# Countering Eco-Terrorism in the United States: The Case of 'Operation Backfire'

*Final Report to the Science & Technology Directorate, U.S. Department of Homeland Security*

September 2012

## About This Report

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## About START

## Citations

To cite this report, please use this format:
Deshpande, Nick, and Howard Ernst. "Countering Eco-Terrorism in the United States: The Case of 'Operation Backfire'." Final Report to Human Factors/Behavioral Sciences Division, Science and Technology Directorate, U.S. Department of Homeland Security. College Park, MD: START, 2012.

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# Executive Summary

American counterterrorism officials consider those who commit violent acts in the name of the environment and animal rights a serious threat to homeland security. In congressional testimony more than six years ago, Senator James Inhofe noted that radical actors affiliated with the Earth Liberation Front and Animal Liberation Front had caused more than $110 million in damage between approximately 1995 and 2005 (Inhofe 2005). Since that time, members of the radical environmentalist movement (REM) continue to carve out a prominent place in the domestic terrorism landscape. In this report, we examine a joint, inter-agency investigation, known as Operation Backfire, into acts of eco-terrorism that occurred in the country's Northwest at the turn of the millennium. The target of Operation Backfire, a group known as the Family, caused more than $40 million in property damage and disrupted numerous lives and businesses from 1996-2001 (Engdall et al. 2007; Likar 2011).

The purpose of this work is to frame Operation Backfire as a terrorism countermeasure and assess what made it effective at dismantling the Family and altering the landscape for actors associated with the REM. Making extensive use of original data (i.e., the Institute for the Study of Violent Groups and the Global Terrorism Database), court documentation related to each of the 18 indictments, and interviews with two key investigators, we examine the concept of eco-terrorism, how to measure counterterrorism effectiveness, resource allocation in inter-agency settings, and deterrence. Our qualitative approach focuses on the characteristics and factors that made the investigation effective.

The measurement of a countermeasure's efficacy poses numerous challenges since there are various, but no universally accepted, metrics for effectiveness. In this case, successful arrests and convictions are certainly one indicator of Operation Backfire's effectiveness. But assessments should also take into consideration the expenditure of resources, a comparison of desired results versus the outcomes (e.g., the dismantling of the Family), and the adherence to best practices and regulations. Further, organizational efficacy, which considers the structure of an organization and the performance of its members, should be accounted for. A measure's ability to adapt to a changing situation is also an important metric that we examine in this study. Lastly, the absence of some future act or event could indicate a countermeasure's effectiveness, but this relationship is difficult to observe empirically.

This case study represents one of the first histories of Operation Backfire and the Family and lays the groundwork for comparisons in the future. Analysis of this case reveals that Operation Backfire owes its success to an effective organizational framework undertaken by a few, key leaders from various agencies. While the effective use of a cooperating witness was a cornerstone of Operation Backfire, so, too, were Assistant United States Attorney Kirk Engdall's efforts to pull together several disparate investigations under one authority. Numerous stakeholders from all levels of government comprised a joint, interagency task force that was charged with investigating the Family's actions and tracking down its members. Throughout, both innovative and classic practices, especially those related to resource management, spurred the approach of key leaders and placed investigators on track to wage an effective prosecution of members of the Family, generating lessons that may be useful to other individuals and agencies engaged in the application of counterterrorism strategies

# Countering Eco-Terrorism in the United States:
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*Backfiring – A tactic associated with indirect attack, intentionally setting fire to fuels inside the control line to slow, knock down, or contain a rapidly spreading fire. Backfiring provides a wide defense perimeter and may be further employed to change the force of the convection column. Backfiring makes possible a strategy of locating control lines at places where the fire can be fought on the firefighter's terms. Except for rare circumstance meeting specified criteria, backfiring is executed on a command decision made through line channels of authority.* -- Daniel S. Widener, *Wildfire Terminology*

*Most every indictment of earth and animal liberationists has come about through snitches and government informants. This makes it all the more important for one to carefully select who s/he decides to work with. As a simple matter of statistics, you're most likely to be betrayed by someone you've worked with . . . and the fewer cooks in the kitchen the fewer people there are to stab you in the back.* -- Excerpted from an issue of *Resistance Magazine: Journal of the Earth Liberation Movement*

## Introduction

Violent criminal acts motivated by concern for the natural environment have taken their place among the mosaic of threats to the American homeland.  Those who commit such acts and their material supporters comprise the radical environmentalist movement (REM) (*See* Deshpande 2011; Ingalsbee 1996; Likar 2011; Trujillo 2005). The two best-known groups in the REM are the Animal Liberation Front (ALF) and the Earth Liberation Front (ELF).[1] In congressional testimony more than six years ago, Senator James Inhofe noted that radical actors affiliated with ELF and ALF caused more than $110 million in damage between approximately 1995 and 2005 (Inhofe 2005). Since that time, members of the REM continue to carve out a prominent place in the domestic terrorism landscape. Characterizations of the REM phenomenon vary significantly; some scholars (*among them*, Ackerman 2003; Leader & Probst 2003; Liddick 2006; Likar 2011) are quick to attach and reinforce the eco-terrorist label. Others (*among them*, Amster 2006; Vanderheiden 2005; Wagner 2008) present the acts of the REM's participants as unconventional political participation and denounce its vilification. Strategies for countering the potential threat posed by the REM are as disaccorded as the descriptions of the problem at hand.

Those who apply the eco-terrorist label are most likely to favor countermeasures that traditionally fall in a counterterrorism domain: intelligence-led investigations aimed to prevent acts by known and suspected perpetrators. Others advocate approaches that fall squarely in the criminal justice realm: addressing acts after-the-fact to secure prosecutions. Both procedures subsume an element of deterrence, but are executed differently.  The mounting costs of REM actions, the variety of depictions

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[1] ALF and ELF are often considered together given the mutual solidarity that exists between them, shared membership, and similar ideological roots. In the past, members of both groups have claimed responsibility for joint acts. See USDOJ, Terrorism 2002-2005, available <http://www.fbi.gov/stats-services/publications/terrorism-2002-2005> (Accessed March 20, 2012).

and the (sometimes) competing approaches force homeland security managers to ask: What constitutes an effective countermeasure against this threat?

Few (if any) studies have looked at specific measures undertaken to counter violent acts committed by the radical environmentalist movement in the United States.  This study attempts to map out the events and circumstances surrounding a particular interagency effort undertaken in the early 2000s. Operation Backfire was designed to define and stem the threat of one particular branch of the disparate and unorganized REM.  Known as the Family, its transient members committed 20 known criminal actions in five states in the Pacific Northwest over a period of approximately six years.  While this group considered itself part of the ELF and would often paint the ELF moniker at the site of their actions and make use of its media arm to send their communiqués, the Family established a strong identity that was separate from the more amorphous ELF. Given the history of the REM in America, the Family was a unique entity because of how long it was active and the nature of its actions (Smith and Damphousse 2009). The group was comprised of 18 members over its lifespan, although this number varied over time. Group membership varied depending on the internal social dynamics of the group, as well as members' life circumstances. At times various members of the group formed romantic relations or would live in close proximity to each other; as relationships changed and members of the highly mobile group moved to new areas, the size and the composition of the groups would change. The independent cell structure enabled the group to persist even as new members entered and existing members left the group. Its members employed advanced denial and deception techniques as a part of a sophisticated operational security plan to avoid detection by law enforcement officials. As REM adherents, the Family aimed to alter the cost-benefit calculus of businesses and government actors whose actions they viewed as threatening to the natural environment and to raise awareness. The group's actions were significant in terms of the damage they wrought – $40 million, according to the Government Sentencing Memorandum – as well as the lives they disrupted (Engdall et al. 2007; Likar 2011).

Due to its success in apprehending members of the Family, Operation Backfire has captured the attention of American homeland security professionals in recent years and merits further attention. Of particular interest is an examination of the factors that led to Operation Backfire's success and whether lessons learned from Backfire can or should inform contemporary counterterror efforts.

### *Methods and Terminology*

We relied on a case study to conduct an in-depth investigation and to lay the groundwork for comparisons down the road. Previous work on the Family by Smith and Damphousse (2009) demonstrated the value of an in-depth case study for looking at terrorist groups' specific dynamics related to their operations and function. Smith and Damphousse focused their analysis on understanding the nature of planning and preparatory activities in which the Family participated in advance of attacks and were able to gain significant insights using open-source, unclassified materials, including court-case transcripts and media reports.

In this study, we also used open-source documents related to the Family as a key resource in addition to other archival information derived from legal documents. Quantitative data and qualitative data provided

the background on the REM and the Family's actions. The archival data included court documentation (20 case dockets) with special attention devoted to the Government's Sentencing Memorandum for Operation Backfire. This primary source information was further verified using approximately ten open-source articles and archival information.

For the quantitative data, we analyzed three open-source datasets on terrorism and violent extremism relevant to Operation Backfire: (1) a subset of the data collected by the Institute for the Study of Violent Groups (ISVG), a research center housed at the University of New Haven; (2) a subset of data from the Global Terrorism Database (GTD), compiled by the National Consortium for the Study of Terrorism and Responses to Terrorism (START) headquartered at the University of Maryland, and; (3) a dataset collected by the Foundation for Biomedical Research (FBR), an industry group that represents animal research organizations..

The ISVG dataset covers domestic and international REM incidents from 1981 - 2009. The primary sources for the ISVG data are media accounts, Internet sources, and public records. The GTD dataset includes 172 eco-terrorist events in the United States between 1970 and 2010. The primary sources for the GTD are news articles. The FBR data covers domestic REM incidents from 1981 -2006 and includes 529 total incidents. The primary sources for the FBR data are the websites of radical animal rights groups, where illicit actions from the radical environmentalist movement are regularly documented. Given the FBR's focus on animal research safety, its data tend to focus on crimes committed against animal research centers. In addition, the FBR might not be viewed as an objective source of data, given that their constituency has often been the target of these groups. For these reasons, data drawn from the FBR website are included in Appendix 1 and not in the main body of the report.

Finally, this study benefits from access to two individuals involved in Operation Backfire who recently retired from public service. The authors conducted two semi-structured elicitation interviews with Kirk Engdall and Chuck Tilby. Engdall, a former Assistant United States Attorney, led Operation Backfire and became the lead prosecutor following the indictments. His insights into the design and implementation of the investigation are invaluable and shed considerable light on the processes, challenges and solutions. Tilby, a retired Captain with the Eugene Police Department, also offered his invaluable perspective on the episode and allowed us to obtain another insider viewpoint from a primary source. The subjects were selected based on their reported roles according to official documentation, media reports of Operation Backfire, and their availability. Both interviews were conducted in the summer of 2011 and lasted approximately two hours, with questions focused on topics related to the Family's members and their actions, as well as law enforcement organization, leadership, resource management, legal tools, and innovation. Through their open-ended responses, the subjects offered important points that the research team had not considered at the outset. These responses provided new information about Operation Backfire's design and efficacy.

