



**Calhoun: The NPS Institutional Archive**  
**DSpace Repository**

---

Reports and Technical Reports

All Technical Reports Collection

---

2006

The use of alternative dispute resolution  
techniques in United States Air Force  
environmental conflicts

Pigeon, Nanci R.; Hudgens, Bryan J.; England, Ellen C.;  
Mable, Leon A.

Monterey, California. Naval Postgraduate School

---

<https://hdl.handle.net/10945/401>

---

*Downloaded from NPS Archive: Calhoun*



Calhoun is the Naval Postgraduate School's public access digital repository for research materials and institutional publications created by the NPS community. Calhoun is named for Professor of Mathematics Guy K. Calhoun, NPS's first appointed -- and published -- scholarly author.

**Dudley Knox Library / Naval Postgraduate School**  
**411 Dyer Road / 1 University Circle**  
**Monterey, California USA 93943**

<http://www.nps.edu/library>

NPS-AM-06-068



# EXCERPT FROM THE PROCEEDINGS

---

OF THE  
THIRD ANNUAL ACQUISITION  
RESEARCH SYMPOSIUM

**THE USE OF ALTERNATIVE DISPUTE RESOLUTION TECHNIQUES  
IN UNITED STATES AIR FORCE ENVIRONMENTAL CONFLICTS**

**Published: 30 April 2006**

**by**

**SMSgt Nanci R. Pigeon, USAF, Lt Col Bryan J. Hudgens, USAF, Lt  
Col Ellen C. England, USAF, Lt Col Leon A. Mable, USAF (ret.),**

**3<sup>rd</sup> Annual Acquisition Research Symposium  
of the Naval Postgraduate School:**

**Acquisition Research:  
Creating Synergy for Informed Change**

**May 17-18, 2006**

Approved for public release, distribution unlimited.

Prepared for: Naval Postgraduate School, Monterey, California 93943



ACQUISITION RESEARCH PROGRAM  
GRADUATE SCHOOL OF BUSINESS & PUBLIC POLICY  
NAVAL POSTGRADUATE SCHOOL

The research presented at the symposium was supported by the Acquisition Chair of the Graduate School of Business & Public Policy at the Naval Postgraduate School.

**To request Defense Acquisition Research or to become a research sponsor, please contact:**

NPS Acquisition Research Program  
Attn: James B. Greene, RADM, USN, (Ret)  
Acquisition Chair  
Graduate School of Business and Public Policy  
Naval Postgraduate School  
555 Dyer Road, Room 332  
Monterey, CA 93943-5103  
Tel: (831) 656-2092  
Fax: (831) 656-2253  
E-mail: [jbgreene@nps.edu](mailto:jbgreene@nps.edu)

Copies of the Acquisition Sponsored Research Reports may be printed from our website [www.acquisitionresearch.org](http://www.acquisitionresearch.org)

Conference Website:  
[www.researchsymposium.org](http://www.researchsymposium.org)



ACQUISITION RESEARCH PROGRAM  
GRADUATE SCHOOL OF BUSINESS & PUBLIC POLICY  
NAVAL POSTGRADUATE SCHOOL

## Proceedings of the Annual Acquisition Research Program

The following article is taken as an excerpt from the proceedings of the annual Acquisition Research Program. This annual event showcases the research projects funded through the Acquisition Research Program at the Graduate School of Business and Public Policy at the Naval Postgraduate School. Featuring keynote speakers, plenary panels, multiple panel sessions, a student research poster show and social events, the Annual Acquisition Research Symposium offers a candid environment where high-ranking Department of Defense (DoD) officials, industry officials, accomplished faculty and military students are encouraged to collaborate on finding applicable solutions to the challenges facing acquisition policies and processes within the DoD today. By jointly and publicly questioning the norms of industry and academia, the resulting research benefits from myriad perspectives and collaborations which can identify better solutions and practices in acquisition, contract, financial, logistics and program management.

For further information regarding the Acquisition Research Program, electronic copies of additional research, or to learn more about becoming a sponsor, please visit our program website at:

[www.acquisitionresearch.org](http://www.acquisitionresearch.org)

For further information on or to register for the next Acquisition Research Symposium during the third week of May, please visit our conference website at:

[www.researchsymposium.org](http://www.researchsymposium.org)



THIS PAGE INTENTIONALLY LEFT BLANK



# The Use of Alternative Dispute Resolution Techniques in United States Air Force Environmental Conflicts

---

**Presenter: SMSgt Nanci R. Pigeon, USAF, 609 Air Support Squadron/A4/LGC**

**Presenter: Lt Col Bryan J. Hudgens, USAF, Naval Postgraduate School**

**Presenter: Lt Col Ellen C. England, USAF, Air Force Institute of Technology**

**Presenter: Lt Col Leon A. Mable, USAF (ret.), Air Force Institute of Technology**

---

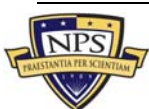
## Abstract

The use of alternative dispute resolution (ADR) in government disputes is mandated by the Administrative Dispute Resolution Act of 1990. The use of ADR to resolve disputes typically provides a quick and inexpensive resolution when compared to litigation. The Air Force has a very strong ADR program to resolve acquisition and workplace disputes; however, the varied conditions and situations of environmental issues have prevented the Air Force from achieving similar success in this area. This research analyzes the experiences of twenty-six Environmental Conflict Resolution practitioners who have resolved environmental disputes using ADR techniques. Content analysis and pattern matching were used to provide insight into the current use of ADR techniques in military environmental disputes. The insight gained from this research provides the Air Force with information to better understand the current practices in environmental ADR and also provides areas for further research.

## Introduction

Alternative Dispute Resolution (ADR) is an umbrella term that refers to means of settling disputes other than through court adjudication (Nolan-Haley, 1992:1), for example, though negotiation, mediation, and arbitration. Because ADR promises several significant benefits, the Federal government mandated the use of ADR in any case in which the government was a party through the Administrative Dispute Resolution Act (ADRA) of 1990 (amended in 1996). Consistent with ADRA, Air Force policy is to use Alternative Dispute Resolution (ADR) to the maximum extent practicable to resolve disputes at the earliest stage and at the lowest organizational level possible (AFPD 51-12, 2003:2). Within the Air Force, the Deputy General Counsel for Dispute Resolution (SAF/GCD) has overall responsibility for the Air Force Dispute Resolution Program, which has been recognized especially for its effectiveness at resolving acquisition and workforce disputes (Air Force ADR Program Office 2004).

Federal workplace disputes, such as equal opportunity complaints, are governed by a formal dispute resolution process (Equal Employment Opportunity Commission, 2003). Similarly, acquisition dispute resolution is governed by a formal process spelled out by the Federal Acquisition Regulation (FAR). Unfortunately, circumstances surrounding environmental issues typically are not so clear cut as those in workplace and acquisition disputes. Environmental disputes can involve issues such as land use, water resources, natural resource management and air quality. The parties involved in environmental disputes can range from one party to hundreds of parties and fall into several categories, for example, federal government, state government, local government, citizen groups, environmental groups, and



various other private interest groups. Because of the complexity of environmental disputes, the Air Force has made much less progress applying ADR to environmental disputes than it has to workplace and acquisition disputes (Southern, 2004:1).

