations on violence in television and video games.

B. OBSTACLES TO FORT ORD REUSE

Closure and reutilization of the former Fort Ord has reached a stalemate. The process continues to drain off scarce Department of Defense resources without resolution. It is in the nation's best interest to identify the obstacles to reutilization so that we can develop a strategy to turnover the land at closed military bases to the local civilian community. The current stalemate that exists at Fort Ord signals that we are dealing with a wicked problem.

There are many interrelated obstacles associated with Fort Ord base reuse. To convert the former Fort Ord into a qualitatively different conglomerate of properties and estates, the following issues require consideration:

- There are areas with significant amounts of unexploded ordinance and other dangerous items that were used to train soldiers for combat.
- There are hundreds of World War II vintage buildings, which do not meet local civilian building codes and contain lead-based paint and asbestos insulation.
- There is no agreement on the allocation of revenues from land sales and reuse.
- There are different, often contradicting, proposals for land development.

This research project grew out of two classes on wicked problems and environmental security offered by the National Security Affairs department at the Naval Postgraduate School in Monterey, California. The professors divided the classes into teams and assigned topics for each team's project. Our team project focused on the building removal issue at Fort Ord. While this thesis focuses on the building removal aspect of Fort Ord reuse, it does not imply that the building removal aspect is more important than the other three obstacles mentioned above.

C. RESEARCH QUESTIONS

This thesis addresses a simple research question: What are wicked problems and how do we cope with them? To illustrate its military applicability, the thesis will examine the following subsidiary research questions: Is building removal at the former Fort Ord a wicked problem? If so, what strategy should the Army employ to cope with it?

D. STRUCTURE

Chapter II is a review of wicked problems in academic literature. We define wicked problems, describe the principles of a coping strategy, and identify three types of

strategies used to cope with wicked problems. Chapter III utilizes the building removal issue at the former Fort Ord to illustrate the definition of a wicked problem. Chapter IV first describes previous strategies employed in Fort Ord base reuse planning and the results of these previous attempts. We then propose a new strategy for coping with wicked problems and provide a set of criteria to evaluate the implementation of the strategy. Finally, Chapter V draws conclusions from the illustration of the wicked problem at Fort Ord, identifies limitations of this thesis, and evaluates the applicability to base closure issues in general.

E. METHODS

This thesis is a study of wicked problems utilizing Fort Ord building removal as a case study. Primary and secondary source journal articles and textbooks on wicked problems, collaboration, and problem-solving theories provide the theoretical foundation for the research. Twenty-three interviews with primary sources involved in Fort Ord base closure form the database for the case. The stakeholder interview form in the Appendix allowed us to collect standard data about each stakeholder and simplified comparison of the interview results. Most interviews were conducted in person by both authors for increased inter-rater reliability. In cases where both authors were not present, we recorded the interview on microcassette and the absent interviewer listened to the interview. Information from various primary and secondary sources dealing with Fort Ord and BRAC-related issues supplemented the information obtained from the personal interviews.

It is important to understand that the objective of our thesis was not to identify a solution to the wicked problems at Fort Ord, but to identify a strategy for the stakeholders to independently reach a solution. We believe that if nothing else, this thesis will provide a new perspective to the stakeholders and we hope that it will open the door to further communication and understanding. Ultimately, this thesis can benefit others affected by current or future base closure.

II. WICKED PROBLEMS

Some problems are so complex that you have to be highly intelligent and well informed just to be undecided about them.

Laurence J. Peter

A. INTRODUCTION

"Wicked" problems have confounded problem-solving experts in various fields of expertise. This chapter reviews the concept of wicked problems in the academic literature and is partitioned into two sections. The first section identifies characteristics of wicked problems, and the second section discusses the principles and strategies for coping with wicked problems.

B. THE NATURE AND DEFINITION OF WICKED PROBLEMS

Although some people may smirk when they hear it for the first time, the phrase "wicked problems" has been in use amongst some strategic planning and policy experts for the past three decades. Horst Rittel and Melvin Webber from the University of California, Berkeley, first coined the phrase in 1973.

Rittel and Webber (1973) observed that policy problems had a fundamentally different nature from problems of the past, and that any attempt to solve them from a scientific standpoint would fail. These new problems "are 'wicked' problems, whereas science has developed to deal with 'tame' problems. Policy problems cannot be

definitively described."[2] There is no right or wrong answer to a wicked problem; there are only better or worse answers.

> In a pluralistic society there is nothing like the undisputable public good; there is no objective definition of equity; policies that respond to social problems cannot be meaningfully correct or false; and it makes no sense to talk about 'optimal solutions' to social problems unless severe qualifications are imposed first. Even worse, there are no 'solutions' in the sense of definitive and objective answers.[3]

In 1981, Richard Mason and Ian Mitroff from the School of Business Administration at the University of Southern California expanded upon Rittel and Webber's description of tame versus wicked problems. In their strategic planning book,[4] they identified three characteristics of the complexity of modern policy making that give rise to wicked problems:

1. Any policy-making situation is comprised of many problems and issues.

2. These problems and issues tend to be highly interrelated. Consequently, the solution to one problem requires a solution to all the other problems. At the same time, each solution creates additional dimensions to be incorporated in the solutions to other problems.

3. Few, if any, problems can be isolated effectively for separate treatment.[5]

---

[2] Horst W. J. Rittel and Melvin M. Webber, "Dilemmas in a General Theory of Planning," *Policy Sciences*, 4 (1973): 155.

[3] Ibid., 155.

[4] Richard Mason and Ian Mitroff, *Challenging Strategic Planning Assumptions: Theory, Cases, and Techniques* (New York: John Wiley & Sons, 1981): vii.

[5] Ibid., 4-5.

Mason and Mitroff breakdown problems into three categories: simple, disorganized complex, and organized complex. Simple problems and problems of disorganized complexity both fall into Rittel and Webber's category of "tame" problems because they *can* be isolated effectively for separate treatment. Simple problems are "those that can be separated and reduced to relatively few variables and relationships... Simple problems can be bounded, managed, and, as [Rittel and Webber put] it, 'tamed.'"[6]

> Ironically, problems of the utmost complexity can also be tamed as long as the complexity is 'disorganized.' That is, whenever the number of variables is very large and the variables are relatively disconnected, the problem can be tamed with the elegant simplicity of statistical mechanics.[7]

Wicked problems are problems of organized complexity, and they are inherent to policy making and strategic planning. "The great difficulty with connected systems of organized complexity is that deviations in one element can be transmitted to other elements. In turn, these deviations can be magnified, modified, and reverberated so that the system takes on a kind of unpredictable life of its own."[8] Due to the interdependencies between variables in organized complexity, one cannot attribute the source of unique variability to any given variable or any given subset of related variables. Thus, incapable of parsing the problem into unique sources of variability or interdependencies, the analyst is left facing the problem without the simplifying effects of modern multivariate statistical procedures. Subsequently, the organized complexity of wicked problems has two implications for policy making:

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[6] Ibid., 5.
[7] Ibid.
[8] Ibid., 6.

1. There must be a broader participation of affected parties, directly and indirectly, in the policy-making process.

2. Policy making must be based on a wider spectrum of information gathered from a larger number of diverse sources.[9]

Rittel and Webber (1973) and Mason and Mitroff (1981) were the only authors to write about wicked problems for the next ten years. In the last decade, wicked problems have become a more popular topic in a wide range of academic disciplines, and a surge of articles on wicked problems appeared during the 1990's.

According to John Camillus (1996) from the University of Pittsburgh, strategic planning issues have a propensity to be wicked problems.

> Wicked problems cannot be effectively resolved using the classic, linear problem-solving process. Wicked problems and strategic issues possess the following characteristics:
>
> - The problem is not independent of the solution.
> - Multiple stakeholders with different and sometimes conflicting priorities exist.
> - Unexpected contingencies and hazards will inevitably be encountered.
> - Underlying factors giving rise to a wicked problem are complex and intertwined, and cause and effect are difficult to distinguish.
> - No perfect or obviously right answer can be found.
> - Wicked problems and emerging strategic issues in a dynamic

[9] Ibid., 13.

> world have few, if any, precedents that can help in responding to them.[10]

Judith Innes (1996), Director of the Institute of Urban and Regional Development at the University of California, Berkeley, wrote a response to the planning issues raised by Alan Altschuler three decades earlier. Altschuler challenged the legitimacy of comprehensive city planning and of city planner's expertise due to the complexity of modern planning issues. Although neither Altschuler nor Innes used the phrase, "wicked problem," the principles in their writing are very applicable to describing and coping with wicked problems.

Innes wrote that current policy mandates public involvement, resulting in conflicting or uncoordinated action.

> Multiple local agencies and interests engage in either conflict or simply uncoordinated action.... Usually, state laws already mandate procedures for public involvement, and planning commissions and public hearings are the accepted forms of public review of plans. Many stakeholders, such as residents or businesses from neighboring jurisdictions, and state and federal regulatory agencies representing environmental or economic interests have little legitimacy as participants in local decisions about land use.[11]

Jeffrey Conklin and William Weil (1997) of Group Decision Support Systems, Inc. were the first to write specifically about the definition and tools for handling wicked problems since Rittel and Webber (1973). Conklin and Weil explain why the traditional, linear problem-solving methods of the past would not work with wicked problems and

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[10] John C. Camillus, "Reinventing Strategic Planning," *Strategy and Leadership* (May/June 1995): 10.

[11] Ibid.

offer a few principles for dealing with wicked problems.

> Within organizations—such as corporations, institutions, and government—where lots of people work on complex issues, people are encountering a new class of much more difficult problems... We call these wicked problems because of the dynamic and evolving nature of the problem and the solution during the problem-solving process.[12]

While the authors before this provided elaborate descriptions of wicked problems, Conklin and Weil provide a concise definition using four characteristics.

- The problem is an evolving set of interlocking issues and constraints. Indeed, there is no definitive statement of the problem. You don't understand the problem until you have developed a solution.

- There are many *stakeholders*—people who care about or have something at stake in how the problem is resolved. This makes the problem solving process fundamentally social. Getting the right answer is not as important as having stakeholders accept whatever solution emerges.

- The constraints on the solutions, such as limited resources and political ramifications, change over time. The constraints change, ultimately, because we live in a rapidly changing world. Operationally, they change because many are generated by the stakeholders, who come and go, change their minds, fail to communicate, or otherwise change the rules by which the problem must be solved.

- Since there is no definitive Problem, there is no definitive Solution. The problem-solving process ends when you run out of time,

[12] E. Jeffrey Conklin and William Weil, *Wicked Problems: Naming the Pain in Organizations*, Group Decision Support Systems, Inc., 1997, available [Online] <http://www.mmm.com/meetingnetwork/readingroom/gdss_wicked.html> [29 January 2001], page 4 of 14. Pages listed in this format refer to the page numbers when the website is printed out.

> money, energy, or some other resource, not when some perfect solution emerges.[13]

This thesis will use Conklin and Weil's definition of a wicked problem and summarize the four characteristics as follows:

- There is *no definitive statement of the problem.*
- There are *many diverse stakeholders.*
- There are *changing constraints* within which to solve the problem.
- There is *no definitive solution* to the problem.

Given the nature and the definitive criteria of wicked problems, the next section identifies principles and strategies for coping with them.

C. COPING WITH WICKED PROBLEMS

1. Principles

New tools are required to cope with wicked problems. It is especially difficult to cope with wicked problems, "using thinking, tools, and methods that are useful only for simpler problems."[14] A coping strategy must be inherently non-linear, account for the social aspect of wicked problems, and utilize an evolving set of interlocking issues and constraints. Some authors such as Mason and Mitroff (1981), Conklin and Weil (1997), and Yankelovich (1999) have identified essential elements of a strategy to cope with wicked problems, but do not lay out an overarching strategy. Mason and Mitroff argue

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[13] Ibid.
[14] Ibid., 1 of 14.

that any strategy to cope with wicked problems must have four qualities: participation, adversity, integration, and support of the managerial mind.

a. Four Qualities of a Coping Strategy

The first quality of a coping strategy is *participation*. Participation, *per se*, is composed of two elements. The first element is obtaining knowledge and assumptions from all of the stakeholders in the process.

> Contained in the minds of each participant in a wicked problem are the powerful notions as to what is, what ought to be, why things are the way they are, how they can be changed, and how to think about their complexity. This represents a much broader class of information than is commonly used to solve problems of simplicity or of disorganized complexity.[15]

The second element is restating the knowledge and assumptions in objective terms for comparison and acceptance by the stakeholders as a group.

> Also, this participant based information is less likely to have been stated and recorded in a communicable form. Consequently... this information must be "objectified"—explicitly, articulated—so that the basis for each party's judgments may be exchanged with others.[16]

The second quality of a coping strategy is *adversity*. In other words, the participants in a wicked problem must clearly understand and use doubt.

> This does not mean that one should be a 'nay sayer' or a permanent skeptic. To do so would impede responsible action that must be taken. What it does imply is that one should withhold judgment on things until they have been tested. The methods... are means for eliciting the reasons, rationale, and assumptions underlying the information used in complex problems. They may be used to test this information as well.[17]

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[15] Mason and Mitroff, 14.
[16] Ibid.
[17] Ibid., 14-15.

The third quality of a coping strategy is *integration*. To be integrative, coping with wicked problems requires both analysis and synthesis. The task of analysis is "...to subdivide a complex problem into its elements and to determine the nature of the linkages that give organization to its complexity," while the task of synthesis is "...to understand the problem as a *whole*."[18]

The fourth quality of a coping strategy is *support of the managerial mind*. Because wicked problems tend to be ongoing, it is important not only to provide managers with a decision support system, but also an understanding of the complexity in order to better cope with future wicked problems. Mason and Mitroff promote techniques that, "involved intensive immersion of managers and staff in the process."[19]

b. Dialogue

Dialogue is essential to achieve the four qualities of a coping strategy. Daniel Yankelovich (1999), a professor at the University of California at San Diego and chairman of the research firm, DYG Inc., acknowledges that dialogue, "is not, in fact, an instrument of decision making, which always involves considerations of power and interest—issues that interfere with dialogue. And it is not a negotiating device that seeks agreement leading to action."[20] The principles of dialogue presented in his book are instrumental in creating a shared vision amongst a diverse group of stakeholders. "Dialogue is a process of successful relationship building."[21] It is not, "a reversion to the

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[18] Ibid., 15.

[19] Ibid., 16.

[20] Daniel Yankelovich, *The Magic of Dialogue* (New York: Simon & Schuster, 1999), 15.

[21] Ibid.

participatory ideology of the 1960s with its insistence that everybody get involved in every decision, thus bringing decision making to a virtual halt."[22] Yankelovich chose his words very carefully and emphasized the unique quality of dialogue. He drew two important distinctions. The first is the distinction between *dialogue* and *debate*. Debate, "is the opposite of dialogue. The purpose of debate is to win an argument, to vanquish an opponent," while, "in dialogue, all participants win or lose together."[23] The second is the distinction between *dialogue* and *discussion*. Yankelovich illustrates this distinction by identifying three distinct features of dialogue. "When all three are present, conversation is transformed into dialogue. When any one or more of the three features are absent, it is discussion or some other form of talk, but it is not dialogue."[24]

The first distinct feature of dialogue is *equality amongst the participants*.