Through triangulating these three data types this study revealed new factors with respect to the effectiveness of Operation Backfire, as discussed below. In the same vein, those causal variables likely only emerged in the context of the task force's investigation and would not otherwise have been revealed through other methods of study. The case study approach proved to be a valuable tool, enabling us to

identify key variables that had not been considered by previous research. Lastly, the case study approach provided a historical explanation and account where none previously existed.

## *Measuring Counterterrorism Effects and Effectiveness*

The measurement of a countermeasure's efficacy poses numerous challenges since there are various metrics for effectiveness. In this case, successful arrests and convictions are certainly one indicator of Operation Backfire's effectiveness. But assessments should also take into consideration the expenditure of resources, a comparison of desired results versus the outcomes (e.g., the dismantling of the Family), and the adherence to best practices and regulations. Further, organizational efficacy, which considers the structure of an organization and the performance of its members, should be accounted for. A measure's ability to adapt to a changing situation is an important metric that we examine in this study. Lastly, the absence of some future act or event could indicate a countermeasure's effectiveness, but it would be difficult to observe this relationship empirically.

Academic investigations of countermeasures are usually limited to the strategic realm (*see, for example*, Armitage 2007; Baldwin 2004; LaFree 2006; van Dongen 2009). That is to say, studies tend to focus on terrorism in general and the broad policies that officials wield to counter it, rather than particular episodes of terrorism. This report attempts to isolate a single group's spate of terrorist acts and how a discrete investigation, informed by broader counterterrorism strategy, unfolded to counter it. Operation Backfire was bounded in space and time, yet has lasting demonstrable effects that permits its inclusion as a countermeasure. In that vein, a broad overview of terrorism countermeasures follows; while neither refers explicitly to radical environmentalism, these two counterterrorism studies and their theoretical offerings collectively inform our exploration of Operation Backfire and the actions of the Family.

In a START report, Perliger, Pedahzur and Kornguth (2010) relied on an epidemiological analogy to characterize effective terrorism countermeasures as those that attack the social identity of a given group, prevent access to mass media and communications critical for spreading ideas, and focus on the environments in which groups thrive to block the inputs vital for their growth and sustainment. The authors list some of the requirements for designing effective approaches to countering terrorist groups, including "extensive knowledge of culture, language, ethos of the specific region affected and access to statistical modeling" (159). We note that their exploration of countermeasures is a strictly theoretical one and does not offer an instance of practical application. Yet, it still sheds light on the theoretical underpinnings for designing terrorism countermeasures.

A second example of terrorism countermeasure research is that of Thomas and Casebeer (2004) for the United States Air Force Institute for National Security Studies. The authors characterized violent non-state actors, including eco-terrorist groups, as "dynamic biological systems," not unlike Perliger et al., but in far more detail (62). Their use of systems theory is instructive and allows them to parse potential effective countermeasures. They push for an understanding of a given system's interactive dynamics, strengths and weaknesses so that exploitation on a number of fronts can be exercised. One form that exploitation would ideally take, they offer, would be the application of ecological deterrence, allowing for an intervention (of sorts) during a specific developmental period of a given system. They importantly

note that, "the same intervention at different points in time can have dramatically different effects" (68-69). Thomas' and Casebeer's framework is also instructive as it relates to employing social network analysis, which we discuss below in our examination of Operation Backfire.

These studies encourage a consideration of the overall aims of counterterrorism measures and the entities that execute them. Law enforcement aims primarily to ascribe responsibility for criminal acts to individuals.  Investigations are intended to set the conditions for a successful prosecution. Historically, agencies have been less concerned with the outright detection of acts of criminality to prevent them *before* they take place; rather, police and prosecutorial teams have placed significant stock in the socializing power of deterrence. On one hand, there has been a notable shift in attitudes and approaches within law enforcement agencies following the devastating terrorist attacks of 11 September 2001 (*See, for example*, Clarke and Newman 2007; Marks and Sun 2007; Weisburd et al. 2009; Zegart 2005). For example, more and more agencies and their staffs have embraced the concept of intelligence-led policing (ILP). There has been considerable horizontal and vertical integration of resources and networks (both human and electronic databases) to enhance police capacities to prevent acts of terrorism. On the other hand, police powers are still geared towards ensuring the immediate safety and security of a given community while federal agencies are mandated with a counterterrorism role, though the role of state and local law enforcement in countering violent extremism appears to be on the rise.[2] Ultimately, when assessing efforts to counter terrorism, it is imperative to recognize the differences between countermeasures in a law enforcement context and a strictly counterterrorism one, and the blending of both.

The overarching thesis of this study is that the organizational framework of counterterrorism investigations has a significant bearing on their outcome. We posit that Operation Backfire owes its success to an effective organizational framework undertaken by a few, key stakeholders from various agencies.  This case is designed to look more closely at the impact of the structure of the investigation as well as how reliance on other innovations as well as traditional investigatory practices facilitated an effective prosecution of members of the Family in order to assess the potential for future application.

## Primer on Eco-Terrorism

The importance of certain terms merits inclusion of their definitions. The Federal Bureau of Investigation (FBI) employs the following definition for eco-terrorism: "The use or threatened use of violence of a criminal nature against innocent victims or property by an environmentally oriented, subnational group for environmental-political reasons, or aimed at an audience beyond the target, often of a symbolic nature" (Jarboe 2002). While this terminology is not standardized across discussions of eco-terrorism, it provides an adequate lens through which to examine the Family's actions. Members of the REM frame their views as the defense of the environment; it is important to recognize the movement's perspective when assessing and designing relevant countermeasures. Eco-terrorism is committed by adherents to a

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[2] Some major cities, such as New York City, illustrate this characterization and have devoted considerable law enforcement resources to counterterrorism. The commitment of significant Homeland Security funding to build capacity at the local law enforcement level has bolstered this trend.

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radical ideology informed by a supreme concern for the environment that permits the use of violent action to attack the symbols of "corporate industrialism" (Liddick 2006, 56; *See also* Likar 2011). While eco-terrorism is employed when addressing actions, eco-extremism refers to the ideological dimension associated with groups engaged in those acts.[3]

### *The Rise of the Radical Environmentalist Movement*

The radical environmentalist movement with its direct action tactics and illicit campaigns is a relatively recent phenomenon. While the movement has philosophical roots that date back to 19th Century Transcendentalists, who favored a worldview that recognized the inherent value of the natural world, the modern radical environmentalist movement did not take form until the 1970s (Liddick 2006, 1).  It was at this time that more activist non-profit environmental groups like Friends of the Earth (founded in 1969), Greenpeace (founded in 1971), Sea Shepherd (founded in 1979), and PETA (founded in 1980) spun off from the more mainstream environmental groups such as the Humane Society, Sierra Club, The Wilderness Society, and The Nature Conservancy.

In time, disaffected members of the environmental community demanded actions that went beyond the capacity of even the new, edgier groups, which tended to limit their actions to lawful environmental protests, demonstrations, moderate levels of civil disobedience, and conventional lobbying techniques. It was at this time that radical elements within the environmental community began to demand that groups make use of "whatever means are necessary" in defense of the earth (Edward Abbey quoted in Manes, 175). Groups that specialized in illicit activities, such as the Animal Liberation Front (ALF) (founded in 1976), Earth First! (founded in 1980), Earth Liberation Front (ELF) (1992), and Stop Huntingdon Animal Cruelty (SHAC) (1999) pushed the environmental movement to new extremes.

Two distinct philosophical threads run through modern radical environmentalist thought.[4] One is the philosophical traditional popularized by the Norwegian philosopher Arne Naess that is known as deep ecology. This philosophy is based on the biocentric belief that human beings are tied in a web of connections with nature and that the anthropocentric distinction between man and nature is artificial and harmful to both humans and the planet. Naess outlines the deep ecology philosophy in his 2001 work, *Ecology, Community and Lifestyle: Outline of an Ecosophy*. In his work Naess argues that nature has intrinsic value beyond the utility it provides humans. While there is nothing inherently violent or illicit in the deep ecology approach, and no evidence to suggest that Naess favored violent or criminal tactics, radical environmentalists reference deep ecology as one of their primary philosophical foundations.  For this community, deep ecology presents a radical alternative to values of free-market capitalism and demands tactics that reflect its radical objectives (Manes 1990, 140-150).

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[3] For a rejoinder on definitions in a legal context, see Grubbs, Kevin R. 2010. Saving Lives or Spreading Fear: The Terroristic Nature of Eco-Extremism. *Animal Law* 16(2): pp. 351-370.

[4] Edward Abbey, whose 1975 fictional work, *The Monkey Wrench Gang*, is considered by many to be the most influential work of the radical environmentalist movement, made a list in 1982 of the most important authors for "Nature Lovers, resistance fighters, wild preservatives, deep ecologists, and regular environmentalists" (in David and Foreman 1991). His list included: Henry David Thoreau, John Muir, John C. Van Dyke, Farley Mowat, Raymond Dasmann, Garrett Hardin, Barry Lopez, Murray Bookchin, Bernard De Voto, William O. Douglas, Loren Eisley, Paul Ehrlich, Colin Fletcher, Charles Bowden, Sigurd Olson, Wallace Stegner, Wendell Berry, Joseph Wood Krutch, Aldo Leopold, Annie Dillard, Ann Zwinger, Mary Austin, Rachel Carson, Paul Shepard and others.

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The radical environmentalist movement also draws inspiration from animal rights thinkers like Peter Singer, author of the influential work *Animal Liberation* (1975), and Tom Regan, who published *The Case for Animal Rights* (1983). The animal rights thinkers, like the deep ecologists, extend traditional human-to-human responsibilities and ethics to all living creatures. For these thinkers, animal cruelty is wrong for the same reason human cruelty is wrong. According to this view, blind speciesism results in the human treatment of animals as subjects and is derided as immoral. The human-centered paradigm is seen as the underlying assumption on which biomedical animal research, industrial animal production, and other animal use practices are justified.