Another barrier to successful ADR implementation in environmental issues is that the Air Force is not always able to retain oversight of the process. For example, the Air Force faces challenges of environmental cleanup and remediation, which are covered by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 and typically are turned over to the district courts. From that point, the process is controlled by the Department of Justice (DOJ). The district court must approve the consent decree executed by the parties and the DOJ must approve the final results on behalf of the United States. The ADR process can be used to negotiate the consent decree but it requires up front coordination with the DOJ (O'Sullivan, 2004:1). The ability to apply the ADR process in a timely manner—before the dispute is referred to DOJ under CERCLA—is the biggest problem the Air Force faces in the environmental arena (Southern, 2004:1).

### **The Research Problem**

The Air Force has enjoyed significant success employing ADR to resolve workplace and acquisition disputes. Now, it wants to extend its very successful use of ADR into the environmental arena. Thus, the primary purpose of this research is to assess usage of ADR in the environmental arena and offer recommendations to the United States Air Force ADR Program Office on how to participate more effectively in the process. In making this assessment, the study analyzes ADR techniques and processes, and both the antecedents of, and barriers to, successful ADR usage. The data analyzed comes from environmental conflict resolution practitioners who have a wide range of experience in all facets of environmental dispute resolution. By investigating the use of ADR techniques in environmental disputes generally, and within the Department of Defense specifically, this study seeks to better understand how the Air Force can apply more effectively its successful ADR capability to environmental disputes.

### Literature Review

Dispute resolution is the act of settling disagreements between parties through means other than litigation (Nolan-Haley, 1992:1). Dispute resolution can trace its origins to 1768, when arbitration was used to settle business disputes among tradesmen (Singer, 1994:5). Current dispute resolution practices have grown out of the 1976 Roscoe Pond conference convened by Warren E. Burger, then Chief Justice of the Supreme Court (Singer, 1994:7; Nolan-Haley, 1992:5). Burger was concerned that "...we may well be on our way to a society overrun by hordes of lawyers, hungry as locusts, and brigades of judges in numbers never before contemplated," and that "...we have reached the point where our systems of justice—both state and federal—may literally break down before the end of this century" (Burger, 1982:274).

Expanding on Nolan-Haley's (1992) definition, the term alternative dispute resolution or ADR has been assigned to the field of practice where parties in a dispute use various means other than resorting to violence, strikes, litigation, or doing nothing to resolve conflict (Singer, 1994:15). ADR is popular because it saves time and money compared to the normal legal process (O'Leary and Husar, 2002:1269). Today, ADR is used in every area imaginable. Businesses are including provisions in their contracts with customers to resolve disputes by

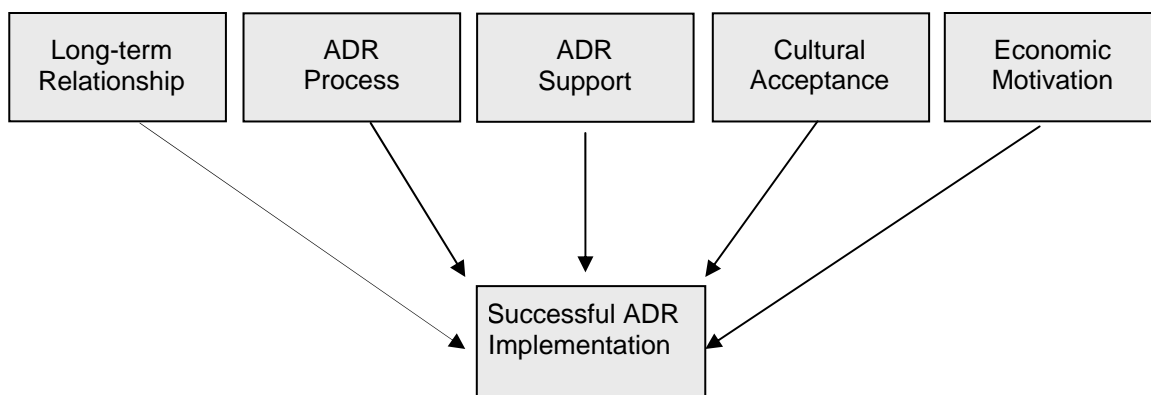


mediation and/or arbitration; workplace disputes solved through ADR encompass equal employment issues, personal conflicts, or labor disputes; family courts are referring more and more cases of family disputes (divorce/child support) to mediation; some local courts require mediation prior to trial in small claims disputes; community boards have been created to help mediate landlord-tenant disputes, neighborhood conflicts, and family rifts; even some high schools have trained students to mediate disputes between other students, between teachers and students, and even between parents and students (Singer, 1994:8-10).

An additional catalyst of current ADR usage was the passage of the 1990 Administrative Dispute Resolution Act (ADRA), which was amended in 1996. This Act required all federal agencies to develop policies on the use of ADR, appoint an ADR specialist, and provide appropriate employees with training in ADR (5 USC § 571, 1990). Along with ADRA came an executive order mandating federal agencies that litigate use ADR techniques in appropriate cases (Singer, 1994:10). Also in 1990, the Civil Justice Reform Act (CJRA) was passed requiring all federal district courts to create advisory committees to consider ways of reducing cost and delay of civil litigation (28 USC § 471, 1990). The CJRA directed each committee to use ADR to reduce cost and delay (Singer, 1994:10).

The true spirit of ADR is face-to-face meetings of all stakeholders in a dispute to reach a consensus on a solution (O’Leary, Durant, Fiorino, and Weiland, 1999:3). O’Leary et al. (1999) suggested five principle elements that characterize ADR methods (except binding arbitration): (1) the parties agree to participate in the process; (2) the parties or their representatives directly participate; (3) a third-party neutral helps the parties reach agreement but has no authority to impose a solution; (4) the parties must be able to agree on the outcome; and (5) any participant may withdraw and seek a resolution elsewhere.

Scholars also have attempted to understand characteristics of successful ADR. Hopper (1996) proposed five antecedents for the successful use of ADR: 1) long-term relationships, 2) existence of a formal ADR process, 3) top management support, 4) acceptance of ADR by all parties as a valid process, and 5) greater economic ramifications (see Figure 1).



**Figure 1. Hopper’s Antecedent Model**

### **ADR Techniques**

Traditional litigation can be a confrontational situation resulting in winner-take-all scenarios; ADR, on the other hand, tries to downplay confrontation and develop a win-win





environment where both parties feel like they have won some concessions (O’Leary and Husar, 2002:1269). Generally, the ADR process is voluntary and is initiated by the parties involved to obtain a mutually acceptable resolution (Bingham, 1986:5). In fact, the most successful ADR outcomes are between parties that have ongoing relationships (Nolan-Haley, 1992:3). In most instances, the use of ADR to resolve an issue saves time and money over litigation and also tends to produce a better outcome that all parties can live with (Nolan-Haley, 1992:4; Singer, 1994:13).