> In genuine dialogue, there is no arm-twisting, no pulling of rank, no hint of sanctions for holding politically incorrect attitudes, no coercive influences of any sort, whether overt or indirect...
>
> Mixing people of unequal status and authority does not necessarily preclude dialogue, but it makes it more difficult to achieve. Dialogue becomes possible only after trust has been built and the higher-ranking people have, for the occasion, removed their badges of authority and are participating as true equals.[25]

The second distinct feature of dialogue is *listening with empathy*. "The gift of empathy—the ability to think someone else's thoughts and feel someone else's feelings—is indispensable to dialogue."[26] The third distinct feature of dialogue is *bringing*

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[22] Ibid.
[23] Ibid., 38.
[24] Ibid., 41.
[25] Ibid., 42.
[26] Ibid., 43.

assumptions into the open. "The most striking difference between discussion and dialogue is the process of bringing assumptions into the open while simultaneously suspending judgment."[27] Harmony is not necessarily an outcome of dialogue. By bringing assumptions into the open, "...disagreement may still exist, but the level of tension will be reduced and there will be better mutual understanding."[28]

c. *Satisficing*

Once the stakeholders achieve mutual understanding through dialogue, they will identify several feasible courses of action. The diversity of the stakeholders in a wicked problem "makes the problem solving process fundamentally social. Getting the right answer is not as important as having stakeholders accept whatever solution emerges."[29] One must realize when dealing with a wicked problem that there is no perfect solution. While there are better or worse solutions, the goal should be to stop when a solution is "good enough." In 1969, Herb Simon called this *satisficing*, whereby, "the nature of the design process is such that it is virtually impossible to find the best solution, because the space of the possible solutions is so large."[30]

2. Strategies

Other authors such as Fischer (1993), Innes (1996), and Roberts (2000) have proposed a handful of strategies for coping with wicked problems. Frank Fischer from Rutgers University recognized the inherent link between policy and wicked problems, and he suggested that collaboration would be the key to solving such problems.

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[27] Ibid., 45. Emphasis added.
[28] Ibid.
[29] Conklin and Weil, 4 of 14.
[30] Ibid., 11 of 14.

> Criticizing conventional conceptions of science and expertise, theorists advocating participatory democracy argue that the conventional model of professionalism based on a practitioner-client hierarchy must give way to a more collaborative method of inquiry. While such arguments have largely remained in the domain of utopian speculation, recent experiences with a number of 'wicked' policy problems have begun to suggest the viability, if not the necessity, of participatory research methods... collaborative citizen-expert inquiry may well hold the key to solving a specific category of contemporary policy problems.[31]

Innes (1996) wrote that consensus building with stakeholders is the key to overcoming the wicked problems of urban planning.[32]

> The emergence of consensus building as a method of deliberation has provided the opportunity to reformulate comprehensive planning. The practice is becoming more popular as a way to address complex, controversial public issues where multiple interests are at stake.[33]

She cites the growth of published materials on group dynamics and accomplishing tasks using alternative dispute resolution and reaching mutually beneficial agreements to support her assertion on the importance of consensus building.

> Consensus building has emerged parallel to the idea of "communicative rationality"... A decision is "communicatively rational" to the degree that it is reached consensually through deliberations involving all stakeholders, where all are equally empowered and fully informed, and where the conditions of ideal speech are met (statements are comprehensible, scientifically true, and offered by those who can legitimately speak and who speak sincerely). Communicatively rational decisions, then, are those that come about because there are good reasons for them rather than because of the political or economic power of particular stakeholders.[34]

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[31] Frank Fischer, "Citizen Participation and the democratization of policy expertise: From theoretical to practical cases," *Policy Sciences* 26 (1993): 165.

[32] Judith Innes, "Planning Through Consensus Building: A New View of the Comprehensive Planning Ideal," *Journal of the American Planning Association*, Vol. 62, No. 4 (Autumn 1996): 460.

[33] Ibid., 461.

[34] Ibid.

Like Mason and Mitroff, Innes believes in broader participation in the policy making process, and ushered wicked problems strategies into the urban planning arena. She proposes a new policy of providing incentives to bring stakeholders together, including "benefits for cooperation, and penalties or disadvantages for those stakeholders who do not participate."[35] Once together, informed discussion ensues, shifting the previous, long-standing power base, providing legitimacy to all stakeholders, and thereby creating decisions that will benefit the whole. In each of the cases Innes used as examples, "informed and in-depth discussion occurred among a diversity of stakeholders… In most cases, they made decisions they collectively regarded as beneficial to the resource or to the system as a whole."[36] Because the stakeholders come to the table with their own agendas, they want short-term results coupled to long-term implications. As a result, the planning process "should be issue-oriented and rooted in current tasks and problems, even while its goal is to develop general policies."[37]

Recently, Nancy Roberts of the Naval Postgraduate School in Monterey, California, has drawn upon her experiences in Afghanistan with the United Nations to derive common elements of wicked problems and potential strategies. Roberts argues that there is no ideal strategy for solving all wicked problems and that the distribution of power in a given situation will determine what type of strategy would best solve a particular wicked problem. Roberts proposed three strategies for coping with wicked

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[35] Ibid.
[36] Ibid., 469.
[37] Ibid.

problems: authoritative, competitive, and collaborative.[38] To determine which strategy is best for a given situation, one must answer two questions. First, is power dispersed or concentrated amongst the stakeholders? If power is concentrated in one individual or one group, then the situation warrants an authoritative strategy. However, if power is dispersed, then one must address the second question. Do the stakeholders contest power? If power is uncontested, then the situation warrants a collaborative strategy. If, however, power is contested, then the strategy will likely be competitive.

a. Authoritative Strategies

The goal of an authoritative strategy is to effectively reduce the number of stakeholders involved in the decision-making process. "Authoritative strategies are 'taming strategies.' They diminish the level of conflict inherent in wicked problems by putting problem solving into the hands of a few stakeholders who have the authority to define a problem and come up with a solution."[39] On the one hand, this strategy has the advantage of reducing the complexity and amount of resources consumed in decision-making. On the other hand, it has the disadvantage that the authority could be less informed and make poor decisions, causing litigation and stalemate.

b. Competitive Strategies

Competitive strategies are like a market economy. They are pluralistic and produce a "zero-sum" outcome: somebody will win and somebody will lose. These strategies have the advantage of promoting innovation and efficiency to get an advantage over a competitor. The disadvantages of competitive strategies can be drastic. "Pushed

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[38] Roberts, "Wicked Problems and Network Approaches to Resolution," 8-12.
[39] Ibid., 8.

to their extreme, they can provoke violence and warfare... Competition also consumes resources that could be spent on problem solving."[40]

c. *Collaborative Strategies*

The prisoner's dilemma[41] is an example of a collaborative strategy. It discards the "zero-sum game" assumption of competition and adopts a "win-win" perspective. By working together, the stakeholders "can accomplish more as a collective than they can achieve by acting as independent agents."[42] Collaborative strategies have the advantages of distributing costs, sharing benefits, and eliminating redundant efforts. Unfortunately, collaborative strategies also have the disadvantage of consuming precious resources in transaction costs. It takes time for the stakeholders to come together at a common location for meetings. It requires conference facilities, transportation costs, and the administrative costs of organizing and conducting the meetings. The stakeholder with very meager resources must gamble whether or not to spend those resources pursuing their own objectives or working together with other stakeholders in achieving common goals. For collaboration to work, the stakeholders must perceive that the increase in benefits by working together will outweigh the increased drain on resources to participate.

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[40] Ibid., 10.

[41] The Prisoner's Dilemma is a game of competition versus cooperation. Available [Online] <http://serendip.brynmawr.edu/playground/pd.html> [28 March 2001].

[42] Roberts, "Wicked Problems and Network Approaches to Resolution," 12.

D. CONCLUSION

This chapter reviewed the academic literature to describe first, the characteristics of wicked problems and second, potential strategies for coping with them. In the last decade, wicked problems have spread quickly into many seemingly unrelated academic fora. The phrase, "wicked problem," has not yet appeared in military literature, but the time has come to introduce it. We use a base closure case to illustrate its applicability to military issues and challenges.

III. DESCRIPTION OF A WICKED PROBLEM: FORT ORD BUILDING REMOVAL

For every complicated problem, there is a solution that is short, simple, and wrong.

H.L. Mencken

A. INTRODUCTION

The previous chapter draws on the literature to provide a general overview of wicked problems and how one can cope with them. This chapter uses the case of building removal at Fort Ord to demonstrate the concept's utility and applicability to a military audience.

B. BACKGROUND

The former Fort Ord is located on the Monterey Bay in California. In 1917, the U.S. Army obtained land primarily used for agricultural purposes and converted it to land used as a maneuver and training ground for field artillery and cavalry troops stationed at the Presidio of Monterey. The Army made permanent improvements, such as administrative buildings, barracks, mess halls, and a sewage treatment plant in the late 1930s. In 1940, after obtaining additional land in 1938, the Army began construction on the Main Garrison. Since most of the construction met emergent training requirements during World War II, the Army hastily constructed these buildings without consideration of their permanent nature.

Initially, Fort Ord served as a facility for training and staging infantry troops. Then, from 1947 to 1975, it was a basic training center. In the early 1960s, Fritzsche Army Airfield (FAAF) was completed, and after 1974, the 7th Infantry Division occupied

Fort Ord.[43] With up to 15,000 active duty military personnel and 5,100 military family members residing there at any one time during its active history, developed areas of Fort Ord resembled a medium-sized city with family housing, medical facilities, warehouses, office buildings, industrial complexes, and gas stations.

The U.S. Environmental Protection Agency (EPA) identified Fort Ord as a federal Superfund site in 1990 because of groundwater contamination discovered on the base. Shortly thereafter, the 1991 Department of Defense (DoD) Base Realignment and Closure (BRAC) Commission recommended the closure of Fort Ord. In August 1993, the 7th Infantry Division (Light) was relocated to Fort Lewis, Washington,[44] and one month later, the Secretary of Defense declared that the reuse efforts at Fort Ord would serve as the national model for base conversion.

Fort Ord closed in September 1994. The Army retained approximately five percent of the property for a Presidio of Monterey (POM) Annex and reserve center. The base closure left behind over 7,000 buildings on more than 28,000 acres, or 44 square miles. The surrounding communities are to integrate the land that falls into two categories and five geographic regions as identified in Table 1 on the following page.[45]

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[43] Fort Ord Reuse Group, *Preliminary Draft Initial Base Reuse Plan* (Marina: Fort Ord Reuse Group, 17 December 1992), 3.

[44] John Pike, *History of the 7th Infantry Division*, Federation of American Scientists website, 27 July 1999, available [Online] <http://www.fas.org/irp/agency/army/guard/7_div/long_history.htm> [2 April 2001].

[45] The information in Table 1 was derived from the Former Fort Ord Environmental Cleanup website, *Information & History – Land Use*, available [Online] <http://www.fortordcleanup.com/landuse.shtml#top> [20 April 2001].

Land Category	Geographic Region	Description and Facilities
Developed Land	East Garrison	• 350 acres located on the northeast side of the base, adjacent to undeveloped training areas. • Includes tactical vehicle storage facilities, defense recycling and disposal areas, a sewage treatment plant, and a small arms range. • Twenty-five acres of the East Garrison will remain as recreational open space.
	FAAP	• Includes airstrip, motor park, aircraft fueling facilities, sewage treatment plant, aircraft maintenance facilities, air control tower, fire and rescue station, and aircraft hangars.
	Main Garrison	• Schools, a hospital, housing, commercial facilities, motor pools, and machine shops. California Highway 1 separates the Main Garrison from the Coastal Zone.
Undeveloped Land	Coastal	• Sand dunes between Highway 1 and the Monterey Bay shoreline. • Because of rare and endangered animal and plant species, and because of its scenery, the Coastal Zone is designated as an environmentally sensitive area. • Many consider the beach dunes one of the best coastal dunes in California, because of its coastal strand vegetation and the amount of natural dune habitat.
	Inland	• Undeveloped land in the inland portions of the base. • Includes infantry training areas and open areas used for livestock grazing and recreational activities such as hunting, fishing, and camping. • The Multi-Range Area (MRA) occupies a large portion of this undeveloped land, and it was primarily used for advanced military training operations.

Table 1. Land Category, Geographic Region, and Description and Facilities at the Former Fort Ord.

C. PLANNING FOR FORT ORD REUSE

The cities of Seaside and Marina along with the County of Monterey formed the Fort Ord Economic Development Administration (FOEDA) to begin community planning in anticipation of the base closure. When it was determined that the cities of Monterey, Del Rey Oaks, and Sand City would also be receiving property from Fort Ord, they joined Marina and Seaside, and established the Fort Ord Reuse Group (FORG). FORG submitted its Initial Base Reuse Plan to the Army on 24 March 1993. Cities within Monterey County that were not included in FORG expressed concern that FORG would try to develop too much, and that it would have an adverse impact on them through effects such as increased automobile traffic and air pollution. To ensure that planning for Fort Ord Reuse considered the broad impact on the region and not just on

the cities adjacent to Fort Ord, in April 1994, the California State Senate created the Fort Ord Reuse Authority (FORA) to prepare, adopt, finance, and implement a base reuse plan.[46] The 13-member FORA Board consists of the members of its predecessor—FORG—plus additional representatives from the cities of Carmel-by-the-Sea, Pacific Grove, and Salinas.[47] Additionally, there are non-voting members on the Board, such as the Executive Director of the local reuse authority and the Army Installation Commander. FORA completed an updated Fort Ord Base Reuse Plan in June 1997.[48]

The Base Reuse Plan defines land uses and specifies the estimated acreage and intended purpose of the land:[49]

- 18,000 acres for the endangered species habitat (61 percent)
- 4,000 acres for parks, open space, visitor serving, and public facility uses (13 percent)
- 2,300 acres for educational or research uses (8 percent)
- 2,000 acres for new and (remodeled) existing residential units including single-family homes, apartments, and other housing facilities (7 percent)
- 1,500 acres for business and retail (5 percent)
- 1,100 acres for infrastructure/rights of way (4 percent)

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[46] Steve Endsley, Director of Planning & Redevelopment, and Standen Cook, Facilities Leasing/Project Implementation Manager, Fort Ord Reuse Authority (FORA), interview by the authors, 6 April 2001, Marina, California.

[47] The cities of Seaside and Marina each have two voting members on the FORA Board and the County of Monterey has three.

[48] For more information, see the FORA and Former Fort Ord Environmental Cleanup websites. Available [Online] <www.fora.org> and <www.fortordcleanup.com/reuseplanning.shtml> [19 April 2001].

[49] Fort Ord Reuse Authority, *Base Reuse Plan*, available [Online] <http://www.fora.org/base.html> [2 April 2001]. Percentages in parentheses were calculated based on an estimated 29.700 total acres.

- 800 acres retained by the Army (3 percent)

According to the Base Reuse Plan, about 35,000 people will be living at the former Fort Ord by the year 2015. This is approximately the same population as was present on the base when it was an active military installation. Moreover, the Base Reuse Plan projects the creation of about 18,400 new jobs by the year 2015.[50]

D. LAND CONVEYANCE

Most of the land at the former Fort Ord is still under the jurisdiction of the U.S. Department of the Army. In the past, "private parties rarely bid on the purchase of base properties because communities often request these properties under public benefit transfers, economic development conveyances, and noncompetitive negotiated sale authorities."[51] A Public Benefit Conveyance (PBC) can transfer land formerly under military control to state and local government agencies, and to non-profit institutions that benefit the public. These agencies and institutions obtained the property at no cost. Beginning in 1994, the Department of Defense was authorized by Congress to use an Economic Development Conveyance (EDC) to transfer property "at below fair market value."[52] Under the PBC and EDC programs, the Army has either conveyed or approved conveyance for the following property:

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[50] Ibid.