But these two philosophies alone do not explain the radical environmentalist movement. Needless to say there are numerous law-abiding citizens who accept the tenets of deep ecology and who, for example, maintain a vegetarian or vegan diet out of respect for animal rights, but do not engage in illicit activities. These philosophies provide the moral foundation for the movement, giving its members a moral imperative that they view as on par with the anti-slavery movement or other civil rights movements that were based in natural law theory. Neo-Malthusian writers like Paul Ehrlich (1968) give the movement a sense of urgency that spurs them to action. But the modern radical environmentalist movement adds its own sense of indignation and outrage to the mix.

Many radical environmentalists have come to believe that humans, at least humans living in technologically driven, Western, consumer cultures that are cut off from the natural world, are the problem (Davis and Foreman 1991). Ingrid Newkirk, president of People for the Ethical Treatment of Animals (PETA), reflects this position in her quote, "humans have grown like a cancer. We're the biggest blight on the face of the earth" (Oliver 1999, 205). Radical environmentalists not only reject mainstream Western values, but they also tend to reject mainstream career-oriented environmentalists who they view as "sell outs." (Smith 2008, 544; Manes 1990, 55-65). Their radical objectives require radical tactics, which in turn alienate them from mainstream environmental groups and fuel their green rage (Manes 1990, 186).[5]

### *The "Direct Action" Tactics of Radical Environmentalist Groups*

The radical environmentalist movement remains diverse in their objectives and tactics. Table 1 categorizes some of the more popular direct action tools implemented by the radical environmentalist community in recent years (see Arnold 1997, 123-159 for a detailed list of methods; and Manes 1990, 3-22 for a description of early eco-sabotage tactics). What the tactics have in common is that they are illicit; what distinguishes them is the extent to which they harm property or threaten to harm individuals. The categories are listed from most moderate (those that do not aim to harm people or property), to those that aim to harm property, and finally tactics that aim to harm or threaten individuals.

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[5] For first-hand accounts from eco-extremists see: Foreman 1991; Best and Nocella 2006; Rosebraugh 2004a.

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## Table 1. Typology of REM Direct Action Tactics, *adapted from Liddick 2006*

**Type 1 Criminal Actions**: Minor crimes involving little or no property damage (less than $10,000, the limit to invoke federal Animal Enterprise Protection Act of 1992) and no threat to human injury

| | |
|---|---|
| **Eco-Drama** | **Definition:** Staging of non-violent, often illicit, events that cause no property damage, but that are designed for the sake of gaining media attention for an environmental cause or to expose an environmental abuse. This type of action is often designed to spur a law enforcement response to maximize sympathetic media attention. |
| | **Examples**: Tree sitting, chaining one's self to a tree or building, disrupting government proceedings, hanging protest messages in a public space, painting a fake crack in a dam, infiltrating and recording abuses at research laboratories and industrial food operations. |
| **Monkey Wrenching** | **Definition**: Made popular in Edward Abbey's fictional work *The Monkey Wrench Gang* (1975). It generally refers to minor acts of vandalism or sabotage that are undertaken to frustrate the perpetrators of a perceived environmental harm. |
| | **Examples:** Spreading a fox scent to confuse hounds during fox hunts, spray painting a billboard, cutting down a billboard, gluing locks, pulling up survey stakes, and slashing tires. |

**Type II Criminal Actions:** Significant acts of property damage (greater than $10,000) with no intended violence against humans

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|---|---|
| **Ecotage** | **Definition**: Acts of major economic sabotage that are designed to hurt the profits of businesses that radical environmentalists believe are profiting from environmentally harmful practices. |
| | **Examples:** Major vandalism to a butcher shop, putting salt or sugar in the fuel tanks of logging equipment, slashing the tires at an SUV dealership, damaging the drive-through equipment at a fast food restaurant, and spray painting SUVs. |
| **Animal "Liberation"** | **Definition**: Targeting biomedical research labs and industrial food production sites for theft |
| | **Examples:** University of California, Riverside, 1985: ALF activists broke into the lab and removed numerous lab animals, causing an estimated $700,000 in damage. Other large scale animal thefts have taken place at research labs at University of Pennsylvania in 1984, University of Arizona in 1989, and the Arritola Mink Farm in Mt. Angel, Washington in 1997. |
| **Eco-Arson** | **Definition**: Firebombing and arson as a means of protest and economic sabotage, causing millions of dollars in material damage to car dealerships, research labs, ski lodges, and other targets. |
| | **Examples:** Vail, Colorado in 1998($26 million in damage); Michigan State |

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|---|---|
| | University in 1999 ($900,000 in damage); University of Washington in 2001 ($3 million in damage); U.S. Forest Service, Irvine, PA in 2002 ($700,000 in damage); and a San Diego condominium complex in 2003 ($50 million in damage). |
| **Type III Criminal Actions:** Threatening behavior directed against people, including minor physical assaults producing no injuries | |
| **Eco-Thuggery/ Intimidation** | **Definition**: Use of multiple tools to intimidate opponents. |
| | **Examples:** Bomb hoaxes, harassing phone calls, staging demonstrations at private homes, vandalizing private homes or cars, posting home addresses of opponents on the Internet, and demonstrating against people as they move through public spaces (like airports). |
| **Type IV Criminal Actions:** Physical attacks against persons in which injury occurs or is intended | |
| **Bodily Harm** | **Definition:** Dr. Jerry Vlasak, who serves as a spokesperson for several extreme animal rights groups, and others have argued that is time for environmental activists to stop targeting property and profits and to start targeting people. A 60 Minutes report (2009) quotes Vlasak as saying "I think for five lives, ten lives, fifteen human lives, we could save a million, two million, ten million nonhuman lives." |
| | **Example**: Theodore Kaczynski (known as the Unabomber), whose letter bombing campaign killed three people and injured twenty-three, was in part motivated by radical environmentalist thought, as was James L. Lee who was killed by police after entering the Discovery Channel's headquarters in Silver Spring (MD) with explosives and a gun. Both men wrote manifestos that linked their actions to radical environmentalist thought. |

## *Major Groups in the Radical Environmentalist Movement*

*"One of today's most serious domestic terrorism threats come from special interest extremist movements such as the Animal Liberation Front (ALF), the Earth Liberation Front (ELF), and Stop Huntingdon Animal Cruelty (SHAC) campaign" (U.S. Senate Committee on Environment & Public Works Hearing, May 18, 2005a)."*-- John Lewis, *Deputy Assistant Director, Federal Bureau of Investigation*

*"The intimidation and fear that these crimes were designed to inflict continues to this day. Scientists, business owners and farmers around the United States still live in fear that a bomb will be waiting for them the next time they go to their offices, farms, or laboratories" (Arnold 1997, 53).* -- Michael H. Dettmer, *U.S. Attorney speaking about Rodney Coronado's interstate actions in the name of environmental conservation and animal rights*

Radical environmentalist groups like ALF and ELF have adopted a *leaderless resistance* model, in which autonomous subgroups of trusted confidants form cells for the purpose of carrying out illicit actions based on a set of guiding principles (Joosse 2007, Leader and Probst 2003). New recruits are warned not to join existing cells, but rather to start their own cells with trusted associates (Joosse 207). Regional and national press offices, which claim no official affiliation with the individual cells, post communiqués from the cells. The lack of a structured hierarchy and clearly identifiable leaders makes it difficult for law enforcement officials to infiltrate the groups. The leaderless structure also guards against the type of ideological fracturing that often plagued earlier radical environmentalist groups like Earth First! (Joosse 2007). The net result is an amorphous organizational structure of loosely bound illicit actors who are able to persist over time and across vast geographic areas, posing tremendous challenges to the law enforcement community at the federal, state, and local levels.

To date, none of the major radical environmentalist groups, including ALF, ELF, and SHAC, have as stated objectives the harm of human beings. Each of these three groups officially disavow violent tactics. Both ELF and ALF state as part of their guidelines that they engage in non-violent direct action campaigns in which "activists take all precautions not to harm any animal (human or otherwise)" (ALF official website). And SHAC, the most confrontational of all the groups, specifically states that it "does not support violence of any kind" (SHAC official website). Gary Ackerman (2003) observed that, "While the ELF has caused millions of dollars of property damage, it has not yet intentionally (or even unintentionally) brought harm to anyone" (162). Given the restraint demonstrated by members of the REM, some have questioned whether the term "eco-terrorism" even applies to them (Smith 2008).

Nevertheless, burning buildings, destroying property, and stealing are at the very least criminal activities that may put people's lives at risk and incite fear – potentially leading to psychological trauma. Moreover, the intimidation tactics of the radical environmentalist movement are distinct from the types of truly peaceful civil disobedience that Martin Luther King, Mahatma Gandhi, and others used in their campaigns. The former spokesman for ELF, Craig Rosebraugh, explained the distinction best after resigning from his role with the group. He explained (Rosebraugh 2004a, 248):

> Nonviolent ideology, as I interpret it, was the ability to display compassion, respect and decency toward the opponent. The opposition is supposed to be weaned from error by sympathy for the nonviolent activists who use their own suffering as their primary means of promoting change…ELF has not displayed any hint of compassion or respect toward its opponents… [ELF's actions] can reasonably be construed as violent in its attempt to force or coerce.

Even beyond the violence that is inherent in coercion, there is growing evidence that a small subset within the REM is willing to make use of violence directed at people. Lone militants, like James Lee (the 2010 Discovery Channel gunman) and the Unabomber, Theodore Kaczynski (Ph.D. mathematician who killed three people and wounded 23 with his letter bombs), were motivated in part by the radical ideology of environmental extremism (Arnold 1997, 31-64). At least two UK-based groups, Animal Rights Militia (ARM) and Justice Department, have shown a willingness to target people with violence

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(Liddick 2006, 44-45). Whether these actors represent anomalies or the face of things to come remains an open question (Ackerman 2003; Leader and Probst 2003, 44-46).

*Descriptive Analysis of REM Incidents and Eco-Terrorism*

With the ideological underpinnings and key definitions in mind, this section turns to actual crimes and eco-terrorism conducted by the REM. The charts, maps and graphs in the following section are compiled by the authors from two separate datasets. The first dataset was collected by the Institute for the Study of Violent Groups (ISVG) and covers incidents conducted by domestic and international radical environmentalists from 1981 - 2009. The second is a subset of the Global Terrorism Database (GTD), compiled by the National Consortium for the Study of Terrorism and Responses to Terrorism (START) at the University of Maryland. As discussed below, this data source provides deep information on a narrower class of events—those that involve the real or threatened use of violence.

Neither of these datasets is likely to be comprehensive of illicit actions carried out by radical environmentalist groups, as the datasets under-report minor acts of "monkey wrenching" and vandalism that go unreported by the media. In addition, both datasets are part of much larger databases and therefore lack the fidelity of less scientific but more focused datasets such as Foundation of Biomedical Research (FBR) dataset described in Appendix 1. Despite their inherent shortcomings, these data give unique insight into the scope and incidents conducted by the radical environmentalist movement.