Singer (1994:16) provides one classification of ADR techniques and how each one fits into the ADR process (see figure 2). The further the parties move to the right on the spectrum, the less control the parties will have and the higher the cost will be (Singer, 1994:15).

Unassisted Negotiation	Assisted Negotiation		Adjudication
	<b>Mediation</b>	<b>Outcome Prediction</b>	
	Conciliation	Neutral Evaluation Fact-Finding	Arbitration
	Facilitation	Ombuds and Complaint Programs Mini-trial	Agency
	Regulatory-Negotiation	Summary Jury Trial Nonbinding-Arbitration Mediation-Arbitration	Court

**Figure 2. The ADR Spectrum**

Unassisted negotiation, in which the parties seek to resolve differences without outside help, is the basic form of dispute resolution and is foundational to all other forms of dispute resolution (Nolan-Haley, 1992:11). With this exception the ADR process involves third-party neutrals to help the parties involved in a dispute come to a resolution (Nolan-Haley, 1992:11).

Assisted negotiation is divided into two general categories of techniques: mediation and outcome prediction. In mediation the parties are assisted by a third party neutral to come to an agreement. The mediator facilitates the parties’ interaction (O’Leary, 2003:11), but lacks decision-making authority (Equal Employment Opportunity Commission, 2002). Mediation approaches can be distinguished by whether the mediator becomes involved in the substance of the dispute (mediation) or focuses primarily on facilitating interaction (facilitation) and/or building relationships (conciliation) (Equal Employment Opportunity Commission, 2002; O’Leary, 2003:11-12; Singer, 1994:24). The special case of regulatory negotiation involves mediating proposed regulatory verbiage before it is published (O’Leary, 2003:12).

Outcome prediction occurs when the parties have a third party predict the most likely outcome if the case were to be adjudicated. In most cases this prediction motivates the parties to reach a settlement. Various approaches to outcome prediction have been identified. Neutral evaluation and fact-finding emphasize documenting the facts and issues, and perhaps issuing a non-binding opinion as to how the dispute should be resolved (O’Leary, 2003:14-15; Singer, 1994:25). Ombuds programs extend fact-finding by attempting to mediate the dispute once the facts are determined (Nolan-Haley, 1992:204). Mini-trials and summary jury trials are



both quasi-judicial processes that mirror what may happen if the cases were to go to trial. The parties present cases either to executives from their organizations or to a mock-jury, who make recommendations for resolving the dispute. The parties are not bound by these recommendations, which are intended to facilitate resolution through further negotiation (O'Leary, 2003:14).

Finally, adjudication occurs when the parties cannot come to an agreement and a third party determines the outcome. Arbitration is a more formalized ADR technique. In the arbitration process the parties present their case to a neutral third party who then renders a decision. Arbitration can be either binding or non-binding. If it is binding then the decision of the arbitrator is final. If it is non-binding then the parties have the option to seek other remedies (Nolan-Haley, 1992:124; Singer, 1994:15). Binding arbitration is not used in federal cases; this is because the decision would delegate legislative power to the arbitrator who is not accountable to the public for the decision (Nolan-Haley, 1992:126). A hybrid form of dispute resolution, mediation-arbitration, is used when the parties want a binding decision if they cannot reach an agreement (Singer, 1994:27). The mediator works with the parties to reach an agreement but if no agreement can be reached then the mediator typically becomes the arbitrator and decides the outcome (Singer, 1994:27, Nolan-Haley, 1992:201).

## **Environmental Conflict Resolution**

Environmental conflict resolution (ECR) is the use of ADR techniques to resolve environmental disputes (O'Leary, 2003:5-6). The first documented use of ECR in the U.S. was in 1973, when the governor of Washington invited mediators to help settle a long-standing dispute over a flood control dam on the Snoqualmie River (Bingham, 1986:1). Since that time, ECR has evolved along-side other ADR processes like workplace and acquisition dispute resolution.

ECR has reached its current popularity largely due to the Environmental Protection Agency (EPA), which in 1981 became one of the first federal agencies to implement ADR (Bourdeaux, O'Leary, Thornburgh, 2001:176). In 1987, the EPA issued guidelines and established a review of all enforcement actions for resolution by ADR (Bourdeaux et al., 2001:176). Today, the EPA is a leader among other federal agencies in the application of ADR to a wide range of disputes (Bourdeaux et al., 2001:176).

The EPA (2000) listed its most-used ADR techniques as facilitation, convening, mediation, consensus-building, and ombudsmen. Convening (or conflict assessment) uses a third party to determine the cause of the dispute and identify the parties that would be affected and help those parties determine the best way to resolve the issue. Consensus-building is when people agree to work together, informally, to resolve a problem (EPA, 2000:2). O'Leary and Husan (2002) found that mediation was by far the most frequently used technique among environmental attorneys, with 82.6% of respondents in the study reporting having used mediation; negotiation followed with 67.9% and facilitation rounded out the top three with 25.7% of respondents reporting experience using the technique in environmental disputes.

Bingham (1986) first classified typical ECR cases into six broad categories: land use, natural resource management and use of public lands, water resources, energy, air quality, and toxics. O'Leary and Husan (2002:1271) offer a different list that provides a more detailed list of possible dispute cases. They found that ECR had been used most frequently in hazardous waste cleanup (53.2%), which is perhaps not surprising since the Superfund law allocates funds



specifically for ADR use. Use of ECR varied among the remaining categories: quality (36.7%), solid waste (22%), land use (18.3%), water quantity (14.7%), air pollution (13.8%), siting disputes (11.9%), oil and gas exploration (10.1%), endangered species (10.1%), and pesticides (3.7%). (Responses sum to greater than 100% because respondents in this study were allowed to choose all types of ECR in which they had participated.)

Given the broad list of potentially contentious areas, it is perhaps not surprising that environmental disputes frequently have multiple stakeholders, including federal, state, and local governments; citizen groups; environmental groups; private interest groups; any potentially responsible parties; and the facilitator/mediator. This broad range, and sheer number, of interested parties increases the complexity of ECR. (Andrew 2000).

## Methodology

The primary purpose of this research was to assess usage of ADR in the environmental arena and offer recommendations to the United States Air Force ADR Program Office on how to participate more effectively in the process. This study analyzes ADR techniques and processes, and both the antecedents of and barriers to, successful ADR usage. The data analyzed comes from environmental conflict resolution practitioners who have a wide range of experience in all facets of environmental dispute resolution.

### Qualitative Research

Research on environmental ADR exists. However, this specific research focuses on the use of ADR in military environmental disputes, an area underrepresented in the literature. Accordingly, a qualitative research approach was chosen to collect open-ended data with the goal of determining themes in the data (Creswell, 1994:7). The data gathered from this research will be used to build theory on this topic, and the results will be synthesized into conclusions and recommendations for improving the use of ADR in military environmental disputes.