[51] U. S. Government Accounting Office, *Military Bases: Update on the Status of Bases Closed in 1988, 1991, and 1993*, Letter Report, 08/06/96, GAO/NSIAD-96-149 (Washington, D.C.: GPO, 1996), 1. Available [Online] <http://www.fas.org/man/gao/ns96149.htm> [2 April 2001].

[52] Katy Podagrosi, "Economic Renewal: Community Reuse of Former Military Bases," *DefenseLINK,* April 21, 1999, available [Online] <http://www.defenselink.mil/pubs/reuse042199.html> [26 September 2000].

- To the California State University system as an EDC for California State University Monterey Bay (CSUMB),
- To the University of California as an EDC for the University of California Monterey Bay Education, Science, and Technology Center (UCMBEST),
- To the City of Marina as a PBC for its municipal airport,
- To the California Department of Parks and Recreation as a PBC for creation of the Fort Ord Dunes State Park, and
- To several homeless service providers as a PBC.

Katy Podagrosi, former mayor of Rantoul, Illinois, where Chanute Air Force Base was closed in 1993, argued that the EDC process was cumbersome and suggested that the government take additional steps to accelerate land transfers.

> A policy of no-cost EDCs will eliminate these time-consuming steps, thereby speeding property transfer and reuse and reducing DoD's cost to maintain and operate the property. This policy also will reduce somewhat the daunting costs of reusing former military bases, allowing communities to invest more quickly in infrastructure modernization and redevelopment.[53]

On 5 October 1999, the National Defense Authorization Act for fiscal year 2000 "provided for no-cost transfers of EDC property in order to further stimulate economic redevelopment and long-term job creation and to eliminate delays resulting from prolonged negotiations over fair market value."[54] In the case of Fort Ord, however, it has not produced the anticipated results, in part due to an unresolved issue of preexisting buildings.

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[53] Ibid.

[54] U.S. Army, Base Realignment and Closure Office (BRACO), *No-Cost Economic Development Conveyance (EDC) Policy Guidance Overview,* 13 December 1999, available [Online] <http://www.hqda.army.mil/acsimweb/brac/web/data/edc/3.doc> [2 April 2001].

E. THE BUILDING REMOVAL ISSUE

Environmental restoration is a precondition for realizing various aspects of the Fort Ord reuse plan.

Andrew Szasz and Michael Meuser

Part of FORA's challenge is deciding what to do with roughly 1,200 remaining World War II era structures that do not meet local civilian building codes and contain hazardous materials such as asbestos and lead-based paint (LBP). While there are valuable materials such as old growth lumber in the buildings, removing, salvaging, and diverting non-hazardous materials from the waste stream will concentrate the hazardous materials in that stream with attendant potential, unintended consequences.

Asbestos contained in the buildings poses a serious risk during building demolition. Activities that disturb asbestos, such as cutting, sanding, or other remodeling activities performed while demolishing or removing a building can release high levels of airborne asbestos fiber. Medical research has documented the adverse impact of airborne asbestos on human respiratory health.

Because asbestos removal is very expensive and poses the greatest risk of fiber release, it should be the last option exercised, unless required by state or local regulations. However, removal may be necessary when remodeling a building or when it is impossible to repair damaged asbestos material. Asbestos removal is difficult and dangerous, and it requires a specially trained, licensed contractor. Removal *per se* is expensive in and of itself, but it is only a part of the complete process. After removal, disposal of asbestos materials adds additional expense. Waste contractors may deposit asbestos materials in the Class III landfill in Marina, as long as they seal it in double-

bags. While the tipping fee[55] at the landfill for regular municipal waste is $30 per ton, double-bagged asbestos requires special handling at the landfill and costs $45 per ton.

The second hazardous material associated with these buildings is LBP. The primary hazard of LBP is to the brain development of children. LBP chips, as well as soil and household dust contaminated with lead are the primary sources of childhood lead poisoning. Children could eat, chew, or suck on lead-painted surfaces they can reach, such as windowsills or railings. However, demolition jobs present these hazards to adult workers as well. Dirt and dust can contain lead, as can the fumes and dust stirred up during building renovation or while sandblasting lead-painted buildings. According to most experts, lead either absorbed through the skin or inhaled as a dust are the most toxic routes of exposure. Moreover, workers exposed to lead have an increased risk of developing Alzheimer's disease, according to the American Academy of Neurology.[56]

Since 1978, the Army has built an additional 2,916 housing units in compliance with building codes; that is without using these hazardous materials. The Army has turned over many of those housing units to the local community for rent to the public, but they still have not turned over approximately 1,100 units.[57] The local community could

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[55] Landfills pay for their operations by charging tipping fees. When trucks bring in a load of waste to deposit in the landfill, the truck drives onto a scale to determine the weight of the waste. The amounts listed in the text are the tipping fees for the Monterey Regional Waste Management District.

[56] Reuters Health, *Workers Exposed to Lead Have High Alzheimer's Risk*, 4 May 2000, available [Online] <http://www.alzheimers.com/news/200005044801.html> [26 September 2000].

[57] Standen Cook, Facilities Leasing/Project Implementation Manager, Fort Ord Reuse Authority (FORA), interviews with the authors, various dates from August 2000 to March 2001, Marina, California.

have easily reused those housing units shortly after the closure of Fort Ord, but they now face inordinate costs for repairs following years of neglect while awaiting transfer.

The Army was ready to transfer the land shortly after the base closed, but the FORA Board did not want to receive land with buildings intact. The Base Reuse Plans mentioned above address allocation of land to residential, commercial, or industrial use, but they did not address how to transform the land from its present state to the desired state defined in the plan. In other words, the plans did not take into consideration the removal or remediation of buildings.

People expected and hoped that the actual land transfer would occur quickly, but unfortunately, this has not happened. Because of the delays, the salvageable materials contained in the buildings are deteriorating and losing value, and the hazards, such as peeling lead-based paint, are worsening and becoming more costly to cleanup.

F. FORT ORD BUILDING REMOVAL IS A WICKED PROBLEM

As we summarized in Chapter II, there are four key characteristics of a wicked problem[58]:

- The problem is ill defined,
- It has many diverse stakeholders with different perspectives and points of view,
- Its constraints constantly change, and
- It has no definitive solution.

[58] Conklin and Weil, 4 of 14.

The building removal issue at the former Fort Ord provides an excellent example of these four characteristics, and we will use it to help us understand the nature of wicked problems.

1. No Problem Definition

There is no agreement on the definition of the problem. First, there is no agreement whether or not the existing buildings must be either remediated or removed. Second, if there is a requirement to remove or remediate the buildings, there is neither agreement as to who bears the responsibility, nor is there agreement on what method to use in accomplishing the remediation or removal.

a. Agreement to Remove or Remediate

There is a large and diverse group of stakeholders with differing and sometimes competing interests in the issue of building removal. The Army uses similar buildings at many other bases throughout the country, so from its perspective, there is no requirement for building removal. The policy of the Army is that the buildings come with the land at transfer, "as-is, where-is." However, the Army did not build these buildings according to local building codes and regulations, so they have less value for use in the civilian sector. The potential developers want land free of these buildings, so from their perspective, there is a requirement to remove the buildings.

b. Responsibility

The Army uses the criteria: If the Army was going to keep this land, then what would the Army do with the buildings? The Army would use the buildings in their current state. The policy of the Army's Base Realignment and Closure Office (BRACO) is that they are required to *notify* the local community of the *existence* of hazardous

materials in the buildings, but not to abate such hazardous materials. After all, approximately 94 percent of the residential housing in San Francisco was built before 1978 and probably contains LBP. If the Army expends scarce resources to abate the hazardous materials from the buildings, then the Army would be improving the land value for the sake of the local community. The Army believes that whoever receives this land is getting a good deal. The inherent value of the land is greater than the cost of remediating the buildings.[59] For example, no one would build a new sewer system if there were a leaking sewer pipe. It would make sense to simply patch the pipe to make the sewer system functional. Building a new sewer system to fix a leaking pipe is really redeveloping for the economic benefit of the follow on user, which is not the Army's responsibility.

The Army also believes that the requirement to cleanup the land depends on the intended reuse of the land. The Army should not pay to clean the land to the high standards of residential zoning if the community intends to zone the land for commercial or industrial use. Likewise, it is not the Army's responsibility to turn over land cleaned to the standard of new zoning if the local communities want to change the zoning of the land. The Army has agreed that if the community zones the land for residential use, then they will comply with Housing and Urban Development (HUD) requirements and take

[59] At the *Military Bases and Community Partnerships: Maintaining California's Edge* conference on 10 April 2001 in Monterey, California, Leon Panetta said that such claims by the Army are "bullshit," and that the cost of the environmental cleanup negates the financial benefit of receiving the land through a no-cost EDC.

samples to determine the level of contamination, but they will not clean the area to residential standards.[60]

From the perspective of the local communities, a city would not want to spend several times their annual budget to develop this land. For the City of Marina, it is much more attractive to develop other adjacent areas with no such cleanup costs. The Army obtained the land at minimal cost.[61] The Army spent the nation's tax dollars to put the buildings there, to paint them (with LBP), and to insulate them (with asbestos), so the local community should not have to pay to remove the buildings and hazardous materials now. The building removal costs are estimated in the tens of millions of dollars—a very small fraction of the Army's several billion-dollar budget.

The local developers want the land, but do not want the liability involved with hazardous material abatement. For the developers to accept the liabilities, the perceived benefits must greatly outweigh any potential risks. Developers are hesitant to be the first to accept the challenge and take the risk. Thus far, developer conferences have been unsuccessful in finding any contractors to start the process. It would be much easier, and not to mention economically beneficial, for them to get land without the buildings. The local community eagerly accepted transfer of land that did not require modification before reuse. For example, the Sun Bay Apartments and the Bayonet and

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[60] Richard Seraydarian, Superfund Division, Federal Facilities Cleanup Branch, U.S. Environmental Protection Agency (EPA) Region 9, interview by the authors, 1 March 2001, San Francisco, California.

[61] Joe Cavanaugh, *The Peace Dividend: Defense Conversion through Higher Education* (Monterey: The Leon Panetta Institute, 2000), 9.

Black Horse golf course were both sold and reused "as-is," which was without risk to the new owners. No developers are willing to accept the remaining land "as-is."

c. Method

Four alternatives comprise the protocol for handling Fort Ord's buildings: use-in-place, move, deconstruct, or demolish. In other words, the most desirable action is to use the buildings in place. This alternative costs less, takes less time, and has the least impact on the environment, both in the release of hazardous materials to the environment and less total waste going to a landfill. Moving the buildings could have similar benefits to the environment, but it would cost more time and money. Deconstructing would incrementally increase the risk to the environment, and increase costs in terms of time and resources. Finally, demolition of the building would have the most adverse impact on the environment and would cost the most in time and money. The protocol is not mandatory, but following it to the maximum extent possible not only lessens the adverse environmental impact, it helps transform a military base to a thriving part of the surrounding community. Additionally, following the protocol should increase stakeholder acceptance of solving the problem due to the aforementioned reasons.

2. Many Diverse Stakeholders

The previous section described the lack of agreement on a problem definition and summarized the arguments of three broad groups of stakeholders: the Army, the local community, and the developers. The vast quantity and diversity of the stakeholders involved further complicates this issue. It is difficult to circumscribe the boundaries of the many individuals and organizations that have a stake in the outcome of building removal and land reuse at the former Fort Ord. To include some in the problem-solving

process while excluding others invites dissent and possible litigation. Every citizen who believes they have an interest in the outcome of an issue is a stakeholder and a major task associated with resolving a wicked problem is identifying the stakeholders and including them in the decision making process, either by direct participation or by representation. Ed Freeman defines a stakeholder as, "any group or individual who can affect or is affected by the achievement of an organization's purpose."[62] Nancy Roberts adds that, "...stakeholders are any individuals or groups, whether internal or external, adversarial or not, that have the potential to 'make a difference' to the organization."[63] Roberts and King's stakeholder audit format provides the framework for the identification of the stakeholders and their interests in the current case.

An interview with Stan Cook at FORA set our stakeholder audit in motion. He provided us with a preliminary list of the organizations involved in Fort Ord reuse and the points of contact for each organization. Our stakeholder audit initially focused on the local and regional levels. Figure 1, on the next page is a map of the Fort Ord reuse stakeholders from the perspective of these levels. From this perspective, the stakeholders fall into one of three groups:

- A core group comprised of each of the local city mayors and the County of Monterey (FORA board).
- An "insider" group that advises the core group. This group consists of representatives from the regulatory agencies and other groups with perceived legitimacy.

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[62] Nancy C. Roberts and Paula J. King, "The Stakeholder Audit Goes Public," *Organizational Dynamics* (1989): 64-65.

[63] Ibid., 65.

- An "outer ring" of individuals or organizations. This is the largest group and is comprised of everyone who feels they have a stake in Fort Ord reuse—quite possibly all people from every city that borders Fort Ord—but whose opinions are not necessarily considered.

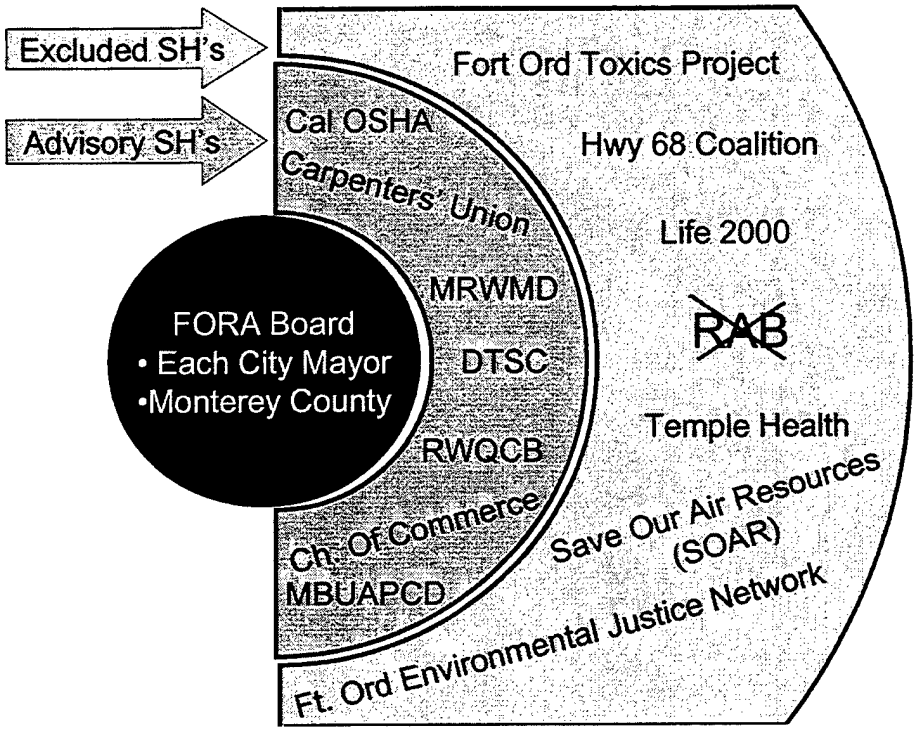

Figure 1. Satellite Diagram of Local Level Stakeholders in Fort Ord Reuse

The project's scope then broadened to examine the state and federal levels of stakeholder involvement. Figure 2, on the next page depicts the stakeholders broken down into the local, regional, state, and federal levels. While the regional and state levels are comprised of regulatory agencies that have oversight of reuse issues; the federal level is comprised of various offices and agencies of the legislative and executive branches of government. The federal level stakeholders are responsible for initiating and implementing the BRAC process and establishing federal environmental standards, and they have control over a significant amount of financial resources.