**Figure 1. REM Incidents by Target Type (ISVG)**



| Number of Records | | TargetType | |
|---|---|---|---|
| · | 1 | 🟧 | Building |
| ○ | 5 | 🟩 | Individual |
| ○ | 10 | 🟥 | Monument / Structure / Public Land |
| ○ | 15 | 🟪 | Non-Building Infrastructure |
| ○ | 21 | 🟫 | Vehicle |

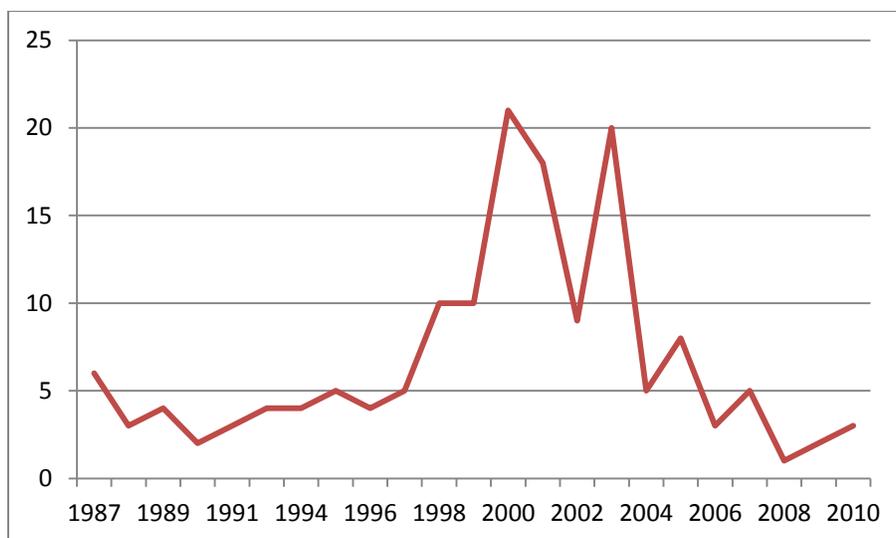*Source: Compiled by the authors from ISVG dataset.*

Figure 1 demonstrates the geographic distribution of REM incidents in the United States and is color coded by target type. The radical environmentalist movement in North America remains primarily a threat to property, as almost all the incidents focused on property, rather than people.

## *Eco-Terrorism in the United States*

Whereas ISVG looks at a broad range of criminal activity by the REM, the Global Terrorism Database (GTD) contains information exclusively on the violent attacks that members of this movement have engaged in, allowing for an overview of eco-terrorist activity in the United States. The GTD classifies as terrorism "the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation" (GTD 2011). In addition, events included in the GTD must meet 2 of 3 inclusion criteria:  (1) The violent act was aimed at attaining a political, economic, religious, or social goal; (2) The violent act included evidence of an intention to coerce, intimidate, or convey some other message to a larger audience (or audiences) other than the immediate victims; and (3) The violent act was outside the precepts of International Humanitarian Law (GTD 2011).

Based on this definition and GTD's efforts to identify perpetrators of each terrorist incident and to categorize the primary motivations behind the perpetrators' actions, GTD has identified 172 eco-terrorist events in the United States between 1977 and 2010, compared to—for instance—the more than 500 REM incidents identified by FBR. Figure 2 presents information on the number of these incidents by year. These data demonstrate that the peak of eco-terrorism in the United States occurred in the late 1990s and early 2000s.

**Figure 2. Number of Eco-Terrorist Attacks in the United States by Year**



*Source: Global Terrorism Database*

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It is important to note that, consistent with the philosophy of much of the REM, no known deaths have occurred as the direct result of any of these terrorist incidents, but they have resulted in millions of dollars in property damage through the years.

Consistent with data on REM activities more generally, presented in Figure 1, eco-terrorism has been concentrated in the Western states of the United States, with California as the most frequent target, experiencing 46 known attacks. However, in all, 26 U.S. states have experienced at least one eco-terrorist attack according to the GTD, demonstrating the national nature of this activity.

According to the GTD, ALF and ELF are responsible for the majority of eco-terrorist activity in the country. As Figure 3 reflects, ELF and ALF combined have committed 76% of the known eco-terrorist attacks in the United States. The remaining incidents have been conducted by a range of groups and individuals, similarly committed to the goals of the REM, but less active in terms of committing terrorist attacks. While FBR highlights PETA and SHAC as particularly active groups, it is notable that the GTD does not include any information that links these two radical groups to known terrorist events.

**Figure 3. Perpetrators of U.S. Eco-Terrorist Activity**



*Source: Global Terrorism Database*
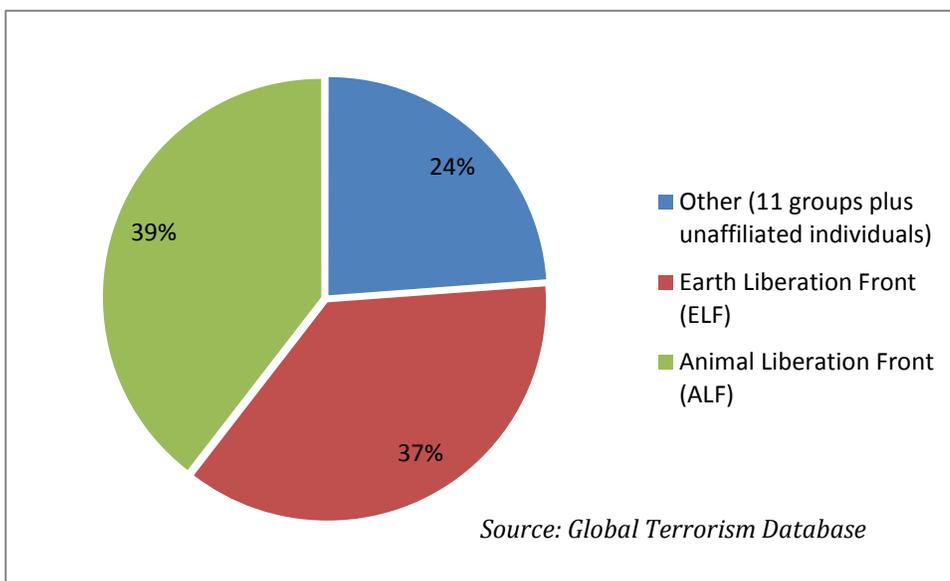
## The Family

The intent of this section is to assess the composition of the Family, its ideological underpinnings, tactics, operational security and messaging influence campaign, all of which are relevant to the impact that specific countermeasures had on the group's devolution. Extremist groups are diverse in many regards. These four factors will provide a better understanding of the Family (and its place in a larger network) and outline a frame of reference for the examination of Operation Backfire.

The Family was comprised of 18 members throughout its lifespan, though its size varied at any given period of time. While their backgrounds are diverse in many respects, there are some common

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characteristics that brought each of them to the group. Their disaffection with society, a disregard for the justice system (especially law enforcement), association with larger protest and activist communities, and a staunch commitment to one another – at least initially – are important hallmarks. Members' education levels varied significantly: Some possessed college degrees and others had attended post-secondary institutions, according to the Government Sentencing Memorandum (Engdall et al. 2007). While reports indicate the group's members shared a commitment to the general REM agenda, personal ideologies were not uniform among them, and morphed over time.

In discussing the group, the architect of Operation Backfire, Kirk Engdall, noted

> Some of the people wanted to do it simply because they were political activists, [and others] were motivated because they like to blow things up. And some people just came along because their boyfriend was involved or their girlfriend was involved. And then some people did it because of their certain political philosophy about things. So there were all kinds of mixed motives but the bottom line was, no matter what the motive was, they were out to destroy property and they did it quite successfully (Kirk Engdall, telephone interview with author, 27 July 2011).

Evidently, the group was able to function – for a time – and attract new members despite the varying significance of a cohesive ideology.

The role of social bonding is patent and must be considered by those who design and implement terrorism countermeasures. As Tilby points out, the group's adoption of the name 'the Family' is without coincidence. Max Abrahms' (2008) research points to the significance of the connection between social ties and individuals' motives for joining extremist groups. Several members had close, personal relationships with one another and could be described as having a "sense of alienation from society" (98), another hallmark of individuals seeking membership in extremist groups. Citing numerous studies, Abrahms relates how "social bonds preceded ideological commitment, which was an effect, not a cause, of becoming a terrorist member" (98). He goes on to point out that, in some cases, terrorists and leaders "never develop a basic understanding of their organization's political purpose" (99). This appears to apply to the Family as well as the groups and individuals that Abrahms examined. The countermeasure in question did not explicitly leverage this dynamic to understand and dismantle the network; however, as investigators sought out an informant and elected which activists he should speak to in order to gather evidence, the importance of social ties was paramount among a number of considerations.

The Family was cautious about who was brought into the fold. For example, when Jonathan Paul recruited Jennifer Kolar – the two were in a romantic relationship – for the Cavel West Arson, other members "were outraged [but] grudgingly accepted her" (Engdall et al. 2007). The Family's members recognized early on that operational security was vital to their survival and ability to operate. As Smith and Damphousse (2009) report,

> The Family added personnel with established histories of active participation in direct action in other venues. Most additions to the Family were seasoned environmental

extremists who had been arrested numerous times at demonstrations. They were known by Family members to be 'true believers' in the cause (491).

A few members may have been perceived to have been true believers when in fact other motivational dynamics had brought them to the table. Individuals recruited romantic partners and friends who were believed to be REM adherents as well, but who in many cases did not feel as committed to the REM cause and movement (Engdall, Tilby). Aside from the deep personal connections between some members, Ferguson, for example, was obsessed with pyrotechnics and explosives (Engdall). Members' views changed over time as well; Tilby relates how commitment was an evolutionary process." Individuals did not necessarily join the Family to be an arsonist, but over time some parted ways with the group's core ideology for the sake of causing destruction (Chuck Tilby, telephone interview with author, 2 August 2011).

Many members of the REM engaged in relatively low-level civil disobedience prior to graduating to more extreme tactics. Figure 4 is a simplified graphical representation of the radical environmentalist movement and is meant to represent the relative membership aggregate at each stratum of adherence. There is no static membership; activists might move up the pyramid initially but only a few reach its pinnacle. The members of the Family's adherence to radical environmentalistism can be depicted



**Figure 4. Simplified REM Adherence Pyramid**

this way. Some individuals may later completely disassociate themselves from the movement depending on personal and societal circumstances (Tilby). In the case of the Family, many of its members were already on the radical fringes of the larger movement by the time the group had formed (Engdall; Engdall et al 2007; Grigoriadis 2006; Tilby). Hence, it was much easier for the group's leaders, Kevin Tubbs, William Rodgers, and Stanislas Gregory Meyerhoff, to recruit the others to engage in the 20 direct actions that took place in the name of the ELF and the ALF. Figure 5 displays the Family's illegal actions chronologically.