### Participant Selection

The participants for the study came primarily from two sources. The first source was the National Roster of Environmental Dispute Resolution and Consensus Building Professionals ("Roster of ECR Practitioners"), which is managed by an independent, impartial federal program established by Congress to assist parties in resolving environmental, natural resource and public lands disputes. The roster was developed with the support of the EPA (Institute for Environmental Conflict Resolution, 2004). A search of the roster was conducted using military/base experience as the searchable term. This search yielded sixty-nine practitioners. Each of the sixty-nine practitioners were contacted and asked if they would consent to be interviewed. One of the practitioners supplied two other names, bringing the total of practitioners contacted to seventy-one. Of the seventy-one, forty-one either declined or did not respond to the request; thirty initially agreed to be interviewed. Of these thirty, twenty-six practitioners (36.6 percent) were actually interviewed; the other four either did not answer the second invitation to be interviewed or were too busy to be interviewed during the interview time period.

The practitioners interviewed represent a wide-selection of the practitioner populace, which provides some confidence to suggest the results may generalize. A demographic profile of the respondents was developed from data from the IECR database. Eighteen (69%) of the 26 respondents were male. All respondents had Bachelor degrees; 19 had a Master's degree;



seven held the Jurist Doctorate (JD) and five held the Doctorate of Philosophy (PhD). Position titles varied: eleven (42%) respondents were president or owner of their company, and the rest held positions such as director, mediator/senior mediator, or partner/senior partner. Eight (31%) of the respondents worked for firms specializing in ADR, seven (27%) worked for a nonprofit organization, five (19%) worked for an environmental consulting firm; and two (8%) worked for a governmental agency; the remainder worked in law firms, consulting firms and similar organizations. The respondents offered services in consensus-building (100%), mediation (96%), conflict assessment (96%), facilitation (92%), regulatory negotiation (81%), dispute system design (62%) and neutral evaluation and fact-finding (50%); a smaller percentage (35%) worked on Superfund Allocation issues. Respondents were located across the country, with a few areas of geographic concentration including Colorado (six respondents), California (four), and Virginia/DC (five). Fifty percent or more of the respondents reported having worked on disputes in essentially all regions of the United States (north central states were slightly lower at 42%). Respondents also reported experience working in 38 foreign countries spread across all six major continents. Two-thirds of respondents reported working at least twenty-five cases in the previous ten years, and 23 percent had worked at least fifty cases. The typical respondent spent less than one-hundred hours (62%) on a case; twenty-three percent reported spending between one and two hundred hours, while a few respondents reported spending more time and two respondents did not report an average number of hours.

During the course of the interviews several practitioners mentioned that they had worked with Restoration Advisory Boards through the Installation Restoration Program. The Installation Restoration Program (IRP) was established by the Department of Defense in 1975 to provide guidance and funding for the investigation and remediation of hazardous waste sites caused by historical disposal activities at military installations. (DERP, 2004). The Restoration Advisory Board (RAB) provides a forum for communication between community members, the military organization, and regulatory agencies.

The main purpose of the RAB is to represent the interests of the general public and serve as a community point of contact. The boards are made up of local community members, environmental regulators, local government officials, military representatives and other interested parties. The RAB encourages community participation in the cleanup process and provides community members and other stakeholders the opportunity to have meaningful dialogue with and provide advice and recommendations to the military officials (DERP, 2004). Many bases use these programs to determine what environmental issues need to be addressed and then initiate discussions in an open forum with participants from the local community. The public is kept informed of what environmental issues the bases have and can comment on the procedures the base is using to clean up the contamination. It is a consensus building, public participation tool that has been put in place by the Department of Defense.

Base Realignment and Closure (BRAC) bases have similar programs set up to gain community involvement in reaching agreements on clean-up and other base closure issues. The terms used for the teams in the BRAC cases are BRAC Cleanup Teams (BCT) and Local Redevelopment Authorities (LRA). One recent success story of an Air Force BRAC base is Kelly AFB in San Antonio, Texas. Kelly was recognized by the National Association of Environmental Professionals with the National Environmental Excellence Award for Public Participation. "Kelly Air Force Base reached award-winning levels of involvement through exceptional public outreach, collaboration with local organizations, and strong partnership with the community (DERP, 2004:3)." Kelly's outstanding efforts with the community has put it on target for



achieving its last remedy one year in advance of the BRAC deadline, and 11 years ahead of the Air Force goal (DERP, 2004;1)

### **Data Collection and Analysis**

The data was collected primarily using a semi-structured interview format. Seven investigative questions were developed to address the primary research problem of understanding current environmental ADR usage and identifying antecedents of and barriers to successful AF application of ADR to environmental cases. Each investigative question was decomposed into several interview questions. Twenty-two interviews were conducted over the phone, and because of practitioner preference, four were conducted by email. The interviews were taped and transcribed, and the transcribed interview was sent to each interviewee for review and concurrence.

For the Defense Environmental Restoration Program contacts, ten Air Force Base environmental points of contact were sent a questionnaire via e-mail. The ten installations were chosen because the Defense Environmental Restoration Program website described them as having outstanding environmental programs. The questionnaire was similar to the one the practitioners answered, but questions were adapted where needed to target installations rather than individuals (i.e., practitioners). E-mail was chosen as the primary means of contact because the research team only learned of this program late in the study, and email provided a way to reach many potential respondents quickly. Two installations answered the questionnaire, three others indicated they did not have enough experience to answer and five others either did not respond or the point of contacts e-mail was no longer active.

The data collected from both sources was scrutinized, coded, and analyzed using categorization and frequency counts for patterns, themes, and biases (Creswell 1994; Leedy and Ormrod 2001). Additional data was obtained from the literature on environmental issues; this additional data was compared to the primary data, a method known as triangulation, which enhances validity by increasing the probability that the researchers conclusions are the most probable based on the data (Leedy and Ormrod, 2001).

## **Case Study Analysis, Results, and Discussion**

This portion of the paper presents a summary of the analysis and results, and then draws conclusions based on those results. For each interview question, data was collected and analyzed as described in the methodology.

### **Investigative Question 1: Typical environmental disputes**

The first area of interest in the study was to understand “typical” environmental disputes. To that end, the first investigative question asked, “What are typical environmental disputes?” Three interview questions were asked in order to answer this question.

- *Question 1a: What types of environmental issues (i.e. water quality, solid waste, land use, etc.) have you consulted on in the past 5 years?*



The practitioners reported having consulted on twenty-nine different types of environmental issues. The top six issues, *Land Use*, *Superfund*, *Water Quality*, *Solid Waste*, *Water Quantity*, and *Clean Air*, correspond to O’Leary’s (2000) top six issues, with *Land Use* appearing first on the respondents’ list and fourth on O’Leary’s (2000) list. The most commonly reported issues on which the practitioners had worked were *Land Use* (60%), *Superfund* (56%) and *Water Quality* (56%). Three other issues were reported by roughly one third of the respondents, and the rest were reported relatively infrequently. The two base IRB respondents mentioned similar issues generally, but had experienced mostly water-related issues themselves.