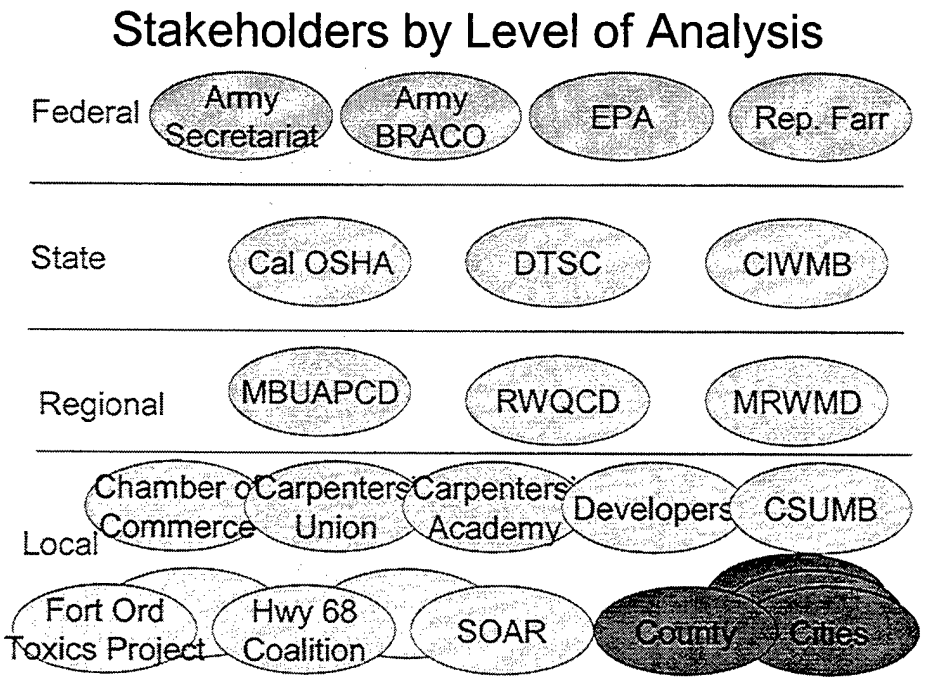

Figure 2. Stakeholders in Fort Ord Reuse by Level of Analysis

For the most part, the regulatory agencies at all levels have a "wait-and-see" attitude. Although each agency has published standards, they approach reuse issues reactively: they wait for a rendered decision, then judge whether the decision's outcome meets their agency's standards. Additionally, there are unclear and sometimes contradictory regulations. These stakeholders are important to include in the decision making process because they could promote plans that comply with their agency's regulations and can provide timely clarification of ambiguous or contradictory regulations. It would be ineffective and a waste of both time and money to develop a plan that does not comply with environmental standards or regulations.

The following sections provide brief descriptions of many of the stakeholders shown in Figures 1 and 2 above to illustrate their diversity and interests in the present

case. It is important to note that this is not an all-inclusive list, and we present it in no order of priority. The list begins with local level stakeholders and expands to the federal level of stakeholders.[64]

a. Fort Ord Reuse Authority Board

The State of California established the FORA Board. It is comprised of the following voting members: The Monterey County Supervisor, who acts as the head of the Board, and the Mayors from the various surrounding cities, who make up the majority of the Board. The Board also consists of the following non-voting members: U.S. Representative Sam Farr, State Senator Bruce McPherson, Assemblyman Fred Keeley, Transportation Agency of Monterey County (TAMC), Monterey Peninsula Unified School District (MPUSD), University of California (UC), California State University (CSU), U.S. Army, Monterey Peninsula College (MPC), and Monterey Salinas Transit (MST).[65] For an initial vote by the FORA Board to be binding upon the members of the Board, the vote must be unanimous. If the initial vote fails to achieve a unanimous result, then the Board must wait 30 days before its' members can vote again, and a two-thirds majority is enough to carry the vote.

b. Mayor of Marina

Mayor Perrine sees the problem as one of a large number of stakeholders,

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[64] It was interesting to note that every stakeholder interview conducted for this study identified more potential stakeholders. This led to interviews with more stakeholders than were on the initial list provided by Stan Cook at FORA. At some point, we had to stop the additional interviews and simply make a note of the existence of yet another potential stakeholder.

[65] Fort Ord Reuse Authority, *FORA Facts,* 11 May 2000, available [Online] <http://www.fora.org/fora1.html> [8 April 2001].

the sheer magnitude of the project itself (removing 1,200 buildings), and the volume of waste and hazardous material produced (asbestos and LBP). In addition, there may be a high environmental cost involved, but no one knows who will assume the cost and burden of the project. He believes that building removal must occur and that it must be safe and effective.

He believes in an authoritative strategy, with the FORA Board as the authority, and he would be willing to share authority with anyone investing funds in the project. His strategy is straightforward, but simplistic: use proceeds from land sales to fund future building removal. However, to implement this strategy, the FORA Board must cooperate with FORA to increase available capital. In other words, FORA and the regulatory agencies must interact more closely, and state and federal agencies, too, must interact more closely at their level.[66]

c. Monterey Bay Unified Air Pollution Control District

"In 1969, the state designated the three counties of Monterey, San Benito, and Santa Cruz as the North Central Coast Air Basin, a single region sharing the same air pollution problems. A year later, the federal Clean Air Act formalized the responsibility of state and local governments to manage air quality in their regions."[67] The Monterey Bay Unified Air Pollution Control District (MBUAPCD) has jurisdiction over the North Central Coast Air Basin and "is responsible for air monitoring, permitting, enforcement, long-range air quality planning, regulatory development, education and public

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[66] Mayor Jim Perrine of Marina, interview by David Luckey, 31 July 2000, Marina, California.

[67] Sun Star Media, *Monterey Bay Unified Air Pollution Control District*, 1999-2001, available [Online] <http://www.mbuapcd.org/> [3 April 2001].

information activities related to air pollution."[68] The district is responsible for airborne emissions from *stationary* sources. This includes devices that are portable, but are stationary when in operation and producing airborne emissions. For example, the district would have permit authority if a contractor desired to use a wood chipper or sand blaster on the buildings at Fort Ord.

MBUAPCD has two areas of concern with respect to the present case. First, they are concerned about the method of remediation or removal of the buildings and whether that method would cause excessive emissions from machinery or cause lead or asbestos to become airborne and present a health risk to the community. Second, they are concerned with the zoning of the land for what will take the place of the buildings because they model and regulate the airborne emissions from residential, commercial, and industrial zones.[69]

d. Central Coast Regional Water Quality Control Board

The mission of the Central Coast Regional Water Quality Control Board (RWQCB) is "to preserve and enhance the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations." The Board establishes regulations for water quality within its jurisdiction, and it is responsible for enforcing federal, state, and regional regulations on water quality. It is important to understand that the Board does not set regulations merely for the environment's sake. The Board listens to what the local communities want to do with

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[68] Ibid.

[69] Fred Thoits and Mary Giraudo, Monterey Bay Unified Air Pollution Control District, interview by Kevin Schultz, 4 August 2000, Monterey, California, tape recording.

water sources (e.g., water sports and recreation, marine wildlife refuge, cooling for a power plant) and then establishes regulations on waste streams to the water so that the water is safe for its intended use by human inhabitants. In the present case, the Board is most concerned with groundwater contamination near landfills. If contractors take the demolished or deconstructed building materials to local landfills, then the Board will be concerned with the potential for hazardous materials (primarily lead) to leach through the liner of the landfill into the local water table.[70]

e. Monterey Regional Waste Management District

The Monterey Regional Waste Management District is a public agency that manages the landfill in Marina, California, just north of the former Fort Ord. The District provides waste management services to an estimated 170,000 people living in the 853 square miles from Moss Landing to Big Sur on the central coast of California.[71] The facilities at the landfill in Marina serve two purposes. First, they provide recycling services to reduce the flow of waste into the landfill, and second, they provide a dumping ground for all the waste generated in the District. It is a Class III landfill for municipal waste, so accepting hazardous waste is unauthorized. However, it is the responsibility of the waste generator to determine if the waste is hazardous. The District's interest in the present case is that materials in the buildings are used or reused to the highest extent

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[70] Frank DeMarco, Central Coast Regional Water Quality Control Board (CCRWQCB), interview by Kevin Schultz, 18 August 2000, San Luis Obispo, California, tape recording.

[71] Monterey Regional Waste Management District (MRWMD), *District Facts*, available [Online] <http://www.mrwmd.org/> [8 April 2001].

possible instead of being deposited in the landfill, and if not reused then to be provided a place in the landfill.[72]

f. Fort Ord Reuse Authority

California State Bill SB899 established FORA as required to meet federal legislation with regard to establishing a local reuse authority for the creation and implementation of a reuse plan and accepting land from the Department of the Army for turnover to the local communities. FORA is tasked to act as the intermediary between the Army (federal level) and the FORA Board (local level). FORA's responsibilities include advising the FORA Board, drafting plans for use by the Board, accepting land from the Army, and transferring it to the FORA Board. While FORA is proactively involved, they are hamstrung by a lack of authority to implement a plan.

Michael Houlemard is the Executive Director of FORA. FORA is directly responsible for the transfer of land and for building deconstruction, for which Mr. Houlemard established the building deconstruction protocol. However, there is currently no ability to enforce it. Mr. Houlemard believes FORA has three primary functions. The first function is planning. The second function is ensuring conformity with all local, state, and federal rules and regulations. The third function is the implementation and financing, specifically in the areas of land sales, leasing, contracting, setting costs for developers, and receiving and spending grants.

U.S. Representative Sam Farr supports FORA as the lead agency in Fort

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[72] William Merry, Monterey Regional Waste Management District (MRWMD), interview by Kevin Schultz and Cristina Matei, 4 August 2000, Marina, California, tape recording.

Ord reuse. Mr. Houlemard sees himself and FORA as the authority on reuse issues, with the money and creditability to successfully accomplish the task, and he believes the only obstacle to conveyance is competition between the FORA Board members. The consensus among the FORA Board members is that they can make the decisions themselves. It has been a slow process bringing them together and developing understanding and trust, but once in agreement, the Board members smoothly implement the Board's decisions. While Mr. Houlemard predicts that FORA will exist for only six more years, FORA's charter goes all the way to 2014.

Mr. Houlemard categorizes the stakeholders in three levels. The first level is comprised of the Cities of Marina and Seaside. The second level is comprised of the Cities of Del Rey Oaks and Monterey, Monterey County, UCMBEST, and CSUMB. The third level is comprised of the remaining FORA Board members, for whom Fort Ord reuse does not directly affect. High and uncertain costs, the plethora of regulatory agencies with overlapping authority and jurisdiction, the temporary nature of the FORA Board, and a lack of trained deconstruction contractors are the barriers preventing resolution of the problem.[73]

g. California Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) is one of

[73] Michael Houlemard, Executive Director, Fort Ord Reuse Authority (FORA), interview by David Luckey, 31 July 2000, Marina, California.

the six components of the California Environmental Protection Agency (Cal EPA).[74] DTSC's mission "is to protect public health and the environment from harmful exposure to hazardous substances, without unnecessarily impacting sustainable growth and development... [by] regulating hazardous waste facilities and overseeing the cleanup of hazardous waste sites in California."[75] DTSC's primary concern in the present case is the proper classification of building materials before disposal in landfills. The potential volume of demolition debris is extensive. On one hand, if waste generators over-classify the waste as hazardous, then there is a chance that the debris from Fort Ord could overwhelm California's capacity to dispose of it. On the other hand, if waste generators under classify the waste, then there is a risk that improper disposal would harm the public health or the environment.[76]

h. California Integrated Waste Management Board

The California Integrated Waste Management Board (CIWMB) is another one of the six components of Cal EPA. The Board "is responsible for protecting the public's health and safety and the environment through management of the estimated 60

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[74] The California Environmental Protection Agency (Cal EPA) is an umbrella organization with six components: the Department of Toxic Substances Control (DTSC), the California Integrated Waste Management Board (CIWMB), the Air Resources Board (ARB), the Department of Pesticide Regulation (DPR), the Office of Environmental Health Hazard Assessment (OEHHA), and the State Water Resources Control Board (SWRCB). For more information, see the Cal EPA website at <http://www.calepa.ca.gov/>.

[75] California Environmental Protection Agency, Department of Toxic Substances Control, *About DTSC*, available [Online] <http://www.dtsc.ca.gov/about/> [4 April 2001].

[76] Chris Marxen, California Department of Toxic Substances Control (DTSC), interview with the authors, 21 August 2000. Interview questions were emailed to Mr. Marxen, and he wrote his responses into the file and emailed them back to the authors.

million tons of solid waste generated in California."[77] As part of that responsibility, the Board's primary objective is to reduce the volume of waste sent to landfills. To achieve that objective, the Board is very proactive in recycling efforts, and they are the agency responsible for enforcing California Code AB939. We address the impact of AB939 on the building removal case in the Changing Constraints section of this chapter.[78]

i. California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal OSHA) is the largest division within the Department of Industrial Relations. OSHA has two responsibilities: enforcing "California laws and regulations pertaining to workplace safety and health," and providing training assistance "to employers and workers about workplace safety and health issues."[79] The consultation branch utilizes only one tenth of the personnel and funding of the enforcement branch. The enforcement branch responds to complaints from employees, whereas the consultation branch responds to requests for assistance from employers. OSHA's interest in the present case is the safety of workers who would remediate or remove the buildings. The contractors must ensure safety programs are in place to protect their workers, and that workers who handle hazardous

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[77] California Integrated Waste Management Board, *California Integrated Waste Management Board,* 2001, available [Online] <http://www.ciwmb.ca.gov/> [4 April 2001].

[78] John Blue and Terry Brennan, California Integrated Waste Management Board (CIWMB), interview by the authors, 2 March 2001, Sacramento, California.

[79] California Department of Industrial Relations. Division of Occupational Safety and Health, *About Us*, May 2000, available [Online] <http://www.dir.ca.gov/DOSH/aboutus.htm> [4 April 2001].

materials or operate machinery receive adequate training and certification, and have avenues to raise safety concerns to the management.[80]

j. Environmental Protection Agency, Region 9

The U.S. Environmental Protection Agency (EPA) "was created to permit coordinated and effective governmental action on behalf of the environment," and "endeavors to abate and control pollution systematically, by proper integration of a variety of research, monitoring, standard setting, and enforcement activities.... In all, EPA is designed to serve as the public's advocate for a livable environment."[81] The EPA's mission "is to protect human health and to safeguard the natural environment—air, water, and land—upon which life depends."[82] The jurisdiction of EPA Region 9 covers the states of California, Nevada, Arizona, and Hawaii.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), established the Superfund in 1980. The EPA uses money from the Superfund to pay for cleanup of facilities on the National Priority List such as Fort Ord. Additionally, the EPA and the Department of Defense have a Memorandum of Agreement (MOA) to provide EPA funding of approximately $150,000 from BRAC in return for EPA's oversight of cleanup at military facilities. However, Superfund only finances the cleanup of hazardous materials already released to the environment. Since

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[80] Scott McAllister, California Occupational Safety and Health Administration (OSHA), interview by the authors, 1 March 2001, Oakland, California.