The organizational structure of the Family supported its efforts to have a broad impact and to maintain a clandestine nature. Five 'Book Club' meetings – so named because written communication between members was decoded using "a series of numbers and a chosen book" (Engdall et al. 2007, 5) – took place in four states during the Family's arson and bombing campaign and were attended by "as many as 16 of the members" (Smith and Damphousse 2009, 486). Some meetings were much smaller than others, and 'Book Clubs' came to serve as sub-cells of the wider Family network (Figure 6). The intent of the meetings was to provide training for new members, share lessons learned from recent actions, and plot the way forward.
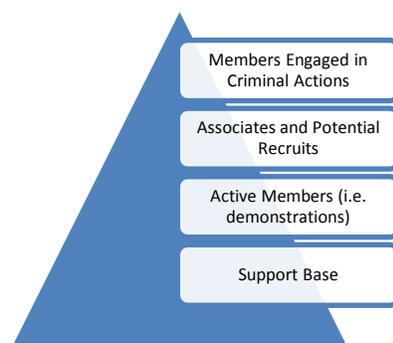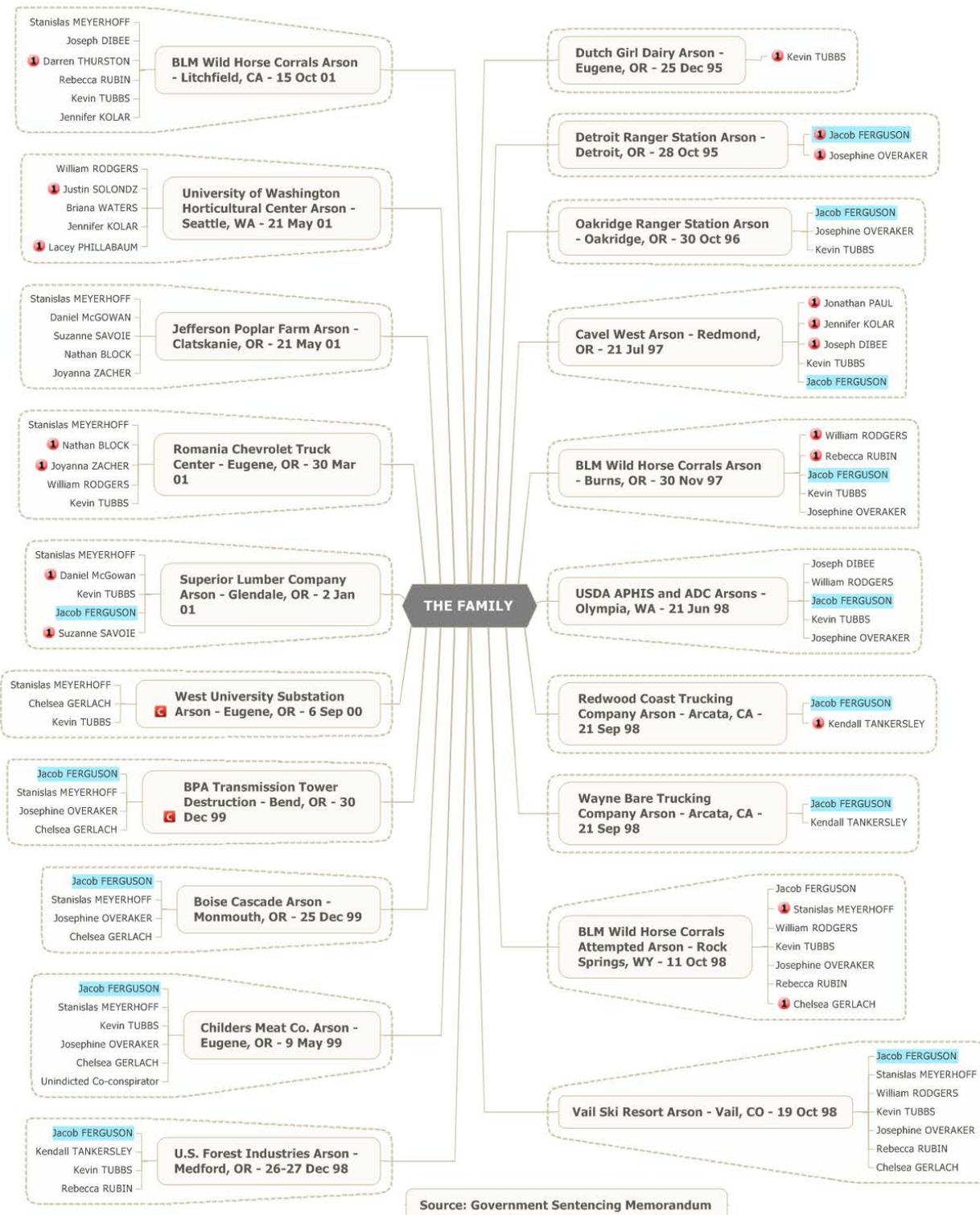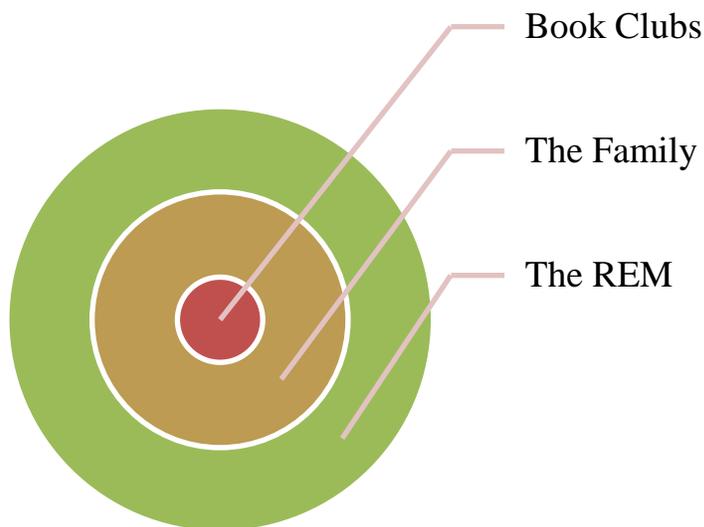
*Denotes a critical infrastructure target*

*Denotes a member's first action*

**Figure 5. The Family's Actions, Chronologically**

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**Figure 6. The Family's Concentric Network Structure**



Book Clubs

The Family

The REM

These forums also facilitated the solidification of their radical ideology and allowed members to encourage one another in their cause. As Chuck Tilby points out, "If somebody is being weak or second guessing their direction, involvement, or commitment, they all know it. They get to talk about it and work through it together . . . There is a social bond between the people before there is a criminal bond." The 'Book Clubs' were the manifestation of the 'leaderless resistance' model that the group had adopted, whether purposely or not, as a part of their operational security measures.

The authorities' investigations encountered significant challenges due to the sophisticated denial and deception techniques employed by members of the Family. Operational security was emphasized repeatedly during both meetings and the conduct of actions. According to the Government's Sentencing Memorandum, the accused evaded detection by

> concealing or destroying evidence, using code words and numbers, code names and nicknames when communicating among themselves, producing or obtaining false identification documents to conceal their true identities, fleeing to foreign countries to avoid detection and arrest, and maintaining an intricate web of secrecy and security within their own ranks, even to the point of not discussing events with each other (Engdall et al. 2007).

The expertise to enact such protocols were passed on and discussed at "Book Club" meetings, themselves subject to elaborate means to avoid detection. Participants arrived at these meetings complete with back stories and details about how they had avoided detection. These measures contributed to law enforcement's inability to identify members of the Family and tie them to actions for many years.

Messaging was another key dimension of the campaign. The activists mounted an information influence campaign to leverage the media coverage after each successful attack. They likely did so at the expense of

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popular support, but certainly gained solidarity from within the REM. The following is a communiqué sent following the arson at the Jefferson Poplar Farm arson in Clatskanie, Oregon, in May 2001.

> We torched Jefferson Poplar because hybrid poplars are an ecological nightmare threatening native biodiversity in the ecosystem. Our forests are being liquidated and replaced with monocultured tree farms so greedy, earth raping corporations can make more money... Pending legislation in Oregon and Washington further criminalizing direct action in defense of the wild will not stop us and only highlights the fragility of the ecocidal empire (Engdall et al. 2007).

Most were similar in tone and wording. In some cases, such as when an attack was perceived to have not been particularly effective, no communiqué followed. The North American ALF and ELF Press Offices were instrumental in bringing these messages to a wider audience while protecting the anonymity of the Family's members. The individuals managing these offices, while not a part of the Family network, could be considered to reside in the 'associates and potential recruits' level of the REM adherence pyramid. Communiqués eventually became a point of contention as at least one member accused another of altering them to his liking (Engdall et al. 2007). For this group, messaging was a vital component of their terrorist campaign, and disagreements related to the content and delivery of those messages reveal larger issues in terms of cohesion and adherence.

As Brian Jackson (2006b) explains, "terrorist groups do not automatically or immediately gain the ability to use given tactics or carry out particular types of operations. Capabilities, including those that facilitate learning, must be developed" (161). For the Family, 'Book Clubs' were the mechanism to promote learning and teach tactics. The Family's tactics included the use of improvised explosive devices (IEDs), setting fire to gasoline or other combustible liquids (arson), and sabotage. Essentially, they aimed to destroy commercial and government property. According to the Government Sentencing Memorandum (Engdall et al. 2007), both Rodgers and Meyerhoff discussed "escalating their tactics to include the assassination of certain business leaders," but this did not take place (76). The group's tactics can be characterized as 'low tech' (requiring very little technical expertise to execute), effective against the selected targets in most cases, using readily available and inexpensive materials, requiring very little logistical support (e.g., to construct devices), easily taught and learned, easily rehearsed, and producing a significant visual impact (scorched buildings and burning flames guaranteed news coverage). The overall theme was *simplicity,* and this allowed the Family to achieve a rapid organizational learning cycle.