- *Question 1b: How many of those were military related? What type of issue did the military dispute(s) involve?*

Of the twenty-six practitioners interviewed, eighteen had actual military case experience. The three without military case experience had erroneously been classified as having military/base experience in the IECR Roster of Practitioners. The majority of the practitioners with military/base experience have consulted on *one to four* military cases. Of the eighteen practitioners with military case involvement 44% had worked on *Superfund* issues, 17% on *Ground Water* issues, and 11% each on *BRAC* or *Land Use* issues. By definition the base IRB respondents were involved in only military-related cases.

- *Question 1c: How many environmental disputes do you consult on per year? In your opinion is that a lot?*

The majority of practitioners consult on one to ten cases per year. This was a harder question for most practitioners to answer because some of their cases last for longer than a year. Most practitioners felt that the quantity of environmental cases and the time involved in handling the environmental cases keeps them fully employed at all times. The IRB respondents had far more experience (“dozens of cases”) than the typical respondent, but noted that the number of cases had tapered off over time and that any issues occurring today are typically resolved at the installation or next higher level.

### **Investigative Question 1—Conclusions.**

The analysis revealed no one typical dispute, but rather several disputes—*Superfund*, *Land Use*, and *Water Quality*—appear to remain high on the list of disputes over time. *Superfund* disputes appeared at the top of the list on both IQ 1a and 1b. Finding *Superfund* at the top of both lists is not surprising because *Superfund* issues are funded by the government for cleanup. Several respondents noted that available funding is a critical factor contributing to a greater likelihood the issue would be resolved.

### **Investigative Question 2: Typical parties to environmental disputes**

The second investigative question asked “Who are the parties in a typical environmental dispute?” This question was answered by the following four questions. The first two questions were asked of both practitioners and installation representatives, while the last two questions were appropriate only for the practitioners.



- *Question 2a: What parties (i.e. local, state, federal agencies, environmental organizations, etc.) were involved (directly or indirectly) in the cases you consulted on? What was their involvement?*

The practitioners listed a wide range of parties involved with the top five being *Federal Government (92%), State Government (88%), Local Government (73%), Environmental Groups (65%),* and *Citizen Groups (27%)*. This list is very similar to the list of typical parties from Andrew (2000), with the practitioners omitting only facilitator/mediator and potentially responsible parties from Andrew's list. It appears that some form of government entity is typically involved as a party to the dispute and this can be attributed to the regulatory nature of environmental issues. Environmental groups, citizen groups, and other private parties are less involved as parties and their involvement tends to be based on the impact that the issue has on their lives or livelihood. The answers from the installations are very similar. Federal and state regulatory agencies are typically involved, with other organizations such as citizen or environmental groups added in depending on the issue at hand.

- *Question 2b: In your experience, who normally initiates the ADR process (which party)?*

The majority of the cases these practitioners have consulted on were initiated by a *Regulatory Agency (46%), another Government Entity (38%),* or *One of the Parties to the Dispute (27%)*. The initiator is rarely an external party to the dispute, although several practitioners noted that external stakeholders can "propel" the government to initiate the ADR process. Respondents also emphasized that funding was important to get the process started and that since governmental organizations frequently had funding, it was perhaps less surprising they initiated ADR in a large number of cases. While the practitioners listed regulatory agencies as the primary initiator (46%) with other government agencies second (38%), the two installation representatives were familiar only with cases initiated by the Air Force.

- *Question 2c: Do you know who initiated the process in the military case(s)?*

The primary initiator in the military cases was *the EPA in 35% of the cases reported*. The *DoD and state regulatory agencies* followed with 23% and 19% respectively. Federal and state regulatory agencies initiate ADR in over half (54%) of all military cases. The results also suggest that the initiators in military cases are primary parties; external parties initiate relatively fewer of these cases.

- *Question 2d: What EPA Regions have you dealt with during your consultations? Where there any differences in dealing with each Region (differing processes)?*

Practitioners reported the most experience in Regions 9, 8, and 1. Region 9 includes the states of Arizona, California, Hawaii, Nevada, American Samoa and Guam. Region 8 covers the states of Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming. Region 1 covers the New England states of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. Most practitioners *did not feel they had enough experience to comment on differences*. Those practitioners who had worked in many regions believe *there are differences* among the regions in terms of personalities, amenability to ADR use, and procedural issues, but that they were "par for the course".

- *Question 2e: Have you used/hired a third party neutral to help with the ADR process? Why?*



This question was asked only of the installations and was asked to determine if hiring a third party neutral is a common practice in Air Force environmental disputes. One installation reported using third party neutrals at the lowest level of resolution and noted that they had reaped significant returns from their use in terms of faster decisions and implementation, as well as greater respect and credibility among the parties. The other installation used them when issues could not be resolved at the lowest level among the parties themselves.

### **Investigative Question 2—Conclusions.**

The analysis revealed that the parties to an environmental dispute are wide ranging and varied. Since the parties to an environmental dispute can consist of two parties to hundreds of thousands of parties it is harder to pinpoint what or who a typical party would be, beyond general groupings such as “government”, and “primary parties to the dispute”. These two categories tend to be consistent parties to disputes and of the two, government entities tend to be the main initiators of the process. The main reason for this appears to be that these agencies/entities tend to have the funds to spawn the process.

### **Investigative Question 3: Perceived uniqueness of environmental disputes**

The third investigative question asked “How are environmental disputes different from workplace and acquisition disputes?” This question was answered by the following three questions. Because these questions compared various kinds of disputes and base IRB respondents focused only on environmental disputes, these questions were asked only of the practitioners.

- *Question 3a: Have you consulted on any workplace or acquisition disputes?*

The main objective of this question was to establish experience in workplace/acquisition in order to ask the next set of questions which will indicate the differences between environmental disputes and workplace/acquisition. The practitioners answered either “yes” or “no” to this question and if they answered “yes” they stated either workplace or acquisition. Seventeen practitioners had experience in either workplace or acquisition disputes; three practitioners had experience in both.

- *Question 3b: Did the ADR process used in the workplace/acquisition disputes differ from the environmental disputes? How did it differ?*

All seventeen practitioners who had experience in workplace or acquisition disputes indicated there were differences between workplace and environmental disputes. Only three practitioners had acquisition experience, however, so for this study, comparisons were only made between workplace and environmental disputes. The primary differences are reported in the conclusions below.

- *Question 3c: In your opinion which type of dispute (environmental, workplace, or acquisition) is best suited for the ADR process? Why?*

The majority response (8 respondents out of 17 with experience, or 47%) for this question was absolutely *all three are suited* for resolution by ADR. Several practitioners noted that “conflict is conflict”, and that while there is “no one ADR process”, applying ADR came down to matching “different tools” to “the context, the issues, the parties, and their goals”. On the other hand, four practitioners (24%) thought *Environmental* issues seemed most suited to ADR because they are typically large, complex, multi-party conflicts and also because of the





public nature of the disputes. Only two respondents believed workforce disputes were best suited to the use ADR.