[81] U.S. Environmental Protection Agency, *Agency Overview,* 26 March 2001, available [Online] <http://www.epa.gov/history/org/origins/overview.htm> [4 April 2001].

[82] U.S. Environmental Protection Agency, *Agency Mission Statement*, 19 September 2000. Available [Online] <http://www.epa.gov/history/org/origins/mission.htm> [4 April 2001].

the hazardous materials are contained on and within the buildings, it is not applicable to the removal or remediation of buildings. The EPA argues that LBP that peels and falls off the buildings qualifies as a release to the environment under CERCLA, but the Army does not agree. This issue has not yet been resolved.

The EPA's primary concern in the present case is the intended use of the land. EPA must write a Finding of Suitability to Transfer (FOST) before the Army transfers land to the local community. The FOST is a statement by the EPA that the property is safe for its intended reuse. The Army must write an Environmental Impact Statement (EIS) that evaluates the difference between the present state and desired use of the land according to the Base Reuse Plan. If the EPA agrees with the EIS, then they issue the FOST.

Like other regulatory agencies, EPA Region 9 does not have a representative on the FORA Board, and they have adopted a "wait-and-see" attitude toward Fort Ord reuse. They are proactive in existing or past releases of pollutants to the environment, but they are not concerned with potential future releases such as those due to building demolition.[83]

k. Assistant Secretary of the Army for Installations and Environment

Mr. Ray Clark is the highest-level Army Secretary directly involved with base closure issues. His philosophy is that the Army should be a "partner in development."[84] Unfortunately, the armed services are incapable of seeing the problem

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[83] Seraydarian interview, 1 March 2001.

[84] Ray Clark, Assistant Secretary of the Army for Installations and Environment, interview by the authors, 5 March 2001, Washington, D.C.

from the community's perspective. Land development is not an Army core mission, so the Army has no expertise in it. The primary problem from his perspective is a lack of communication between the local community and the Army, which he says is required at the outset of a base closure. He believes in bringing in a developer early to act as a bridge between the Army and the community; "the developer understands what the community wants and they have the time and a sense of value and can solve the communication problem."[85]

l. Deputy Assistant Secretary of the Army for Environment, Safety, & Occupational Health

Mr. Ray Fatz reports directly to the Assistant Secretary of the Army for Installations, and he responds to crises that come to the attention of the administration or of congressional representatives such as Sam Farr. Fort Ord is his largest problem. There is poor communication at all levels of involvement, and he "can throw lots of money at it, but that won't solve the problem."[86] The Army has a great deal of technical expertise at its disposal, but has no sense as a developer. While the local reuse authority is responsible for development, neither the Army nor FORA has the proper skill sets to provide for economic development. The Army and FORA Board must have a common definition of success and work together to achieve it, and to achieve resolution as quickly as possible, FORA must be involved early in the process. To solve the current stalemate, developers need to be included in the decision making process.

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[85] Ibid.

[86] Ray Fatz, Deputy Assistant Secretary of the Army for Environment, Safety, and Occupational Health, interview with the authors, 5 March 2001, Washington, D.C.

"We didn't handle things right from the beginning, but some of that is due to the BRAC legislation. The BRAC legislation didn't allow us to do it right."[87] Base closure has been unsuccessful because the law establishing BRAC did not include a strategy to ensure a successful completion; DoD must establish new rules for the BRAC process. BRAC did not have a good start and this deficiency has resulted in the current stalemate at Fort Ord.

Mr. Fatz realizes that information tends to get filtered as it works its way up the chain of command, so he has personally gone to Fort Ord and held "sensing sessions" to hear directly from the stakeholders. After the second sensing session, Mr. Fatz started the Strategic Management, Analysis, Requirements, and Technology (SMART) Team to continue an open forum for sharing ideas and finding common ground. The SMART Team held its first meeting in August of 1999, and it continues to meet on a monthly basis.[88]

m. Department of the Army, Base Realignment and Closure Office

Falling directly under the Army Chief of Staff, the Base Realignment and Closure Office (BRACO) is responsible for all Army base closure issues. Established ten years ago, BRACO has worked on every BRAC round. BRACO works with the civilian side of the Army, the Army Secretariat, in designing and implementing both overall policy and detailed issues regarding all of the Army's closed bases. The primary responsibility of BRACO is the clean up and transfer of Army property to local communities via the local reuse authorities, and their concerns are human health and

[87] Ibid.
[88] Ibid.

safety, and environmental issues. BRACO interfaces with many organizations both within and outside of the Army, such as federal and state level EPA, the U.S. Army Corps of Engineers, and the Army Environmental Policy Institute. The standard they use is "clean up to like reuse. If the Army were to keep the property, what would we do?"[89] The Army used the buildings aboard the former Fort Ord and if the base remained open, they would still be using the buildings. The Army has strict guidelines for clean up and follows all environmental regulations, however, "the line they will not cross is fiscal benefit to the recipient."[90]

n. Army Training and Doctrine Command

The Army's Training and Doctrine Command (TRADOC) handles various issues such as specific base program management and integration, transfer of property and land, real estate issues, environmental concerns, water rights, and housing. TRADOC acts as a liaison between the Army BRACO and local reuse authorities such as FORA. Complete environmental remediation is primarily TRADOC's responsibility, however, the Army—like the U.S. EPA—does not consider buildings as part of the environment. TRADOC was ready to give land in 1993-94, but FORA was not ready to receive it. Property is the common ground, "they want it, and we want to get rid of it. What is needed is consensus and community agreement."[91]

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[89] Colonel Stephen Shambach and Lieutenant Colonel Edgar Yangar, U.S. Army Base Realignment and Closure Office (BRACO), interview by the authors, 6 March 2001, Washington, D.C.

[90] Ibid.

[91] David Taylor and Judy Johnston, U.S. Army Training and Doctrine Command (TRADOC), interview by David Luckey, 27 February 2001, by telephone.

o. U.S. Representative Sam Farr, California 17th District

Congressman Farr sees himself as a mediator, and he has been very proactive in bringing stakeholders together to search for common ground. He has initiated summits to resolve issues between the U.S. Army, EPA Region 9, DTSC, and FORA. Congressman Farr serves on the House Committee on Appropriations and the House Subcommittee on Military Construction, and he obtained the open-ended appropriation in the FY2001 MILCON bill to build the thermo-chemical conversion plant at Fort Ord. He believes that the developers will not take the land "for free" because of the liability issues of toxic and hazardous materials. As the 17th District Representative, Congressman Farr is very knowledgeable about and actively involved in the issues at the former Fort Ord.[92]

p. Office of U.S. Senator Dianne Feinstein

This office is a stakeholder from two perspectives. First, the Senator has a stake because Fort Ord lies within her state. In the case of Fort Ord, Michael Schiffer stated, "We must build consensus among the stakeholders... meet satisfaction of all the stakeholders... sit down with all individuals and groups with interests, within scheduling constraints... [and] listen to differing opinions and look for middle ground."[93] However, he provided no specific information as to how to accomplish this. Although the intent of

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[92] U.S. Representative Sam Farr, 17th District, California, and Rochelle Dornatt, Administrative Assistant to Representative Farr, interview by the authors, 8 March 2001, Washington, D.C.

[93] R. Michael Schiffer, Legislative Assistant to U.S. Senator Dianne Feinstein of California, interview by the authors, 8 March 2001, Washington, D.C.

her office is to play a constructive role in the Fort Ord problem, Schiffer had neither comment regarding what that problem might be nor any potential solutions.

Second, Senator Feinstein has input into the BRAC legislation in the Senate. From her perspective, there is a larger BRAC issue as "BRAC hit California too hard."[94] However, once again, there was "no thought regarding amendments to [future] McCain legislation,"[95] because they want to wait until Defense Secretary Rumsfeld publishes the results of his review of the military. Additionally, "we need a clear idea as to what the majority wants; we have no defined positions yet; we may or may not choose to go with the majority wants depending on what that is."[96]

q. Office of U.S. Senator John McCain

The President, the Department of Defense and the Joint Chiefs of Staff agree that more base closures are necessary to reduce the military's infrastructure and make additional funds available for operations, maintenance, and procurement of equipment. Senator McCain has recently proposed legislation to conduct two additional BRAC rounds in 2003 and 2005. The proposed legislation is identical to the 1991 BRAC legislation. "The purpose of our legislation is not which bases or how to do the process, but simply to order one or two more rounds. It will be up to BRAC to decide on the process and utilize lessons learned"[97] from previous base closures. One should consider the results of previous BRAC rounds and incorporate lessons learned in future rounds.

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[94] Ibid.

[95] Ibid.

[96] Ibid.

[97] Lieutenant Commander Dell Bull, USN, Legislative Fellow, Office of Senator John McCain, interview by the authors, 9 March 2001, Washington, D.C.

3. Changing Constraints

a. Personnel Turnover

When people within a bureaucracy get promoted or retire, or when voters put a new government official into office, that person takes with them not only the knowledge and experience from their job, but also the relationships and trust they have developed with others in the community.

> In fact, the differences in structure between the U.S. Army and the local community are a source of potential conflict. The Army has traditionally organized itself to move personnel every two years to new venues and assignments. This systematic rotation of staff makes it difficult to establish a sense of continuity, and a feeling of trust. At crucial times working relationships with local decision makers were disrupted just when they had gotten started, as new people were assigned.[98]

The Army recognized that a situation like base closure needed continuity, so they instituted a policy of allowing personnel to serve a "twilight" tour for six years before their retirement in one location. This policy worked well for the first six years, but then made matters worse by allowing six years worth of knowledge and experience walk out the door.

The problem is not limited to the military. For example, Fred Harris worked as a community contract specialist for FORA for many years. When he retired, he left behind many files of information, but it is extremely difficult for anyone who was not involved in creating the files to know what is in them, how they are organized, and what the lessons learned were. In another example, the founding chair of the FORA-funded Coordinated Resource Management Planning (CRMP) group was the local head of the

[98] Cavanaugh, 46-47.

Bureau of Land Management (BLM). When he transferred, it left a leadership vacuum in CRMP until a University of California Santa Cruz professor agreed to take the founding chairs' place sometime after he left. A new person taking over a job without a turnover starts anew, and even when there is an overlap for personnel, some level of knowledge and experience is lost in the process.

There have been multiple turnovers in elected offices since the closure of Fort Ord. For example, there have been three mayors of the City of Seaside in the past decade. It is important to realize that in addition to elected officials leaving office, the demographics of the population also change over time. Within a community, the pro-growth, no-growth, and limited growth groups shift considerably. While most residents of the City of Marina supported growth into the former Fort Ord at the beginning of the process, in the last election a majority of the residents voted in favor of Measure E, limiting the city's growth over the next twenty years. [99]

b. Funding

The federal government plans budgets at least a year in advance, and the military programs their budget money for several years in advance. Due to the strict regimen of the federal fiscal year, federal activities lose any unused funds on the first day of October. It does not matter if the task is incomplete. With this long-term program and budget culture of the military, BRAC was set up with a step-down decreasing budget over a period of several years, so regardless whether or not the base closures are complete, at some point the funding stops. This long-term budget system can also make

[99] Endsley and Cook interview.

it difficult to negotiate contracts with civilian developers who work on a short-term basis and cannot wait for the allocation of money in next year's budget for them to conduct a job this year.

While each of the voting FORA Board members pays FORA $14,000 per year to cover administrative costs, most of the funds that FORA handles come from grants.[100] This poses a couple of problems. First, the grant is for a specific amount of money, so it does not matter if the project is not complete; when the money runs out—the project ends. Second, the grant is for a specific length of time and requires renewal on a periodic basis. If a competing project wins the grant, then at the end of the grant period the sponsor withdraws the current project's funding. FORA has had multiple projects begin with funding from grants, only to be stopped before completion because the grant ran out of money or time and was not renewed.

The military construction (MILCON) bill for fiscal year 2001 included an open-ended appropriation to build a new thermo-chemical conversion plant at Fort Ord to transform hazardous material into non-hazardous waste. However, funding does not exist to begin removal of the buildings. Future land sales may provide the funds to continue the operation once it starts, but thus far, no one will provide funds to start it. No one will

[100] Ivana Bednarik, Fort Ord Reuse Authority, response to interview questions by e-mail, 19 April 2001. Currently, each of the 13 voting members pays $14,000 for a total of $182,000 per year, and the six ex-officio members each pay $7,000 for a total of $42,000 per year. That adds up to $224,000 in annual membership dues. Otherwise, FORA operates on federal & state grants, such as a $30 million grant from the U.S. Department of Commerce, Economic Development Authority (EDA) for a Capital Improvement Program that expires in FY 2003; and a $4.4 million grant from the Department of Defense, Office of Economic Adjustment (OEA) and the EDA for planning/operations that expires in FY 2001.

provide the initial funding for two reasons. First, the financial stakes are high. It cost roughly $400,000 to identify salvageable materials in some of the buildings thus far. A David and Lucile Packard Foundation grant paid for half of that cost. The total estimated cost for completely removing all the buildings is $60,000,000. Second, it is difficult to reliably estimate how much the entire project will cost. For example, a small group of buildings that belong to CSUMB incurred asbestos removal costs five times greater than originally estimated.

Selling the land to fund building removal seems wise on the surface, but it requires closer examination. For example, FORA and the City of Marina use different criteria to appraise the land. Marina bases property values on current property values within the City of Marina. FORA bases estimates on local coastal property, which are much higher. Additionally, there is the lack of common terminology amongst the stakeholders. In the interviews conducted for this thesis, stakeholders provided resource and budgeting statistics in several different units of measurement, such as the U.S. Dollar, Full Time Equivalent (FTE), and the Personnel Year.

c. AB939

One California state law, in particular, will affect the disposition of materials from the buildings if they are demolished and sent to landfills. Based on California Code AB939 and beginning this year, California cities face a $10,000 fine per day if they have not reduced their 1990 waste stream to the landfill by fifty percent. If a demolished building is on land that a city is to receive, the material from that building will count toward that city's input to the landfill. If, however, CIWMB waived AB939 in

the case of Fort Ord, then it would lift the risk of adverse financial impact on the local municipalities, and they would be far more likely to participate in building removal.

d. Training

Some local organizations perceive building removal as both an opportunity to provide practical experience and training for local citizens in deconstruction and hazardous material abatement, and as a source of jobs for local construction workers and carpenters. These are reasonable ends, but restricting who and how to conduct removal operations makes estimating the cost more difficult and ultimately, more costly. The reason is simple. To exploit the training opportunity, local workers need federally mandated training to work with hazardous materials, and, thus far, no one has committed the funding for that training. It might cost less to hire contractors who already have the required training and experience. If FORA elected to create jobs for local construction workers and carpenters, it may forfeit its option to choose the least expensive contractor for the job.

e. Environmental Regulations

There are a host of environmental laws, regulations, and ordinances associated with building removal imposed at the federal, state, and regional levels. For example, the Monterey County Health Department, MBUAPCD, CCRWQCB, and the California DTSC are four of the agencies in the state responsible for regulating hazardous waste. Given that Army property is involved, the U.S. Army Corps of Engineers also has some responsibility and oversight. These overlapping jurisdictions have lead to conflicts over precedence of regulations.