The last action attributed to the network occurred on October 15, 2001, at the Bureau of Land Management's Litchfield, California horse corral. Infighting and a shift in strategic focus had led to significant, irreconcilable rifts (Engdall et al. 2007; Tilby, Engdall). Smith and Damphousse (2009) relate how "considerable dissention had developed within the group, including disagreements about the success of their actions and problems with [William] Rodgers' abusive sexual behavior" (486). Extremist groups have an unpredictable life cycle, but few are long-lasting. David Rapoport's 1990 investigation into the life span of terrorist organizations revealed that "90 percent of them have a life span of less than one year; and of those that make it to a year, more than half disappear within a decade" (Cronin 2006, 13). More specifically, recent data from START on terrorist organizations that have attacked the United

States between 1970 and 2010 reveal that 65 percent of these 142 groups faded away within one year or less of their first attack, with only 13 percent still existing a decade after their first attack.[6] It would appear that this observation applied to the Family. At the turn of the millennium, investigators were unaware of the rifts within and impending implosion of the Family.

## Operation Backfire

The Family's initial actions confounded law enforcement agencies in different jurisdictions. Until the Assistant United States Attorney (AUSA) in Eugene, Oregon, Kirk Engdall and his collaborators in local law enforcement and federal-level agencies presented an alternate framework to their superiors and officials in other agencies, the arson cases were initially addressed in a disparate and uncoordinated manner. At the time, the FBI's Joint Terrorism Task Force (JTTF) office in Portland had no mechanism to share information with local law enforcement officials in Eugene. Different AUSAs in the state of Oregon had jurisdiction over different cases. These decentralized authority structures impeded a coherent investigation into acts that the original investigative teams thought to be linked based on the tactics, techniques and procedures employed by the perpetrators (Tilby). While police agencies collected the forensic evidence in different jurisdictions, no single body ensured it was collated and shared in a centralized fashion.

As a result, the investigations into the Family's early actions revealed very little in terms of suspects. For example, the initial four-year investigation undertaken by a small interagency team of the arson at the Oak Ridge Ranger Station on October 30, 1996, failed to result in any charges. The bulk of the investigators' time was spent resolving leads regarding persons who falsely claimed credit for the arson (Engdall). It was evident to those involved that another approach was needed. The turning point came towards the end of 2000.

It was the considerable investment of time and resources into more traditional models that ultimately dispelled their efficacy and forced officials, led by Engdall, to pursue their inquiries in a different framework that emphasized coordination among different agencies. As Chuck Tilby details, "we were able to sell [a new joint, interagency] concept to all the partner agencies without difficulty. It helped that we had several years to look at different models and try different things . . . we were able to say we had tried other models that were lacking. It was a compelling argument." The amalgamation of the separate investigations allowed officials to pool resources, confirm or deny suspected links between people and events, leverage success in one investigation for another, and to better understand the entire eco-terrorist network they were up against.

Adaptability and innovation were key factors for the investigation's progression. According to Engdall, over the course of the investigation, the team "had to be willing to adjust and change and sometimes throw out our preconceived notions of how we thought the crime occurred and why it occurred." An

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[6] Calculated based on the Profiles of Perpetrators of Terrorism in the United States data set, available at http://dvn.iq.harvard.edu/dvn/dv/start/faces/study/StudyPage.xhtml?globalId=hdl:1902.1/17702&studyListingIndex=4_7755dc9b1 4957832aa89657571a4.

example of this shift in mindsets took place in late 2003 at a coordination meeting in Eugene during which Engdall suggested the group take a "cold case approach" to one of the actions. This meant assembling a small team to revisit the original evidence, case notes, and reports in order to draw novel conclusions. Twelve agents from various agencies met weekly and developed new leads based on a fresh look at the Romania Chevrolet Truck Center Arson, which took place on March 30, 2001.

As a result of their renewed efforts, the team succeeded in turning Jacob Ferguson into a willing informant in 2003 (Grigoriadis 2006; Engdall; Tilby). Investigators suspected he had participated in the arson at the Romania Chevrolet Truck Center in March 2001 and knew he was active in Eugene's anarchist community. The new cooperative model permitted them to understand Ferguson's value and mount an overt surveillance operation. Once arrested, Ferguson's sense of self-preservation in the face of considerable evidence implicating him in crimes was a considerable factor. Tilby relates that "he did not want to go to jail… his personal motivations were much higher than his ideological motivations. That's what made our approach successful." Ferguson took part in 13 of the 20 actions laid out in the Government Sentencing Memorandum and, so, was in an ideal position to relate their details to law enforcement officials. However, until his arrest, they were unaware of the extent of Ferguson's involvement and were uncertain about his willingness to cooperate. Since investigators were aware of his general role in the REM, his drug habit and family history, they were able to effectively shape the narrative used to convince him to side with the investigation. The team made no attempt to recruit other cooperating witnesses initially.

The entire dynamic of the inquiry changed following that moment; Ferguson's recruitment marked the first time that investigators had the chance to get a glimpse inside the network to identify and confirm suspects and the nature of their roles. The crew had adopted the name *Arson Heat* to brand their investigation, but this quickly gave way to *Operation Backfire* after Ferguson agreed to cooperate. Engdall explains that "it had to do with fire: During wildfire suppression, you light a smaller fire in front of the main body of fire, burn back against it. It seemed that Ferguson was doing that for us; he was our little fire we were burning back against the arson conspiracy." After eliciting a significant amount of information from Ferguson regarding the Family's actions, the team focused on soliciting support from prosecutors in other jurisdictions so Backfire could expand. This was crucial since the Family's members and their actions were so dispersed. Moreover, such support was vital since it would allow the leaders to access evidence and leverage additional resources. To resolve issues of jurisdiction, Engdall and his team engaged directly with their counterparts and reported their successful recruitment of a cooperating witness, without revealing Ferguson's name.

By this time – 2003 – the Family had ceased to exist, and it was not until December 2005 that law enforcement officials made the initial arrests of six suspected members of the Family (Egan 2005). In the interim period, Ferguson visited known suspects wearing a hidden recording device, and the investigation progressed with each contact.  The Backfire team, of which Engdall became the *de facto* leader, had also expanded from the original dozen investigators to more than twice that amount and followed a road map established using Ferguson's information to track suspects. By this point, officials from the U.S. Attorney General's office, the FBI, the Federal Bureau of the Alcohol, Tobacco, and Firearms,

the U.S. Forest Service, the Bureau of Land Management, the Oregon State Police, and the Eugene Police Department were fully engaged in a cooperative context (Engdall).

The organization of the task force is notable. Standing coordination meetings attended by representatives from involved agencies permitted the team to decide which agency and personnel would follow up which leads. Engdall led the meetings on a weekly basis; over time, meetings became monthly but still permitted Engdall to keep all stakeholders apprised of new information and the investigation's progress. Investigative lead agents for each of the 12 Oregon arsons, as well as lead agents for the out-of-district arsons became subject matter experts on their respective cases. An evidence management officer was employed to manage all incoming evidence in a database. Likewise, an investigative lead officer ensured that all leads were vetted so they did not jeopardize the role of the cooperating witness.

Ferguson's exposure was a major concern; there was a certain amount of risk that accompanied the expanded collaboration since more details were known by more people. In the end, the standard protocols they employed (i.e., ensuring they referred to Ferguson as 'cooperating witness' only and disguising his name in all correspondence) were effective and there were no unauthorized disclosures regarding Ferguson or other sensitive matters.

Stanislas Meyerhoff was one of the first members of the Family placed under arrest by local police and members of the task force in Charlottesville, Virginia in early December 2005 (Engdall). Officials quickly gained his cooperation since Ferguson had recorded incriminating statements made by the suspect. With Meyerhoff's corroborating evidence on record, the Backfire team was able to avoid relying on a grand jury subpoena alone (which would have otherwise been required had Meyerhoff not opted to cooperate) and takedown teams staged in different cities across the United States made further arrests (Engdall).

Despite the lengthy investigation, there were still members of the Family that officials were unaware of until those arrested cooperated and named them. For example, the roles of Nathan Fraser Block and Joyanna L. Zacher were only revealed by Chelsea Dawn Gerlach after her arrest. Thus, an understanding of the entire network remained elusive until the very end despite the considerable investigative horsepower dedicated to the entire effort. The eco-terrorist group's operational security measures account for this knowledge gap. In the end, all 14 arrests took place in approximately six months (Engdall). Four suspects, Justin Solondz, Josephine Overaker, Rebecca Rubin and Joseph Dibee, became fugitives. Solondz was arrested in China in 2011 and extradited to the United States to face charges related to the action committed with the Family. He is the 15th member to be prosecuted (Springer 2011).

## Design and Implementation of Countermeasures against Eco-Terrorism

This section is concerned with the design and implementation characteristics that led to Backfire's lasting outcomes and intended or unintended effects. As Engdall, Tilby, and the others shaped the investigation, they had explicit and implicit goals. The primary aim was to assign responsibility for the actions and to dismantle the group to ensure that those responsible would not attempt other violent activity. Another parallel aim was to dissuade membership in groups like the Family, by sending a clear message to the

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REM and the public that the use of violent tactics carried serious consequences. Engdall admits that Backfire was not a "cookie cutter investigation" – while the techniques were classic, the conditions would be difficult to replicate. Certainly, the use of reliable informants – a traditional law enforcement technique – was essential to the successful outcome of this investigation, with the enlistment of Ferguson among the most crucial developments that prevented the investigation from stalling permanently. In addition, there are notable tools and mechanisms used at different times in Backfire that merit attention. The benefits of the amalgamation of the disparate investigation and Ferguson's recruitment have been addressed above. Here we examine the use of social network analysis and the importance of effective resource management.

### *Link Analysis Tools*

The investigatory team made extensive use of link analysis, a tool more commonly applied to narcotics investigations (Tilby). Link analysis facilitates the visual representation of suspected and confirmed links between actors, actions, and places that interact in some observable fashion. It can help organize and visually represent complex information about a large network of people, but is usually conducted without consideration for the nuances of the relations between those people. Tilby explains how "a lot of the normal assumptions didn't apply because we weren't intimately knowledgeable about the social interactions between people and the delineation between the criminal cell and other people: What made that cell and the interactions in it different?"

Tilby and the team may have been better served by social network analysis (SNA), which – in a law enforcement context – allows investigators to "systematically undercover clandestine and adversary networks" by "detecting and interpreting patterns of social ties among actors and identifying the impact (benefit or constraints) of the social structure on the functioning of actors and networks" (van der Hulst 2009, 103). Unlike traditional link analysis, SNA takes into account the value and meanings of the connections between entities. Had it been applied earlier on in a formal and concerted way, SNA may have allowed the investigators to better appreciate the complexity of the relationships among members in the Family. To do so effectively, centralized control is required to pool information and make it accessible. As detailed above, this did not take place until approximately 2001. Hence, link analysis, though it was employed, did not contribute significantly to the investigation. The earlier application of SNA and the accessibility of available data may have altered the course of the investigation and revealed suspects earlier. At the time of the investigation, employing SNA in a formal sense was not standard practice (Tilby).