### **Investigative Question 3—Conclusions.**

The main differences between workplace disputes and environmental disputes are that environmental disputes are almost always multi-party disputes and workplace disputes are typically two-party disputes. The second difference is the fact that environmental disputes tend to be very technically complex whereas workplace disputes typically are not. The largest group of practitioners believed ADR was equally suitable to all disputes, whereas a smaller but non-trivial group believed environmental disputes were best suited to ADR. Taken in sum, however, the large majority (12, or 71%) of ADR practitioners agreed that environmental disputes were very amenable to ADR.

### **Investigative Question 4: Techniques used to resolve environmental disputes**

The fourth investigative question asked “Which ADR techniques are used to resolve environmental disputes? This question was addressed with two interview questions.

- *Question 4a: What ADR techniques have you used to resolve environmental disputes (i.e. mediation, arbitration)? Why?*

Consistent with O’Leary (2000), the majority of practitioners in this study use *mediation* or *facilitation* to help resolve environmental disputes. The respondents placed a real emphasis on consensus and collaborative work; most of the methods in which external parties get decision-making authority ranked toward the bottom of the list. The two base IRB representatives reported a total of one lawsuit between them. This is significant because the base reporting the lawsuit is a very large installation that has had numerous environmental issues over the course of its existence. That only one lawsuit has been pursued and won against the government might suggest its dispute resolution processes are working very well.

- *Question 4b: What ADR technique was used in the military case(s) you consulted on?*

The answers to this question mirror those in 4a. *Mediation* and *Facilitation* tend to be the most used techniques in military environmental disputes. Many of the respondents noted a large number of parties were involved. In a similar question, the base IRB respondents emphasized consensus building and informal mediation.

### **Investigative Question 4—Conclusions.**

If an environmental dispute is resolved by ADR it is typically resolved using some form of mediation or facilitation or a combination thereof. Consensus building is also used extensively to help the parties get to the point where they can participate and resolve issues.

### **Investigative Question 5: Environmental disputes best suited to ADR**

The fifth investigative question asked “What types of environmental disputes are most suited for resolution by ADR? This question was answered by the following two questions, which were appropriately addressed only to the practitioners.



- *Question 5a: In your experience, what type of environmental dispute (i.e. water quality, solid waste, land use, etc.) do you find most suited for resolution by ADR? Why?*

Most of the respondents believed ADR is suitable for all environmental disputes, and that the parties themselves, their relationships with each other, their positions and issues related to the subject matter, and their willingness to work toward success, were more important than the subject matter of the dispute itself. The base IRB respondents had experience only with their particular installations' issues; while they believed the issues with which they were familiar were amenable to resolution, they were open to the idea that most issues were probably amenable to ADR.

- *Question 5b: In your opinion, are there environmental disputes that are not suited for ADR? Why?*

The largest group of practitioners felt all disputes are suited to ADR; however, a measurable minority believed certain types of environmental disputes are not suited for resolution by ADR. These disputes include *the need to establish a precedent, when parties are unwilling or unable to participate, when there are challenges to regulatory issues/interpretations, or when it involves a criminal act.* As one practitioner noted, ADR was not suitable “Only [in] the usual circumstances in which ADR is generally inappropriate—a novel issue of law; the need to establish a binding precedent; parties who are unwilling or unable to negotiate for psychological reasons; lack of time, money or other resources needed to negotiate effectively or to retain a neutral.” The base IRB respondents agreed that disputes were amenable to settlement unless the parties themselves were unwilling to settle.

### **Investigative Question 5—Conclusions.**

The overwhelming answer to this question is that almost all environmental disputes are suited for resolution by ADR; the primary exceptions being those involving clear legal issues of precedence or legality. Given these exceptions, no one type of dispute is more suited than another to resolution. The main contributing factor to successfully resolving a dispute is the willingness of the parties to resolve the dispute.

### **Investigative Question 6: Antecedents of successful environmental ADR**

The sixth investigative question asked “What are the antecedents of a successful environmental ADR program?” This question was answered through the following five questions.

- *Question 6a: What factors in an organizational environment facilitate the use of ADR in environmental conflicts?*

The majority of the practitioners and both installation respondents answered that *top management support* is definitely a major factor in an organizational environment to foster ADR use. This answer also matches Hopper's model as described in Chapter II. The next three answers *knowledge of ADR process, resources, and training of personnel* were also thought to be very important factors. Installation respondents also suggested a “desire to do the right thing”, funding, and conceptual “buy in” at all levels were important factors.

- *Question 6b: Do the parties involved in an environmental dispute typically have a formalized ADR process in place? Do you think it was helpful? Why or why not?*



Answers to this question varied somewhat among respondents. The majority of practitioners (57%) answered *no* to this question although another 23% indicated that *some agencies* do have a formalized process in place. Both installation respondents indicated that there are formalized processes within the organizations that they have dealt with. Finally, several practitioners expressed an opinion that ADR functions better when the parties create the resolution process themselves.

Hopper's (1996) model of ADR antecedents indicated that parties who have a formalized process in place are more likely to have successful ADR implementation. It is possible that the practitioners in this study had a different understanding of an "existing ADR structure" than did those in Hopper's (1996) study. For example, an existing structure could include detailed implementation instructions, but it could also include a more modest idea that policies exist encouraging ADR use. Such differences could account for the different responses and indicate a need for future research.

- *Question 6c: Do the parties involved in environmental disputes typically have a long-term recurring or single transaction relationship? Do you think these relationships have an impact on the outcome?*

The majority of practitioners (69%) indicated that most of their cases are between parties with *long-term recurring* relationships, noting that this long-term relationship engenders commitment to the ADR process.

- *Question 6d: What influence do economic ramifications typically have on the outcome of the resolution?*

Practitioners and installation respondents agreed that economic ramifications tend to have a *huge/big/immense* influence on the outcome of the disputes. This is also a key element in the Hopper (1996) model.