While there are many agencies with overlapping jurisdiction, even application of the waste classification codes and regulations of just one agency have proven inconsistent. For example, DTSC's Regulation Guidance Document #33 regarding lead based paint, construction debris, and the disposition of it has produced conflicting interpretations. The California Department of Health Services (DHS) was conducting a campaign to reduce childhood lead poisoning by cleaning up LBP in residential areas. To support the efforts of DHS, DTSC issued Regulation Guidance Document #33 which stated that as long as LBP adhered to wood, then it would probably not cause a hazardous release to the waste stream. DHS and the construction and demolition industries interpreted the guidance as carte blanche to throw away any wood painted with LBP, and the waste management district interpreted the guidance to mean that they could accept wood painted with LBP. However, that was not the DTSC's intent. DTSC emphasized that the guidance did not change the regulations, and that it was still the responsibility of the waste-generator to determine if the waste resulted in a toxic emission to the environment.

Asbestos and lead-based paint are the two main environmental concerns associated with building removal. While the costs involved in handling and disposing asbestos are considerable, the regulations are well defined and understood by industry. LBP is a much more complicated issue. National, state, and local regulatory agencies have many different regulations on LBP abatement. The Center for Disease Control has established a blood concentration limit of 10 μg/dL. However, establishing a limit for a given waste stream (airborne, water, soil) is extremely difficult because it requires the use of theories, assumptions, and estimates to quantify the methods of transport. It is also

difficult because there are multiple paths from the air, soil, and water. Simply establishing a regulatory limit on airborne lead will not prevent the *cumulative* effects from the soil, water, *and* air from causing the blood concentration levels to exceed the CDC limit of 10 μg/dL.

4. No Definitive Solution

With no common definition of a problem among a large and diverse set of stakeholders, there is little to bound the problem solving process. Stakeholders generally offer solutions only to their own problems without regard to the interests of others. The proliferation of solutions can and has caused deadlock where each stakeholder competes with others for acceptance of his or her ideas. On one hand, the Army has said the land is free for the taking, but the land comes with the buildings intact. On the other hand, the local community has said it will not accept the land with the buildings, and the Army must remove them. This has resulted in a stalemate causing once-usable buildings to fall into disrepair. The next chapter illustrates the challenges of finding a strategy for coping with this wicked problem at Fort Ord.

G. CONCLUSION

Building removal at Fort Ord is a wicked problem. There is no agreement on the problem concerning Fort Ord building removal among a very large and diverse set of stakeholders at the local, state, and federal levels. Resource constraints such as personnel with experience and project funding from grants have varied in the past decade and multiple agencies interpret and apply the various laws and regulations differently.

Moreover, the situation has produced no solution that is acceptable to all, or even a majority of stakeholders.

There is an old saw about a man meeting another man under a lamp on a city street. The man under the lamp was obviously looking for something, so the second man, wanting to help, asked, "What are you looking for?" The first man replied, "My keys." Whereupon, the second man asked, "Did you lose them around here?" To this, the first man replied, "No, I lost them in that alley across the street." Causing the second man to ask incredulously, "Then why are you looking for them here?" The first man responded indignantly, "Because this is where the light is." This story reminds us of each stakeholder looking for his or her desired outcome under the light cast by his or her own particular agenda.

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IV. COPING WITH A WICKED PROBLEM: FORT ORD BUILDING REMOVAL

The closure of Fort Ord has gradually progressed over a ten-year period marked by... several continuing problems.

Joe Cavanaugh

A. INTRODUCTION

Chapter III used the building removal issue at the former Fort Ord to illustrate what a wicked problem looks like in practice, especially in a military context. This chapter focuses on coping strategies and illustrates their applicability in the Fort Ord case. We begin by examining the outcomes of previous reuse planning efforts, and we end by recommending actions to resolve the base closure problems.

B. PREVIOUS STRATEGY ATTEMPTS

There have been several attempts at planning for Fort Ord base reuse over the past eight years. Some of the previous attempts seemed to achieve positive results, but none of them has succeeded in overcoming the deadlock on building removal.

1. Fort Ord Community Task Force

When the Secretary of Defense announced the proposed closure of Fort Ord in January 1990, then U.S. Representative Leon Panetta created the Fort Ord Community Task Force to "assist in evaluating the probable impact on Monterey County."[101] In March 1990, the Task Force issued its initial report recommending against the closure of Fort Ord. "The report concluded that the closure of Fort Ord did not serve the best

[101] Cavanaugh, 9.

interests of national defense and could cause severe economic consequences for the region."[102] Tension arose between the Task Force and the Army Corps of Engineers because the Army began preparation of an EIS in 1990, before Congress decided to close the base.

> Because community leaders opposed the closing of Ft. Ord, they also opposed work on the E.I.S. As a result of opposition from the Task Force, Congressman Panetta and other community leaders, work on the E.I.S. was limited to collection of base line data that could be used to continue to operate the base, realign missions, or to close the base.[103]

After the Department of Defense announced its decision to close Fort Ord in 1991, the Task Force shifted its focus to base reuse. Meanwhile, the Army Corps of Engineers resumed preparation of the EIS in March 1992, under much Congressional pressure. Leon Panetta added a rider to a congressional bill directing the Corps of Engineers to complete the EIS in 18 months—a task that normally takes two and a half to three years to complete. Additionally, it was to have a broader scope than a typical EIS, because it had to address "social and economic impacts as well as environmental impacts."[104]

The Task Force continued its efforts within the local community, ultimately holding hundreds of meetings by seven advisory groups. Over 400 local community leaders participated in these efforts, and the Task Force published its several hundred-

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[102] Ibid.

[103] Civic Practice Network, *Case Study #3: The Fort Ord Reuse Case*, available [Online] <http://www.cpn.org/cpn/sections/topics/environment/stories-studies/armycorps_langton4c.html> [10 April 2001], page 3 of 13.

[104] Ibid.

page Fort Ord Task Force Strategy Report in June of 1992. [105]

> [The report] formed the basis for Secretary of Defense William Perry to designate Fort Ord as a National Model for Base Conversion Programs in 1993. A valuable feature of having the seven Advisory Groups meeting as part of a larger Task Force was the sharing of information and objectives that occurred as a result of the consensus-based approach that was used during this process. [106]

The Task Force's limited objectives were to "prepare its development strategy through the May-June 1992 time-frame," and, "thereafter, the Task Force would complete its work and serve in an advisory role to the County [of Monterey] and the two Cities [of Seaside and Marina] through November, 1992."[107] The Task Force never followed through on the implementation of its Strategy Report. Instead, it quietly abdicated its planning role as the cities of Marina and Seaside took over base reuse planning.

2. Fort Ord Economic Development Authority

After the official decision to close Fort Ord, the cities of Seaside and Marina formed the Fort Ord Economic Development Authority (FOEDA) to begin base reuse planning. "The 'focal point responsibility to DOD' would transition in July 1992 from the Task Force to those jurisdictions with municipal services and local land use zoning

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[105] We have found references both to the Fort Ord Community Task Force and to the Fort Ord Task Force, and it is not certain if the name was changed or if it was abbreviated for simplicity. While we have not obtained a copy of the Task Force Strategy Report, we have found it cited as both a 300-page document and a 760-page document.

[106] Cavanaugh, 10.

[107] Fort Ord Economic Development Authority, *An Initial Reuse Plan for Fort Ord: An Immediate Challenge for Those Interested in Economic Recovery* (Fort Ord Economic Development Authority, 10 July 1992), 2.

responsibilities (i.e., Monterey County, the City of Marina, and the City of Seaside)."[108] From the limited records of FOEDA's existence, our assessment is that FOEDA was a short-lived and poorly directed effort.[109] Eventually, the Cities of Del Rey Oaks, Monterey, and Sand City discovered they would also receive property from the former Fort Ord. The Fort Ord Reuse Group (FORG) was established to incorporate reuse planning by all of the jurisdictions that would receive land from the closed base.

3. Fort Ord Reuse Group

"On October 1, 1992, the Cities of Marina, Seaside, Del Rey Oaks, Sand City, Monterey and Monterey County opened the offices of the Fort Ord Reuse Group (FORG). FORG was organized by local governments to begin the next step in planning based on the Strategy Report [of the Task Force]."[110] However, FORG's relationships with other cities in the community were adversarial. Cities within Monterey County that were not included in FORG, such as Carmel, Pacific Grove, and Salinas expressed concern that FORG would overdevelop the area, and that it would have an adverse impact on them through effects such as reduced revenue and increased automobile traffic

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[108] Ibid.

[109] Will Koon, Directorate of Base Realignment and Closure, and Gail Youngblood, Directorate of Environmental and Natural Resources, Presidio of Monterey, interview with the authors, 12 April 2001, Marina, California. FOEDA made a presentation to the Deputy Assistant Secretary of the Army, Mr. Paul W. Johnson, on 20 November 1992. An Army evaluation of the presentation stated the "proposal [was] of poor quality," and did not formally address five issues identified by the Secretary. Mr. Koon provided copies of the FOEDA presentation slides and of the Army secretariat's appraisal of the presentation. The latter included that the FOEDA proposal was "not logically developed," its assumptions were not explicit, that "rationale was confusing or absent," it provided "no supporting data for estimated cost and savings," and it did not provide "examples of similar proposals."

[110] Fort Ord Reuse Group, *Preliminary Draft Initial Base Reuse Plan* (Marina: Fort Ord Reuse Group, 17 December 1992), 5.

and air pollution. FORG called for an ambitious, high-density plan "to develop 65% of the undeveloped land for a buildout population of 250,000."[111]

Like the Task Force, FORG also had an adversarial relationship with the Army Corps of Engineers.[112] While the Army Corps of Engineers prepared the EIS, FORG prepared the Base Reuse Plan. Although Corps and FORG representatives met biweekly, the Army and FORG developed their respective plans without regard to each other. Idealistically, the community develops a base reuse plan that describes the desired end-state of the base, and the Army prepares an EIS that compares the current state of the land with the desired end-state in the reuse plan and estimates the impact on the environment as a result of that conversion. In this case, the Army was concerned with completing the EIS before the deadline established by Congress. The Corps of Engineers began preparing the EIS in earnest in April of 1992—two months before the Task Force published its report, and then released an initial draft of the EIS in December of 1992—three months before FORG published its Initial Base Reuse Plan.

FORG submitted its Initial Base Reuse Plan to the Army on 24 March 1993.

> [The Army] determined that the E.I.S. already had a very wide range of alternatives, and the FORG plan could not be implemented, because it did not reflect the request from federal and local agencies for land, and because of the significant impacts resulting from the extensive

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[111] Civic Practice Network, 6 of 13. The Army's EIS included six alternative plans and three sub-alternatives, and the plan preferred by the Army called for "developing approximately 14% of the undeveloped land and a corresponding buildout population of about 22,800." This preferred plan would have roughly restored the population of the community to the level when the base was active.

[112] Leon Panetta, U.S. Representative, to Paul Johnson, Deputy Assistant Secretary of the Army, Installations and Logistics, 18 December 1992. From the files of the Presidio of Monterey, Directorate of Base Realignment and Closure, Marina, California.

development proposed in the FORG initial plan. The Army decided not to attempt to integrate or reconcile it with the E.I.S., because it would slow down the process.[113]

Federal law requires the Army to convey land to four different categories of recipients before they can offer it to the local community. First priority goes to any federal agency that requests it. This is how the Defense Finance and Accounting Service (DFAS) obtained the hospital building. Second priority goes to state agencies, such as the California State University and University of California. Third priority goes to nonprofit service agencies, such as homeless service providers. Fourth priority goes to PBCs. For example, the local school district received the schools on base under a PBC. After those four recipients have had an opportunity to claim property, the remainder is open for conveyance to the local community.[114] Because the FORG Initial Base Reuse Plan did not account for land requests by agencies in these four categories, and because the FORG plan called for a high-density level of development, "a report was prepared for the Army by the Corps in April 1993, concluding that the FORG Reuse Plan was unworkable."[115]

4. Fort Ord Reuse Authority

The concerns raised by cities not included in FORG got the attention of California State Senator Henry Mello. To ensure that planning for Fort Ord Reuse considered the broad impact on the region and not just on the cities adjacent to Fort Ord, the California State Senate created the Fort Ord Reuse Authority (FORA) in April 1994, to prepare,

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[113] Civic Practice Network, 5 of 13.

[114] Ila Mettee-McCutchon, former Commandant of the Defense Language Institute, Garrison Commander and Installation Commander for the Presidio of Monterey, interview by the authors, 11 April, 2001, Sand City, California.

[115] Civic Practice Network, 5 of 13.

adopt, finance, and implement a base reuse plan.[116] The 13-member FORA Board consists of the members of its FORG predecessor plus additional representatives from the cities of Carmel-by-the-Sea, Pacific Grove, and Salinas.[117] Additionally, there are non-voting members on the Board, such as the Executive Director of the local reuse authority and the Army Installation Commander. FORA completed an updated Fort Ord Base Reuse Plan in June 1997.[118]

FORA has improved on the previous reuse planning efforts by FORG in three ways. First, FORA has legitimacy in the fact that the Army recognizes it as the Local Reuse Authority (LRA). Federal law requires the establishment of an LRA to receive conveyance of property from the Army. Second, it has improved legitimacy because it has included more of the stakeholder cities in the region. Third, it has funding from the members of the Board and from fees assessed on transferred properties. For example, the Board members pay FORA $224,000 annually toward its operational and administrative costs,[119] and FORA receives $1 million per year in fees from the rent of the housing units in Preston Park that were transferred to the City of Marina. This is not to say that the Army would not have recognized FORG as the LRA, or that FORG could not have raised

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[116] Endsley and Cook interview.

[117] The cities of Seaside and Marina each have two voting members on the FORA Board and the County of Monterey has three.

[118] FORA submitted its Base Reuse Plan, "18 months late, in draft form, and without a business plan." Mettee-McCutchon interview. For more information, see the FORA and the Former Fort Ord Environmental Cleanup websites, available [Online] <http://www.fora.org> and <http://www.fortordcleanup.com/reuseplanning.shtml> [14 April 2001].

[119] Bednarik interview.

such funds to support their efforts. It is merely an observation of some of the differences between the two organizations.

5. Restoration Advisory Board

When the Department of Defense began environmental cleanup of military bases in the 1970s, it became apparent that the traditional decision making method of "Decide, Announce, Defend,"[120] was no longer suitable in dealing with the public.

> Citizens, typically, have not felt that they can really affect the course of things, that opportunities provided them for comment and 'participation' are little more than window-dressing, belated attempts to secure their consent to decisions others have already made. New ways to bring stakeholders into the process had to be found.[121]

In an effort to keep the public informed and involved in environmental restoration projects at military bases, the Department of Defense decided to create a Restoration Advisory Board (RAB) "at closing and realigning bases where property will be available for transfer to the community.... Through the RAB, stakeholders may review progress and provide input to the decision making process."[122] It is important to note that the Army establishes RABs not only at closing or closed bases, but also at active bases where the local community is concerned with environmental cleanup at the base.