Applying SNA effectively relies on the collection of rich data, information about the nature of a person's different relationships, positions a person holds in an organization, and labels attributed to an individual. These data must be updated continuously to reflect changes: relationships are not static processes or connections. Individuals occupy different places in a network; the value of a new member's place in a network, and the influence he or she might exert on it, changes with time and experience. For example, Meyerhoff was first involved in the Family's ninth action, yet was a key figure in terms of constructing explosive devices and encouraging others to escalate in early 2001 (Engdall et al. 2007). Not every member of the Family was adept at constructing improvised explosive devices (although Meyerhoff was

working to teach this capability at book club meetings), but each offered a skill or characteristic that lent to the network's capabilities. It is not always possible to know such distinct roles without careful surveillance (both physical and electronic) and the establishment of a centrally-managed database.

In cases such as these, officials must be prepared to build a secure database to construct networks from which to draw unobvious connections and understand how the organization functions based on the interactions between members in space and time. Dibee disliked Paul and even discussed with Meyerhoff a plan to kill him. Perhaps not in this instance, but a rift in a network such as the Family's may provide law enforcement officials an opening to recruit a potential cooperating witness. The study of relational data has enormous applicability to the study of extremist groups such as the Family. Since this group, and similar groups, functioned as networks with cells (i.e., book clubs), SNA might have allowed officials to appreciate the implications of individual actors' engagements with one another, especially concerning decision-making (Coles 2001). Furthermore, as Coles indicates, "this interaction often has a regularity and patterning which can betray the structure in a social system" (2001, 581). Finally, taking into account Thomas' and Casebeer's research into the formulation of terrorism countermeasures, law enforcement officials can harness the results of SNA to develop strategies based on an understanding of a network's interactive dynamics.

## *Resource Management*

Resource management within a collaborative framework is inherently difficult. During Operation Backfire, it was the leaders' challenge to access enough resources, and spread them across more people, larger geographic spaces and time. As Engdall relates in his interview, access to FBI human, material, and financial resources was pivotal. As a federal-level agency, the Bureau had the most resources available, which were needed to make the investigation effective. The sharing and management of resources before Operation Backfire was stood up was mostly ineffective. According to Chuck Tilby

> [One lead investigator] garnered influence over some resources, but not all. I had influence over some resources, but not all. And it was difficult to get work assigned, and responsibilities realized. In conjunction with Kirk Engdall, we came up with a more formalized working group where the management of the investigation was done by the representatives of those agencies . . . [The group was able to] coordinate those resources and manage them on a broad scale. It ended up looking like a joint interagency task force, in Department of Defense parlance. That's when we really found that we could coordinate the investigation without hamstringing everybody's individual strengths and agencies were then committing resources where before they weren't.

The former police captain also notes that the mechanisms were important, but so was the amount of time that had passed since the Family's initial actions; all of the agencies felt pressured to resolve them. Still, it is notable that the formation of a culture that made each agency a stakeholder in the process was tied closely to the commitment of resources and the operation's ultimate success.

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Leaders strove to change the dynamic of the relationship with the FBI without souring it. The federal agency wielded considerable resources which the joint task force would require for Backfire to be successful. The partnership was a sensitive one, but given the remarkable failures of previous courses of action (i.e., the disparate, uncoordinated investigations), the FBI was equally receptive to a novel approach and came on board. The strategic need for the formation of the task force was, by 2001, starkly apparent. Kathleen Eisenhardt and Claudia Schoohoven (1996), writing for a business journal, relate how firms form alliances based on strategic needs and social opportunities; they note that "cooperative relationships help firms conserve resources and share risks, serve as signals of enhanced legitimacy, and as opportunities for gaining new competencies" (136). Each of these elements was readily apparent in the 'alliance' formation that occurred with the launch of Operation Backfire. Thus, small, interagency groups that wield control over resources and the ability to delegate authority can effectively investigate disparate, complex extremist actions in a domestic setting. Had any of the attacks been perpetrated over a wider area, Engdall been less tactful in implementing the approach, or an informant not materialized this approach may have been untenable. Moreover, the adoption of this approach can come at the expense of operational security as more personnel are exposed to sensitive information and sources.

### *Lasting Impact?*

Operation Backfire had a range of outcomes and lasting effects rooted in deterrence and lessons learned for law enforcement. A review of eco-terrorist activity in the United States before and after Operation Backfire reflects that there has been a decline in the number of such attacks since the first arrests in the investigation were made at the end of 2005, as reflected in Figure 7.
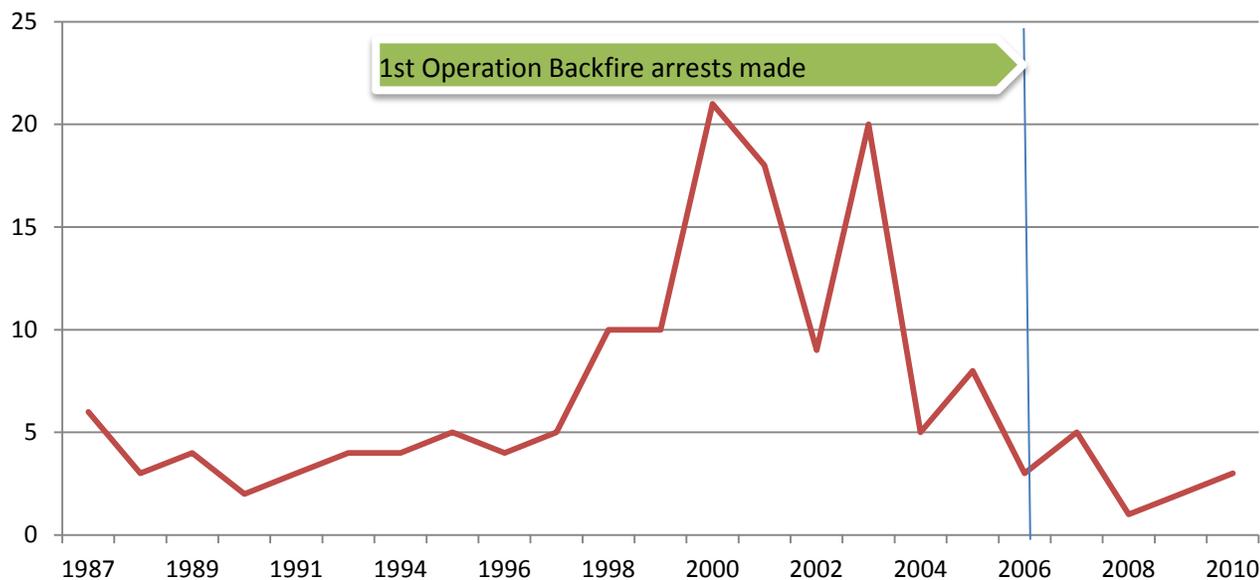


*Source: Global Terrorism Database*

**Figure 7. Eco-Terrorist attacks in the United States by Year**

**START ▶▶**

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These data also reveal, though, that this trend towards fewer attacks had begun before Backfire's successes, following peaks of activity in 2001 and 2003. The Family ceased to exist two years prior to the first arrest in 2003, and the major round up of Family members did not occur until December 2005, four years after the Family's last act of arson. It is likely that the decline in activity is the result of the collapse of the Family, however, it is hard to argue that the Family collapsed due to police pressure. At the time the Family ceased to operate, law enforcement had no active leads into the group. The evidence suggests that internal disagreements about the use of violence against people and concern that their tactics were ineffective (especially the May 21, 2001 attacks at University of Washington Horticulture Center and the Jefferson Poplar Farm arson) led to serious internal strife that brought down the group in 2001. The events of May 21, 2001 (in which the group destroyed what they wrongfully believed to be a tree farm that used genetic engineering and caused massive damage at the University of Washington Center for Urban Horticulture well beyond what they had targeted) led to serious disagreements within the group. Moreover, several of their earlier targets had been rebuilt and continued to operate. All this led the group to question their violent tactics and caused fatal rifts within the organization.
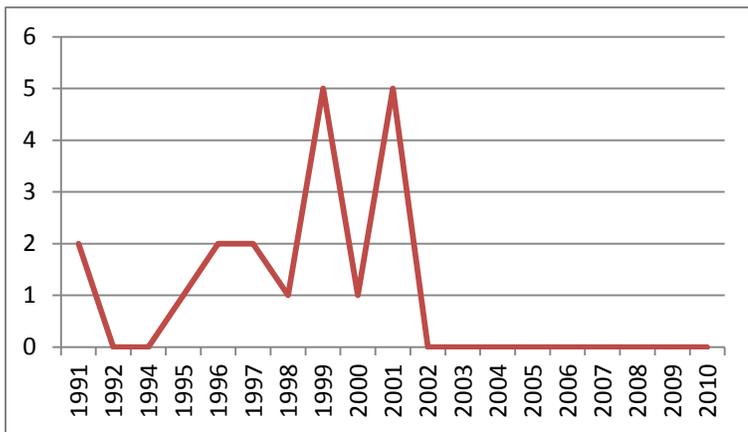


*Source: Global Terrorism Database*

**Figure 8. Eco-terrorist attacks in Oregon by Year**

Given the circumstances, it is difficult to isolate the degree to which reductions in eco-terrorist activity in general are the result of Backfire's successful apprehension of key participants in the movement. But, looking at the local impact of this counterterrorism operation, according to the Global Terrorism Database, no eco-terrorist incidents have taken place in Oregon – the home of Backfire – since 2001. In contrast, Oregon had experienced 19 such attacks between 1991 and 2001 (see Figure 8). This shift away from targets in Oregon could signal that REM members considered this area unsafe due to law enforcement's successes there, or it could simply suggest that the Family was responsible for the bulk of the actions in this area and when it ceased to operate in 2001, the number of illicit actions dropped off.

Engdall provides his perspective on the long-term impact of Backfire. He relates how

> It's generational. People have a short-term memory. For a while, [Backfire] really quashed activity, but I think people are going to forget, and move forward anyway. There's no long lasting effect for deterrence and crime. People are young and dumb and think 'well, I can do it better and quicker'. They don't do the research. Nobody is a historian anymore. It helps for a little while – I think the conclusion of the case has helped – but I think in the end, they're going to do it again (Engdall).