- *Question 6e: What influence does legal ramifications (i.e. need to set precedent) typically have on the outcome?*

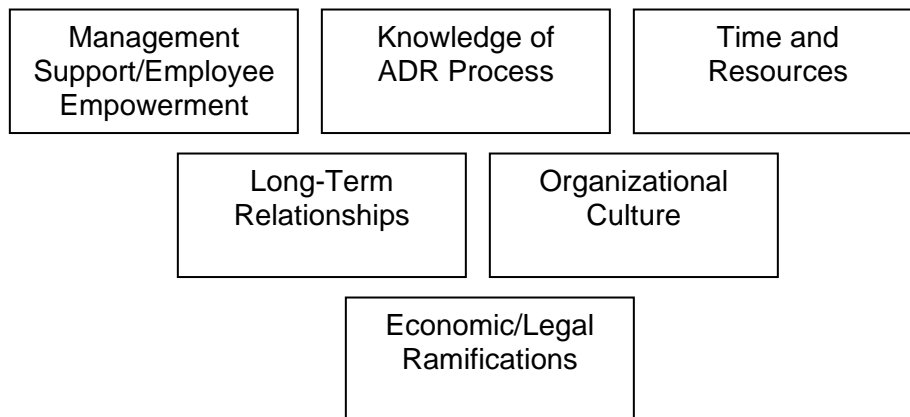
One of the practitioners commented early on that environmental disputes are "bargaining within the shadow of the law", therefore, it is really no surprise that the majority of practitioners indicated that legal ramifications have some form of impact on the cases. Installation respondents went farther, calling the legal ramifications a determining factor. Simply, the need for a precedent can end all interest in ADR. Additionally, in crafting a settlement, the parties are typically unwilling to go beyond what they believe a court would require them to do.

### **Investigative Question 6—Conclusions.**

The analysis showed that there are key elements in environmental ADR that tend to lead to a successful outcome. These key elements are presented in Figure 3. These key elements are similar to those found in Hopper's (1996) antecedent model. The model has changed to show the antecedents in an inverted pyramid with *Economic/Legal Ramifications* at the bottom. *Economic/Legal Ramifications* seem to be the catalyst as to whether or not the ADR process is even initiated; if the parties don't feel they will get a better outcome (legally or economically) through an ADR process then they are less likely to come to the table. The next level shows *Long-Term Relationships* and *Organizational Culture*. These two elements appear to be the



second key elements in progressing towards using an ADR process. If the parties are in a long-term relationship or want to maintain a long-term relationship then they are more likely to work together in an ADR process. If the culture of the organization promotes and uses ADR to resolve issues (including workplace or acquisition type disputes) then it is more likely to use ADR for other issues. The final level of key elements is, *Management Support/Employee Empowerment, Knowledge of ADR Process, and Time and Resources*. Once the ADR process has begun these three elements appear to be the key to a successful outcome. Management should maintain interest in the process as it proceeds and should empower the personnel they have sent to handle the process to make decisions for the organization. The personnel the organization sends to handle the process should have knowledge of how the ADR process works; this may mean additional training for specific personnel who then become the main ADR process agents for the organization. This process agent should also be assured that they will have adequate time and resources to work the process to resolution.



**Figure 3. Key Environmental ADR Elements**

### **Investigative Question 7: Barriers to implementation in the Air Force**

The seventh investigative question asked “What barriers exist to implementing the process for the Air Force?” This question was addressed with five interview questions.

- *Question 7a: What is your experience with ADR in environmental disputes (i.e. positive, negative, or mixed) involving the military?*

The majority of the answers from both the practitioners (54%) and both installation respondents were *positive* regarding the practitioners experience with military cases. Only a few practitioner responses were *mixed* or *negative*. The negative responses voiced concern that the military did not “buy in” to the process and commit actual decision makers to it.

- *Question 7b: What are some key indicators that an environmental issue exists? When do most parties become aware of them?*

There were varying degrees of amusement in the answers to this question mostly due to the fact that the practitioners felt that it should be readily obvious to those who manage land or installations that there is a problem. Typical answers were: *That should be obvious* and *Too late*. The answer with the most responses was that a key indicator is typically an *environmental/regulatory trigger*. In other words, most parties don’t become aware of the environmental issue until something happens to bring it to their attention; they are not



necessarily “looking for trouble”, but respond when it comes to their attention, perhaps through regular meetings either within the government or with the public.

- *Question 7c: How much control do you feel you have during the ADR process (initiation, negotiation, settlement)? Do you feel this level of control is adequate? Why or why not?*

Most of the practitioners answered this question in the same manner. They feel they control the processes to bring the parties together but the parties control the outcomes. As one practitioner noted, “Mediators need to have all the control the parties want to entrust them with. The central role is to ensure the process works as the parties have agreed it should...” Both installations also felt they had adequate control during the process. It is not appropriate to compare this with the practitioner answers as the practitioners play the role of the third party neutral and the installations are a party to the dispute. Control for the practitioners meant control of the process, while control for the installations meant they felt the dispute resolution process was free of external governmental influences.

*Question 7d: Do you feel that the cases you consulted on resulted in win-win situation? Why or why not?*

A majority of practitioners and both installations felt that their cases resulted in win-win situations. Practitioner #20, “When parties come through in an environmental situation and work together collaboratively, it’s always a win-win and there is always something that everybody’s given up.” One installation respondent noted that, even when all sides do not “win”, a focus on the process—honest attention to all positions and a clear explanation for all decisions—is important to preserving the settlement.

- *Question 7e: What steps can the military take to be more proactive in using ADR in environmental disputes?*

There were many responses to this question and the top three—being proactive, being open-minded and transparent, and being trained to apply ADR effectively—were mentioned by multiple practitioners. One installation echoed the need for open-mindedness and being proactive and the other installation noted the importance of maintaining a long-term focus.

### **Investigative Question 7—Conclusions.**

In general, the barriers to implementing the ADR process in environmental disputes appear to be the absence of one or more of the key elements found in Figure 3. Without any Air Force environmental ADR case files to research or parties to interview, it is not apparent if the Air Force is missing one or more key elements in how it approaches the cases. An in-depth study of previous cases would be helpful in determining if any barriers are present.

The interviews with Air Force installation environmental personnel, Air Force RAB members and an interview with an Air Force environmental attorney all seem to indicate that formal ADR processes such as a Superfund case are not as prevalent as they were in earlier decades when cleanup of installations became a priority. Many issues are now being resolved at the base level through the collaborative RAB process.



## Limitations of the Research

The nature of qualitative research is that it allows collecting rich, contextual data; in return, however, it sacrifices the ability to generalize the results with great confidence and the ability to make causal inferences (Leedy and Ormrod, 2001). The research methodology originally selected was the case study method but the inability to find actual environmental ADR cases or parties to interview limited the methodology to a simple exploratory qualitative study. The researcher tried to counteract the lack of cases or parties by continually looking for subjects with some environmental dispute experience to interview during the course of this research hence the installation questionnaire and the RAB board member experiences. Finally, despite the marginally satisfactory response rate (20%), the relatively few responses from base Installation Restoration personnel mean caution should be taken in viewing those bases as representative of the broader community.

## Recommendations for Future Research

The use of ADR in military environmental disputes is a new research area. The results of this study have provided some areas for future researchers to consider:

- An in-depth study of any Air Force environmental ADR case files to explore how the process was initiated, how the process progressed, and the final resolution would help to determine if the key elements are present in the case and if any are not, whether their absence had an effect on the outcome.
- A more detailed study of Air Force IRP/RAB programs. What is being done at the base level to keep issues from escalating? Are there really that many environmental issues any more or is effective use of the IRP/RAB programs precluding their escalation?
- A study of the Army and Navy use of ADR in their disputes. The practitioners repeatedly mentioned the Army Corps of Engineers as their primary military customer, and each of these services seems both to have a good working relationship with the EPA and to use ADR actively in their environmental disputes.