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[120] Fatz interview and Andrew Szasz and Michael Meuser, *Stakeholder Participation in the Toxic Cleanup of Military Facilities and its Relationship to the Prospects for Economic Reuse: The Case of Fort Ord, California*, 30 March 1995, available [Online] <http://www.mapcruzin.com/fotp/eda.htm> [10 April 2001], 4 of 22.

[121] Szasz and Meuser, 4-5 of 22.

[122] U.S. Department of Defense, Deputy Secretary of Defense, *DOD Guidance on Improving Public Involvement in Environmental Cleanup at Closing Bases,* 18 May 1996, available [Online] <http://www.dtic.mil/envirodod/brac/public.html> [14 April 2001].

6. Strategic Management, Analysis, Requirements, and Technology Team

As mentioned in the previous chapter, the SMART Team grew out of one of Deputy Assistant Secretary of the Army, Mr. Fatz's "sensing sessions" with stakeholders at Fort Ord. While the SMART is oriented toward resolving unexploded ordinance issues and not building removal, we believe it is an important example to present because it brought together executive government and both federal and state level regulatory agencies. The Department of the Army, U.S. EPA Region 9, California DTSC, U.S. Army TRADOC, and the local installation commander all participate in the SMART Team, and the Team's meetings allowed for some public commentary.

C. RESULTS OF PREVIOUS ATTEMPTS

In the following subsections of this chapter, we examine the previous attempts at Fort Ord reuse planning. We use Roberts' three-strategy framework to categorize the previous attempts, and we seek to understand the extent stakeholders used authoritative, competitive, and collaborative strategies in their dealings with one another. Examples of each strategy are illustrated and the results summarized.

1. Authoritative

a. Indications

There are three indications of an authoritative strategy. First, there must be an entity that is acknowledged to have the right, by virtue of its position, knowledge, or power, to make decisions and take action that it deems appropriate and necessary. Second, stakeholders are expected to comply with the entity's decisions and actions in deference to the position, knowledge, or power that it holds. And third, stakeholders face

serious repercussions for their refusal to comply with the entity's decision and actions. Thus, there is an element of coercion in the authoritative strategy.

b. Example

In the current Defense Department environment of declining resources and fiscal constraints, the government has the authority, in principle, to cancel efforts that do not produce positive results. The Army attempted to exercise this authority when it took action to disband the RAB. Based on its review of the millions of dollars and countless man-hours expended in support of the RAB, the Army concluded that little of substance was being accomplished.[123] Tense debates and hot tempers disrupted the meetings. Certain vocal individuals from the community attempted to monopolize the agenda and discussion. A number of RAB members even stopped attending, having concluded that they were getting little benefit from their participation. The Army believed its usefulness had ended and decided to disband the RAB in May of 1999.

c. Results

The decision provoked an outcry from some stakeholders. They believed "the RAB served as an important and effective forum for public education,"[124] and they challenged the Army's authority to disband the RAB without consultation with its members. They countered with a lawsuit to stop the effort charging that:

> The Army did not seek, nor did it receive, the general agreement of the RAB membership before disbanding the RAB. Additionally, the

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[123] The Army hired a consultant, Mr. Lenny Segal, to evaluate the RAB, and he determined that the RAB was "dysfunctional." Fatz interview.

[124] Scott J. Allen, "Monterey Bay Residents File Notice of Intent to Sue US Army over Former Fort Ord Army Base Cleanup, Monterey County, California," Fort Ord RAB Lawsuit Press Release, 7 August 2000.

> Army's decision to disband the RAB was not made in consultation with the community as a whole. ...The Army's discontinuation of the Fort Ord RAB is a violation of the Administrative Procedures Act. The law provides a place in the process for impacted communities and individuals to speak their minds and attempt to influence the outcome of cleanup decision-making.[125]

This lawsuit immediately followed another lawsuit in early 1998 by the Fort Ord Toxics Project and several community members of the RAB. They had alleged that "the Army was in violation of CERCLA because it (the Army) had failed to perform a Remedial Investigation/Feasibility Study ('RI/FS') to address the serious dangers posed by unexploded ordnance on Fort Ord."[126] When United States District Court Judge Jeremy Fogel indicated he would rule for the plaintiff in the RAB case, the Army then decided to settle out of court and agreed to commence an RI/FS to address unexploded ordnance.

2. Competitive

a. Indications

There are two indications of a competitive strategy. First, stakeholders characterize issues as a zero-sum game: "If I win, then you lose. If you win, then I lose. Our interests are considered mutually exclusive." Interactions are therefore marked by debates and contests. Second, there is neither an attempt to hold a dialogue and learn from one another, nor do the parties entertain different perspectives or points of view. Why should one listen to others when the point is to defeat them? Ultimately, the pursuit of self-interests over collective interests characterizes their interpersonal relations. Each

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[125] Allen Press Release.
[126] Allen Press Release.

side wants to exercise power over the other to achieve their respective goals. One side wins a zero-sum game to the extent that it has a stronger power base than its competitors and it uses that power to blunt resistance from the other party as it attains its desired end.

b. Example

FORG, the Army Corps of Engineers, and FOTF engaged in competition over base reuse planning. The base reuse planning was described by participants as "at times slow, and frequently confrontational...."[127] FORG promoted a plan for high-density redevelopment of Fort Ord. Its members believed that their communities were hurt the most by the closure of Fort Ord and they wanted high-density redevelopment to restore their local economy. FOTF, on the other hand, supported low-density development. It assumed that the benefits derived by the FORG members in redeveloping Fort Ord would necessarily be to the detriment of the surrounding community. FOTF also competed with members of the local community. While it understood the community's "number one concern [to be] a broad-based desire for environmental protection," the Task Force "realized that the long-term benefits created by a university could stabilize the local economy and create high quality jobs in the future... [and] identified the number one development opportunity as: 'A four-year university campus or university complex.'"[128]

The U.S. Congress imposed an arbitrary deadline on the Army to complete the EIS within eighteen months. The Army's interest was to meet this deadline. Waiting for the community to produce a base reuse plan would have been detrimental to the

[127] Cavanaugh, 16.
[128] Ibid., 13.

Army's timeline for the EIS submission. Additionally, while the Army Corps of Engineers included several options for varying levels of development on Fort Ord in their plan, the option they promoted was one of low-density development. The Army assumed that higher-density development would mean they would have to pay higher costs in time and resources for environmental restoration.

Thus, each stakeholder pursued its self-interests and made little or no attempt to identify collective interests among the Army Corps of Engineers and FORG. Each struggled to define the planning process in a way that supported its own interests. There was no attempt at dialogue. Despite regular meetings between FORG and the Army Corps of Engineers, the EIS and the Initial Base Reuse Plan were incompatible. Despite hundreds of meetings with members of the local community, the Task Force's Strategy Report did not match the "consensus" of the community.

c. Results

FORG and the Army developed their plans in separate, parallel paths, without regard for the each other or the interests of other stakeholders. The Army produced the EIS before FORG completed the initial base reuse plan, and the two plans ended up being incompatible. Eventually, the California State Senate stepped in to impose authority on the region by creating FORA. The competition between FORG, the Army Corps of Engineers, FOTF, and the local community extended the base reuse planning efforts by several years. FORA published its first attempt at a base reuse plan in 1994, but the FORA Board did not approve the final base reuse plan until 1997—three years *after* the base closed.

3. Collaborative

a. Indications

There are four indications of a collaborative strategy. First, a collaborative strategy includes many stakeholders. The strategy holds that all of the stakeholders have the opportunity to participate in the process, if they so choose. Second, a collaborative strategy seeks to empower the stakeholders by inviting them to join in the decision-making process. Third, a collaborative strategy requires dialogue among the stakeholders. To develop a common vision for the end state of the situation, the stakeholders must communicate their basic desires and fears about the outcome and their assumptions in making arguments for their case. Fourth, a collaborative strategy is integrated. This integration refers to the efficiency achieved through combined planning and minimization of redundant efforts. The stakeholders must come to the table ready to create an integrated plan that includes each of the reports required by various branches of government and regulatory agencies. If the community has to write a base reuse plan and the Army has to write an Environmental Impact Statement or a Habitat Management Plan, then they need to do it together so that both plans will work together in achieving a common goal.

b. Example

The SMART Team is an example of a collaborative strategy. The Team included representatives from multiple levels of the Army chain of command and both federal and state level environmental regulatory agencies. It also allowed for public participation in its meetings. The participants in the Team were empowered to make agreements on behalf of their organizations, and the positive attitude toward the Team

portrayed in our interviews reflected the quality of dialogue among the participants. By bringing the Army and the regulatory agency representatives in the same room, it has fostered integration of their planning efforts.

c. Results

Two factors limit the SMART Team's utility as an example of a collaborative strategy. First, while it was a step in the right direction to include all of the participants that they did, there are still more stakeholders that might disagree with agreements made by the Team. In other words, their initial level of inclusion was good, but not all the stakeholders were brought into the process. Additionally, a recent change in the location of the meetings may reduce public involvement in the meetings. The Team initially held its meetings in the Monterey area, and it allowed for public participation. However, the Team recently began rotating the location of its meetings to the headquarters of each of the participants, such as the EPA Region 9 offices in San Francisco and the DTSC offices in Sacramento, so it is not as convenient for the public to attend the meetings as it was when they were held in Monterey. Second, the objectives of the Team so far have been limited to unexploded ordinance issues. It is still a new effort, so it may be too soon to evaluate its outcome. On the surface, it seems that there has been dialogue at the meetings and it has fostered trust among the participants.

D. HYBRID STRATEGY

Given the less than successful results achieved with the three basic strategies, we therefore propose a new strategy for building removal at Fort Ord. It is uncertain, whether this strategy would work in the current situation after so many years of conflict,

stagnation, and failure. However, if the local community is to accept conveyance and reuse the land at the former Fort Ord, then something has to change. We believe this strategy could improve the chances of successful base reuse planning if it were incorporated at the beginning of the base closure process.

We propose a hybrid strategy that incorporates elements of two previous strategies: a collaborative body and an authority. Federal law requires the establishment of an authority to accept the conveyance of property from closed bases, but that does not negate the need to *involve* and *empower* stakeholders through *communication* to produce an *integrated* plan. In the hybrid strategy, the collaborative body would be comprised of all stakeholders, and the authority would be comprised of fewer stakeholders, but it would have the responsibility and the ability to implement decisions. This strategy would enable the authority to implement the desires of the community with the guidance and consent of the technical experts, because it would *include* all the stakeholders and *empower* them to make decisions. It would require clear *communication* through *dialogue* among the stakeholders to identify their core assumptions, establish a common foundation of knowledge, and build consensus toward a common vision. The strategy fosters *integrated* planning. Ideally, the collaborative body would reach consensus and agree on a course of action, and the authority would immediately implement that course of action. However, if the collaborative body were unable to reach consensus, the authority would then make a decision based upon the information and alternative proposals it received.

Recognized as the LRA to receive conveyance of land from the federal government, the authority has the legal power to make and implement decisions. This

provides incentive to the collaborative body to work together toward a common goal. If they fail to work together, then they know that the authority would make the decision for them, and the decision may or may not be in their best interests. The stakeholders are likely to respect and accept the decisions made by the authority, because they would have had input into the decision-making process.

1. Strategy Justification

a. Ability to Implement

The stakeholders would have the incentive to involve themselves in the process. It would be their choice and their responsibility to participate if they have interests in the issue. The stakeholders would have an incentive to make concessions and come to an agreement that satisfies all participants. Either they build consensus and make decisions for the authority to implement, or the authority will make the decision for them—albeit with the information provided by the collaborative body.

b. Optimal Level of Analysis

An authoritative strategy operates from the highest level of an organization. The top of the organization addresses problems, makes decisions, and informs the organization of the decisions. The majority of the organization has little or no say in the content or implementation of those decisions. In this case, it is possible—even likely—for the organization to falter or fail, because those executing the decisions are not included in the details of the problem solving and decision-making process.

A collaborative strategy works up from the lowest levels of an organization and thus ensures consideration of everyone's interests. Thus, the collaborative body may not have the ability to implement the agreed upon decisions.

Reaching some sort of consensus is one thing, having the ability to implement it is quite another.

A hybrid strategy works from both levels. A collaborative body meets and discusses all the issues important to the various stakeholders. The group passes the products of the collaboration to the authoritative body, which then can discuss the relevance and feasibility of that information to the overall problem and base their decisions on that information. The decisions will not necessarily be favorable to all stakeholders, but the authoritative body will at least be aware of the possible impact the decisions will have on behalf of the stakeholders.

c. Legitimacy

Another criterion for judging the suitability of the strategy is the degree to which it enhances stakeholder legitimacy. A strictly authoritative strategy does not require stakeholder approval, outside those few stakeholders invited to participate in the decision making body.[129] Accordingly, stakeholders outside the decision making body are unheard. The collaborative component of the hybrid strategy legitimizes stakeholders by including them in the process while the authoritative component demands that stakeholders accept the authority of the decision making body, if agreement is not forthcoming from the collaborative process.

d. Risks

An essential element of collaboration is "acknowledging the legitimate differences in how parties perceive the problem.... Depending on how one visualizes the

[129] Roberts, "Wicked Problems and Network Approaches to Resolution," 8.

risks involved, very different conceptions of the problem arise and different solution preferences emerge."[130] Stakeholders have a tendency to believe their perception of the problem is most important and to ignore or de-emphasize the perception of others. "For example, project proposers and government regulators typically adopt a very technical view of the issues. They use existing knowledge to predict the probability of certain hazards (based on statistical averages) and design solutions to prevent mishap based on those probabilities."[131] However, even experts disagree on those technical models, so stakeholders are able to find an "expert" to give credibility to their own ideas and beliefs. This enhances the need for dialogue among the participants to understand and legitimize each other's perception of risk.

"...Lay perception of environmental risks may be one of the most important potential impediments to successful conversion and realizing reuse goals requires the development of mechanisms that can secure local stakeholders' trust and consent."[132] In *Negotiating Hazardous Waste Facility Siting and Permitting Agreements*, M.L.P. Elliot "has classified lay publics according to three perceptions of risk: sponsors, guardians, and preservationists."[133] Sponsors believe utilizing current technology and enforcing regulations achieves minimal risk. Guardians "do not trust technology per se

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[130] Barbara Gray, *Collaborating: Finding Common Ground for Multiparty Problems*, (San Francisco: Jossey-Bass Publishers, 1989), 251.

[131] Gray, *Collaborating*, 251.

[132] Szasz and Meuser, 4 of 22.

[133] M.L.P. Elliott, "The Effect of Differing Assessments of Risk in Hazardous Waste Facility Siting Negotiations," in *Negotiating Hazardous Waste Facility Siting and Permitting Agreements,* ed. G. Bingham and T. Mealey (Washington, D.C.: Conservation Foundation, 1988), 9; quoted in Gray, *Collaborating*, 252.

or its operators,"[134] and prefer independent monitoring by the local community to manage the risk. Preservationists prefer the *status quo*. They would rather continue with the certainty of the present situation than deal with the uncertain outcome of a proposed project. The views of all three classes of stakeholders require dialogue to expose conflicting assumptions and stakeholders' perceptions. Otherwise, opposition is certain.