It is possible that the very attribute that contributed to the REM's organizational success, the use of autonomous cells, might also limit the lasting impact of major law enforcement successes like Operation Backfire. Lacking a formal organizational structure, or even identifiable leaders, the distinct cells lack the

type of organizational memory that would enable groups to learn from the Family's failure and that would make the operation a more lasting deterrent. The same dynamic may also limit the organizational learning that would enable others to more easily mount similar actions in the future.

Hal Bernton and Craig Welch reported in 2005 following additional charges against Family members Gerlach and Tubbs, "Some local activists feel they are under siege. The wide scope of the investigation, coupled with the possibility that arson convictions could bring decades of prison time, has stirred up fear and anger" (online). Whether this manifests as a more general deterrence is more difficult to determine; fear and anger could also result in a backlash, and the absence of attacks for a short amount of time does not equate to long-term deterrence. In addition, the most sophisticated members of the movement might adapt their behaviors in light of what they learned about law enforcement protocols.

In an article about Justin Solondz's arrest, terrorism expert Ron Arnold is quoted as saying that "the operation has all but killed ELF's desire to form large eco-terror cells. "We learned far more than they wanted us to. . . That's why we don't see people doing that sort of thing anymore, we pretty much figured out their game plan. We have their playbook" (Springer 2011). The same article goes on to report that, "Police say one of the results of Operation Backfire has been a split between animal rights groups and environmental activists. The two used to be combined into ELF-ALF, but no more" (*op cit*). The evidence for both claims is noticeably omitted, and little time has passed in which to observe the mobilization of a new cell determined to carry out actions on the same scale as the Family (or the lack of one). Ultimately, such claims lack empirical backing; it is one thing to note the absence of eco-terrorist attacks and quite another to understand the movement's ability to mount an arson and bombing campaign in the near term (the next decade). The few public statements by REM adherents that are accessible shed very little light on the long-term impacts of Operation Backfire. Yet, they offer a glimpse of the sentiments internal to the REM. Tilby and Engdall agreed that all extremism ebbs and flows; the United States is likely to experience a period with frequent acts of eco-terrorism on the same or greater scale as when the Family was operational.

While anecdotal in nature, the writings in notable REM publications, such as ELF's *Resistance Magazine* and *Earth First! Journal*, provide a glimpse of the beliefs coursing through the movement, spread via the Internet, subscriptions and social networks (online and offline). One of ELF's former members explicitly pointed out the limited impact of Backfire, writing in *Resistance* magazine in 2010 that:

> Many ELF actions, including a number of very significant actions, remain unsolved and at least some strategic evolutions have apparently taken place to better prevent a repeat of Operation Backfire. The organization continues to engage in guerrilla sabotage in the defense of the Earth, including the toppling of two controversial AM radio towers in Washington with a commandeered excavator on September 4, 2009 and a series of recent high-profile strikes and arsons in Mexico (Pickering 2010, 52).

This is a far cry from disproving the deterrent effect of Operation Backfire and the subsequent prosecution. It is one thing to inspire from a blog post or journal entry and quite another to actually engage in criminal acts against the ELF's (or any radical environmentalist group's) intended targets.

Moreover, if the words of Pickering and others are to be believed, there is a feedback loop that the larger radical environmentalist movement has taken advantage of that allows its franchised cells potentially to carry on with acts of violence and destruction despite setbacks in the past or other parts of the country. This process may not manifest or be detectable for many years and depends on a variety of factors, such as, for example, how much attention is paid to environmental legislation in Washington (Deshpande 2011; Johnson et al. 2010).

The investigation's use of confidential informants, as well as the cooperation prosecutors gained following the arrests, may have an implicit deterrent effect on the REM as well. An individual's cooperation with authorities to uncover incriminating evidence from one's co-conspirators (or threat thereof) engenders fear in the radical elements of the REM. The possibility of dissension down the road may affect group cohesion as members potentially ask themselves, 'If I engage in illegal activities, will a fellow extremist turn on me if we are caught?' This likely has a powerful effect on a person's sense of self-preservation and may temper or even remove the enthusiasm required to reach the peak of the REM adherence pyramid. The role of implicit deterrence in counterterrorism needs to be studied further.

There is no evidence that Operation Backfire has changed police operations against radical environmentalists or other extremist groups that engage in violent activity in the last six years. While Backfire has, thus far, not been emulated in the same jurisdictions or others, police agencies have not yet had to contend with a group on the same scale as the Family. The joint interagency task force that executed Operation Backfire was not a formal entity. Joint Terrorism Task Forces (JTTF) continue to be the dominant bodies tasked with counterterrorism at the local and regional levels in the U.S. Perhaps unexpectedly, the Portland police bureau is permitted to work with the Portland JTTF on a case-by-case basis, unlike its counterparts in other American cities (Baer 2011, online). During his interview, Engdall noted that it would have been valuable to have conducted an after action review; this was not done since it was not standard practice at the time. Such a review is intended to transmit knowledge within an organization and field about successful and unsuccessful practices. Such reviews support organizational learning, a key function of any agency engaged in law enforcement and countering dynamic threats that have the potential to manifest in different forms.

## Conclusion and Future Research

This study attempts to explain the factors and methods that led to the success of Operation Backfire and merit consideration in future similar investigations. We note that Backfire did not explicitly counter the Family, since the group had disbanded well before the first arrest; however, as an investigation into the group's actions and a potential deterrent, the effectiveness of Backfire cannot be overlooked. In fact, by replicating some of Backfire's effective practices, future investigations into similar acts or groups may be successful earlier and expend relatively fewer resources.

The stories of Operation Backfire and the Family remain incomplete in some regards. More narratives are likely to emerge in the future, some of which will provide additional insight into the perpetrators and the investigators' challenges and successes. Future research might take into account the radicalization of individual members and the various roles (e.g., recruitment and facilitation) undertaken by associates. In the same vein, follow-up studies might adopt a network analysis approach to break down the Family's network and provide an understanding of each person's place within it and the members' interactions, as we have suggested here. The entire episode forces us to consider the differences between terrorism and various forms of political participation, another issue that deserves further scholarly attention. Additional critical investigation is needed as the radical environmentalist movement is a global problem that has, so far, shown no sign of abating.

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*Howard Ernst's interview with Kirk Engdall was conducted over the phone 27 July 2011.*

*Nick Deshpande's Interview with Chuck Tilby was conducted via VoIP 2 August 2011.*

# Appendix 1: Data from the Foundation for Biomedical Research (FBR)

In addition to the GTD and ISVG datasets, the authors also analyzed a dataset that was collected by the Foundation for Biomedical Research (FBR) and covers domestic REM incidents from 1981 -2006. Given the FBR's focus on animal research safety, its data tend to focus on crimes committed against animal research centers. In addition, the FBR might not be viewed as an objective source of data, given that its constituency has often been the target of these groups.

Keeping in mind these considerations, the data demonstrate the breadth of the geographic distribution of REM incidents in the United States. While the REM might have begun in the Pacific Northwest, it has spread to both coasts, exists in virtually every state, and has conducted frequent incidents in Minnesota, Michigan, Ohio, and Texas.
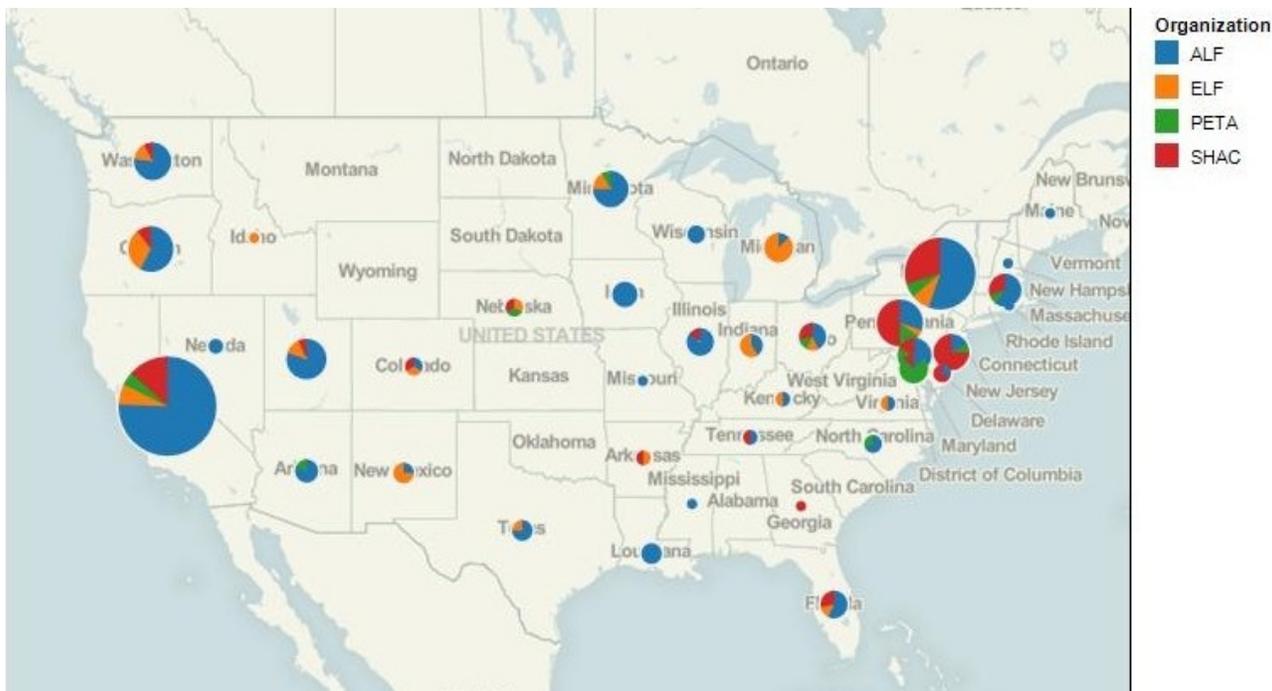


*Source: Compiled by the authors from FBR dataset. Note: Given FBR's focus on animal research safety, its data tend to focus on crimes committed against animal research centers. In addition, FBR might not be viewed as an objective source of data, given that its constituency has often been the target of these groups.*

Looking at the Figure above, we see that ALF (represented by the color blue) is the most active radical environmentalist group in the FBR dataset and that the group's activities are not bound by geography. ALF has a presence throughout the country, and with few exceptions (e.g., ELF in Michigan and SHAC in the Northeast), ALF is associated with the largest number of incidents in each region in this dataset. SHAC's presence in the Northeast region is understandable, as they focus on a specific animal research operation, Huntingdon Life Sciences, which has its North American facilities throughout this area.