## Final Summary

This study has attempted to provide the Air Force ADR Program Office with current information on the status of the use of ADR in environmental disputes. This preliminary research has provided that information through interviews with environmental conflict resolution practitioners, a questionnaire from two Air Force installations, and some opinions from RAB board members. The Program Office also wished to know how it could utilize ADR more in environmental disputes. This study has provided some of the key elements that appear to lead to a successful ADR process. Finally, this study has provided an area for further exploration to determine if there is an Air Force ADR process already in place in the structure of the IRP/RAB program.

## Bibliography

Air Force ADR Program Office, SAF/GCD (2004) *Report to the Secretary of the Air Force on the Air Force Alternative Dispute Resolution Program*. Retrieved May 17, 2004, from <http://www.adr.af.mil/afadr/secaf/fy2003/index.html>



Air Force Policy Directive 51-12, *Alternative Dispute Resolution*, January, 2003. Retrieved June 3, 2004 from <http://www.e-publishing.af.mil/pubfiles/af/51/afpd51-12/afpd51-12.pdf>

Andrew, John (2000). Taking the Plunge: The ADR Participation Decision. *Journal of Environmental Assessment Policy and Management*, 2 (1), 43-79.

Bingham, Gail (1986) *Resolving Environmental Disputes: A Decade of Experience*. Washington, DC: The Conservation Foundation.

Bourdeaux, Carolyn, Rosemary O'Leary, and Richard Thornburgh (2001). Control, Communication, and Power: A Study of the Use of Alternative Dispute Resolution of Enforcement Actions at the U.S. Environmental Protection Agency. *Negotiation Journal*, 17 (2), 175-191.

Burger, Warren E. (1982). Isn't There a Better Way? *ABA Journal*, 68 (3), 274.

Creswell, John W. (1994). *Research Design: Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage Publications.

Federal Acquisition Regulation (2004), Part 33, Protests, Disputes, and Appeals. Retrieved June 3, 2004 from <http://farsite.hill.af.mil/vffara.htm>

Hopper, Patrick F. (1996). *A Cross-Sectional Examination of Alternative Dispute Resolution: A Search for the Antecedents of Success*. Published master's thesis, Air Force Institute of Technology, Wright-Patterson AFB, OH.

Institute for Environmental Conflict Resolution

Leedy, Paul D. and Jeanne Ellis Ormrod. *Practical Research: Planning and Design* (7<sup>th</sup> Edition). Columbus, OH: Merrill Prentice Hall, 2001.

Nolan-Haley, Jacqueline M. (1992) *Alternative Dispute Resolution in a Nutshell*. St Paul, MN: West Publishing Company

O'Leary, Rosemary, Robert F. Durant, Daniel J. Fiorino, and Paul Weiland (1999) *Managing for the Environment: Understanding the Legal, Organizational, and Policy Challenges*. Nonprofit and Public Management Series. San Francisco, CA: Jossey-Bass.

O'Leary, Rosemary and Maja Husar (2002). Public Managers, Attorneys, and Alternative Dispute Resolution of Environmental and Natural Resources Conflicts: Results and Implications of a National Survey. *International Journal of Public Administration*, 25 (11), 1267-1280.

O'Leary, Rosemary and Lisa B. Bingham (2003). *The Promise and Performance of Environmental Conflict Resolution*. Resources for the Future: Washington D.C.

O'Sullivan, Lynda, SAF/GC (2004) E-mail correspondence December 20, 2004.

Singer, Linda R. (1994) *Settling Disputes: Conflict Resolution in Business, Families, and the Legal System*. Boulder, CO: Westview Press.



Southern, Rick, SAF/GCD (2004) Telephone interview conducted April 2, 2004.

The Administrative Dispute Resolution Act of 1996

The U.S. Equal Employment Opportunity Commission (2002). Facts About Federal Sector Equal Employment Opportunity Complaint Processing Regulations. Retrieved June 2, 2004, from <http://www.eeoc.gov/facts/fs-fed.html>

The U.S. Equal Employment Opportunity Commission (2002). Types of ADR Techniques. Retrieved April 19, 2004, from <http://www.eeoc.gov/federal/adr/typesofadr.html>

5 USC § 571 et seq. (1990).

28 USC § 471 et seq. (1990).





THIS PAGE INTENTIONALLY LEFT BLANK



## 2003 - 2006 Sponsored Acquisition Research Topics

### **Acquisition Management**

- Software Requirements for OA
- Managing Services Supply Chain
- Acquiring Combat Capability via Public-Private Partnerships (PPPs)
- Knowledge Value Added (KVA) + Real Options (RO) Applied to Shipyard Planning Processes
- Portfolio Optimization via KVA + RO
- MOSA Contracting Implications
- Strategy for Defense Acquisition Research
- Spiral Development
- BCA: Contractor vs. Organic Growth

### **Contract Management**

- USAF IT Commodity Council
- Contractors in 21st Century Combat Zone
- Joint Contingency Contracting
- Navy Contract Writing Guide
- Commodity Sourcing Strategies
- Past Performance in Source Selection
- USMC Contingency Contracting
- Transforming DoD Contract Closeout
- Model for Optimizing Contingency Contracting Planning and Execution

### **Financial Management**

- PPPs and Government Financing
- Energy Saving Contracts/DoD Mobile Assets
- Capital Budgeting for DoD
- Financing DoD Budget via PPPs
- ROI of Information Warfare Systems
- Acquisitions via leasing: MPS case
- Special Termination Liability in MDAPs

### **Logistics Management**

- R-TOC Aegis Microwave Power Tubes



- Privatization-NOSL/NAWCI
- Army LOG MOD
- PBL (4)
- Contractors Supporting Military Operations
- RFID (4)
- Strategic Sourcing
- ASDS Product Support Analysis
- Analysis of LAV Depot Maintenance
- Diffusion/Variability on Vendor Performance Evaluation
- Optimizing CIWS Life Cycle Support (LCS)

### **Program Management**

- Building Collaborative Capacity
- Knowledge, Responsibilities and Decision Rights in MDAPs
- KVA Applied to Aegis and SSDS
- Business Process Reengineering (BPR) for LCS Mission Module Acquisition
- Terminating Your Own Program
- Collaborative IT Tools Leveraging Competence

A complete listing and electronic copies of published research within the Acquisition Research Program are available on our website: [www.acquisitionresearch.org](http://www.acquisitionresearch.org)





ACQUISITION RESEARCH PROGRAM  
GRADUATE SCHOOL OF BUSINESS & PUBLIC POLICY  
NAVAL POSTGRADUATE SCHOOL  
555 DYER ROAD, INGERSOLL HALL  
MONTEREY, CALIFORNIA 93943

[www.acquisitionresearch.org](http://www.acquisitionresearch.org)