The hybrid strategy must satisfy all three classes of stakeholders. First, the sponsors need accurate technical information and the regulatory agencies can provide this. Second, by including the guardians (regulatory agencies) in a proactive rather than a reactive role, the decision and implementation of the plan is certain to meet existing regulations. Lastly, "for preservationists, the incentives to go forward must be increased."[135] By showing this group that it is better to go forward than allow the hazardous waste to remain in place, and that going forward is the safest option, they will tend to become ardent supporters of removing the waste as well.

e. Power

There are two aspects of power at work in our strategy, shared power and coercive power. While the authority requires the concentration of coercive power, collaboration requires the sharing of power. Ensuring all stakeholders are equal is vital to achieving collaboration. If some stakeholders perceive others as having greater power, and the greater influence that comes along with that, they will be dissatisfied with the process and will seek other avenues to achieve their goals. In a strictly collaborative

[134] Gray, 252.
[135] Ibid.

strategy, there is a dispersion of uncontested power.[136] Stakeholders should be encouraged to realize the collective power of the group. The self-regulating nature of a collaborative effort keeps power brokers and those who abuse their power in check. If the collaboration does not succeed in building consensus and making the decision, then the authority requires the concentration of coercive power to make and implement the decision unilaterally.

E. EVALUATION OF THE HYBRID STRATEGY

> The measures of success for solving a tame problem simply do not apply to wicked problem solving.
>
> - E. Jeffrey Conklin and William Weil

To define "success" in the implementation of the proposed strategy, one must identify evaluation criteria for the strategy's two objectives. The primary objective is to produce results. In the Fort Ord case, the primary objective is to reintegrate the land into the local community. The secondary objective is to foster a collaborative environment for the stakeholders to work together in solving future challenges in the community. In the next two sections, we identify criteria to evaluate the extent to which the two objectives of the strategy have been successfully accomplished.

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[136] Roberts, "Wicked Problems and Network Approaches to Resolution," 6-12.

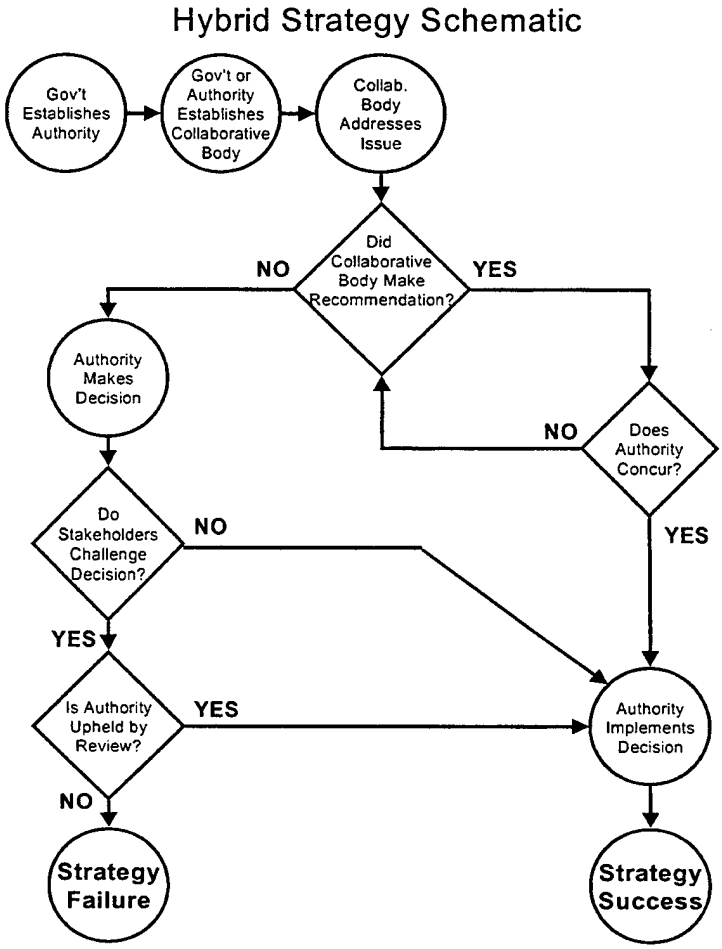

Figure 3. Simple Schematic Diagram of the Hybrid Strategy

1. Evaluation Criteria for Primary Objective

Figure 3 above is a graphical representation of the hybrid strategy. This is a simplified schematic and the feedback loops can complicate the process, but it gives a basic framework from which to develop evaluation criteria. It gives eight criteria on which to evaluate the primary objective.

a. Authority Established

The hybrid strategy uses a fallback authority to provide incentive for the stakeholders to collaborate, so a prerequisite for the stakeholders to participate is the

establishment of the authority. Some higher level of authority in the federal or state government must establish this authoritative entity, and the stakeholders must recognize the entity's coercive power to make and implement decisions if necessary.

b. Collaborative Body Established

The hybrid strategy uses a collaborative body to empower the stakeholders to make a decision for the good of the community. The convening authority for the collaborative body must identify the stakeholders and invite them to participate. The collaborative body must be allocated the resources necessary for meeting and administration.

c. Collaborative Body Addresses Issues

The collaborative body must engage in dialogue to generate a common understanding of the issue's underlying assumptions and address each of the four characteristics of the wicked problem. It must search for a common definition of the problem. It must identify the stakeholders and their interests in the outcome. It must identify the constraints that affect the problem and evaluate potential solutions to the problem based on the common definition, the understanding of each other's interests, and the constraints affecting the problem.

d. The Collaborative Body Makes a Recommendation

Ideally, if the collaborative body meets the criteria set forth in the previous paragraph and makes a recommendation on a course of action that is acceptable to all of the participants, and if the authority concurs with it, then the authority only has to implement the recommendation. If the collaborative body cannot reach a consensus on

a recommendation, then it falls upon the authority to address the issue and make a decision.

e. Does the Authority Concur with the Recommendation?

The authority must concur with the recommendation it receives from the collaborative body. If the recommendation is acceptable, then the authority will implement it. If, however, the authority rejects the recommendation, then the collaborative body will readdress it with the feedback provided by the authority.

f. The Authority Makes a Decision

Although a much smaller group of stakeholders comprises the authority compared to the collaborative body, at least if the decision falls to the authority, then it would have the information, alternatives, and reasoning provided by the collaborative body. With this input from the larger group of stakeholders, the authority would review each issue and make an informed decision.

g. Do Stakeholders Challenge the Authority's Decision?

If the stakeholders do not challenge the authority's decision, then implementation would proceed. If the stakeholders challenge the authority's decision, then the decision is reviewed.

h. Is the Authority's Decision Upheld by Review?

Upon review, the decision can either be upheld or overturned. If the decision is upheld, then the authority has been maintained and the decision is implemented. If overturned, then the implementation of the strategy has failed.

2. Evaluation Criteria for Secondary Objective

Gray (2000) provided five criteria to evaluation of collaboration.[137] The evaluation criteria for the primary objective listed above address Gray's first criterion of "problem solution." To evaluate the second objective of the hybrid strategy, we use the remaining four of lenses and add a fifth lens of our own.

a. Social Capital Formation

The criterion of social capital formation relates to the desired output of increased trust amongst the stakeholders, and it must rely on an assessment of each stakeholder's opinions of the other stakeholders. One desired output of the strategy is to increase the level of trust and honesty amongst the stakeholders. Lawsuits indicate distrust amongst the stakeholders.

b. Shared Meaning

For collaboration to be successful, stakeholders must forge a common definition of the problem, and agree on the causes of the problem and its potential solution.

c. Network Structure

The criterion of network structure seeks to evaluate the density of interactions among the stakeholders. If the collaboration succeeds, the density of interactions among the stakeholders should increase. The density of interactions should also show different patterns over time as the collaborative body enters into different

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[137] Barbara Gray, "Assessing Inter-Organizational Collaboration: Multiple Conceptions and Multiple Methods," paper prepared for Perspectives on Collaboration, 28 October 1998. We derived the five criteria of evaluation from Gray's five conceptual perspectives on assessment.

phases of the collaborative process. For example, the enthusiasm about a collaborative event might prompt a sudden increase in the number of interactions or the interactions might dwindle as conflict and disruption occur.

d. Power Distribution

Power distribution examines the extent to which power is centralized in the hands of a few or distributed evenly among the participating stakeholders. The intent of the hybrid strategy is to equalize the stakeholders' power throughout the collaborative process. Only if the authority were called upon to break a stalemate, would the centralized power be activated.

e. Sustainability

Sustainability refers to the ability of the stakeholders to continue the collaborative spirit created in this problem-solving process and to transfer it to cope with other problems. In the building removal example, if our strategy achieved sustainable results, then the stakeholders should be able to continue their collaborative effort in addressing the other subsets of the Fort Ord reuse wicked problem. Each of the previous four lenses—social capital generation, shared meaning, network structure, and power distribution—all contribute to the sustainability of the strategy, because they all address the strategy's second objective of fostering a collaborative environment.

F. CONCLUSION

In this chapter, we focused on coping strategies and illustrated their applicability in the Fort Ord case. We began by examining previous reuse planning efforts and their consequences. Given the less than successful results of previous attempts, we then

identified a new strategy for wicked base closure problems and defined criteria to evaluate it.

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V. CONCLUSION

In solving a wicked problem, you have to stop at some point, and declare that "this is the problem we've addressed, and this is our solution."

E. Jeffrey Conklin and William Weil

A. RESEARCH QUESTIONS

This thesis addressed the research questions: What are wicked problems and how do we cope with them? To illustrate its military applicability, we examined the following subsidiary research questions: Is building removal at the former Fort Ord a wicked problem? If so, what strategy should the Army employ to deal with it?

B. ANSWERS

A wicked problem has four characteristics. There is no definitive statement of the problem. Instead, many diverse and conflicting stakeholders force changing constraints in the midst of trying to solve the problems. Unfortunately, they are unable to agree on a problem definition or its solution. Once engaged in a wicked problem, stakeholders must develop and implement coping strategies. Three strategies drawn from the literature and one introduced by this research have been identified. When applying this framework to building removal at the former Fort Ord, we find that it meets all the characteristics that define a wicked problem. In addition, we found that stakeholders have attempted to use authoritative, competitive, and collaborative coping strategies, although none of these strategies has proven successful thus far. We propose a hybrid strategy that combines aspects of the authoritative and collaborative strategies. We believe that a hybrid strategy incorporated at the beginning of the BRAC process would have a higher probability of success in the future. However, it is uncertain if a hybrid strategy could overcome the

distrust and animosity that has developed between the stakeholders at Fort Ord after years of unproductive wrangling.

C. LIMITATIONS AND RECOMMENDATIONS

This case is a very similar to the situation on approximately 20 other recently closed bases in California and an additional 150 bases across the country. Many of those bases also have World War II-vintage wood buildings containing asbestos and LBP.[138] However, this thesis only examined one base, so without further research our conclusions should be regarded as tentative. Our time was limited and further research is warranted to evaluate the applicability of our conclusions to other base closures.

D. POLICY IMPLICATIONS

In today's climate of fiscal restraint, the U.S. needs to save money wherever and however it can. The primary purpose of base closure is to reduce the amount of money spent on excess infrastructure in order to fund requirements that are more critical, such as military readiness and modernization. Spending money on closing bases does nothing to directly improve or maintain our warfighting capability. On 27 Feb 2001, Senator Carl Levin (D-MI) stated, "Every year that we delay another base closure round, we waste about $1.5 billion in annual savings that we can never recoup. And every dollar we waste

[138] Another base in California, Camp Roberts, has tried to implement large-scale building removal that is sensitive to environmental needs and in the process created a huge pile of hazardous waste. That hazardous waste still requires removal and it is unknown how or when that will occur. Additionally, hazardous waste landfills are filling up and are becoming harder to site.

on bases we do not need is a dollar we cannot spend on things we do need."[139] Senator John McCain (R-AZ) recently sponsored new legislation to conduct two more rounds of BRAC in 2003 and 2005. If the Department of Defense is to realize the financial benefits it seeks from future rounds of base closure, then it must incorporate lessons from previous base closures into the legislation and implementation of the BRAC process.

> The Fort Ord experience in preparation and implementation of its [Base Reuse Plan] has firmly established that cooperation, good will, and mutual respect between local civilian and on-base military leaders which *has occurred* at Fort Ord is essential. Without these *collaborative* efforts, the transition from military to civilian use *can be* long, difficult and counterproductive.[140]

While Fort Ord was declared the National Model for base closure in 1993, this thesis has shown that the transition *has been* "long, difficult, and counterproductive" with no end in sight. Environmental restoration of Fort Ord and turnover of the land to the local community has *not* set an example for others to follow. If the closure of Fort Ord is to be the example for base closings throughout the country, then it is necessary to accomplish two objectives:

- Develop a process to make and successfully implement decisions in the wicked problem environment of base closure.
- Incorporate the lessons learned at the outset for future base closures to achieve the most timely and cost-effective results.

As in any other arena of planning or policy debate, wicked problems confound base

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[139] Keith J. Costa, "Warner: 'Comprehensive Evaluation' Needed Before New Base Closures," *Inside The Pentagon*, 22 March 2001, 2.

[140] Fort Ord Reuse Authority, *Fort Ord Base Reuse Plan* (Marina: Fort Ord Reuse Authority, 12 December 1994), 3. Emphasis added.

closures. If we are to accomplish these two objectives, we must develop the processes and administrative skills necessary to cope with such problems. These administrative skills would include such things as problem solving under conditions of complexity, interdependence, and "anarchy" and collaborative leadership that invites the participation of community stakeholders.

The military is like insurance; nobody wants to spend the money for the coverage, but everyone must. How much insurance is enough? Funds are limited, and defense has to compete for funding with areas such as agriculture and education. To ensure that funding goes to preserving and improving our warfighting capability in areas such as manpower, research and development, and procurement, base closure needs to be as efficient and effective as possible. Money spent on closing bases does not buy that needed insurance. A strong and ready military secures this nation and base closure is necessary to maintain that security. Thus, base closure activities subserve the greater security issues faced by this country and given their status as wicked problems deserve more attention from the scientific and academic communities.

APPENDIX

Stakeholder Name: Interviewed by:

Interview Date: Location:

Stakeholder Type:

- ☐ Regulatory
- ☐ Municipal / Executive Government
- ☐ Legislative / Political
- ☐ Public Interest
- ☐ Environmentalist
- ☐ Other: _____

Categorize the Stakeholder's Interests:

- ☐ Political
- ☐ Financial / Economic
- ☐ Public health and safety
- ☐ Technical
- ☐ Environmental
- ☐ Other: _____

What is the Stakeholder's nature?

- ☐ Cooperative
- ☐ Compliant
- ☐ Competitive
- ☐ Authoritative
- ☐ Neutral / Don't Care
- ☐ Other: _____

What is the Stakeholder's status?

- ☐ Active - Positive
- ☐ Active - Negative
- ☐ Passive – Wait and See
- ☐ Other: _____

What are the stakeholder's interests?

Describe how the Stakeholder interacts with FORA:

What are the Stakeholder's sources of power?

Sketch an administrative organizational chart showing for whom the Stakeholder works, who works for the stakeholder, and where FORA fits into the chart.

Sketch a financial or resource flow-chart for the stakeholder.

Did the interview give you any ideas for common ground with other Stakeholders? (Follow-up by informing Stan of these ideas and asking the Stakeholder for feedback)

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