

Environmental Justice Strategies in Federal Agencies: *A Regional Focus*



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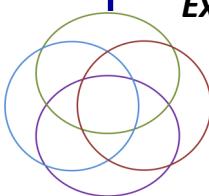
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Executive Summary

Bill Clinton signed Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations in 1994. The Order stipulates that “each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority and low-income populations...”

Many steps have been taken by government and non-governmental organizations to institutionalize environmental justice (EJ) since the Order was issued. The efforts of determined individuals and community-based organizations have evolved into a more powerful and broad-based movement to address environmental hazards in minority and low-income communities than had previously existed. Federal agencies’ responses to the Executive Order have added a top-down aspect to this bottom-up grassroots approach addressing environmental justice concerns. Sixteen years later, federal agencies have yet to fully integrate these concerns into day-to-day operations. To address this shortfall, the Natural Resources Defense Council (NRDC) and West Harlem Environmental Action (WEACT) tasked thirteen students from Columbia University’s Master of Public Administration program in Environmental Science & Policy (with Faculty Advisor E. Gail Suchman, Esq.) with assessing region-level compliance with Executive Order 12898.

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Systems
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Even with the constraints of limited funding, regulatory challenges, and political influence, EJ organizations have made substantial progress at the national, regional and local levels, developing missions as diverse as the environmental issues affecting their respective communities. EJ organizations can be credited with informing community members and government agencies of environmental threats to human health and of barriers to environmental amenities. They have broadened the movement to ensure that their interests are considered in important political decisions.

In response to bottom-up pressure and the requirements of the Executive Order, many federal agencies have policies which purport to consider disproportionate environmental harms to minority and low-income communities. There remains a chasm, however, between current federal initiatives and areas of need, as evidenced by the plethora of grassroots organizations necessary to safeguard vulnerable communities from environmental injustices. While substantial progress has been made on issues that have potential for litigation and are easily solvable or inexpensive, the costly and complicated issues that require fundamental change within governmental agencies remain.

Prepared for:



Our findings illustrate the need for increased education and training of federal employees, proactive and diverse approaches to community engagement, along with innovative programmatic, financial and regulatory management improvements. The degree to which EJ has been incorporated into day-to-day decision-making is still heavily dependent on reactions to political pressure and the individual will of government leaders. A government-wide definition, concordant with the Executive Order, is essential for reducing these inconsistencies across federal agencies and among regions. With proper vision and leadership, Executive Order 12898 can again become a central component of the federal policy agenda. Recent political appointments and noticeable changes under the Obama administration offer hope for future improvements, although many policy changes have yet to be implemented.

The aforementioned actions by federal agencies can be generally perceived as voluntary. Though many significant actions should be commended, equality is not a concern for which a voluntary response is adequate. The following pages present select examples of regional initiatives and shortfalls, the extent to which influential agencies have adequately addressed EJ concerns, and our recommendations to address prominent inter-region disparities.

Research Objectives

Group research efforts focused on identifying environmental justice issues specific to each region, what programs were used to address environmental justice, and where or how community organizations focused their resources in interacting with regional and state level governments. Agency-specific research efforts focused on compliance and programmatic improvements, mainly within the EPA. Specifically, the group analyzed how federal EJ policies, programs, and initiatives were implemented on a regional level.

The following agencies were chosen based upon their prominent engagement with EJ concerns as expressed by the EJ community and through the nature of their operations:

Environmental Protection Agency	Department of Energy	Department of Labor
Department of Agriculture	Health & Human Services	Department of Transportation
Department of Commerce	Housing & Urban Development	Office of Management & Budget
Department of Defense	Department of Interior	

Regional Analysis of Federal Agency Response to EJ Organizational Concerns

Northwest:

The EPA's CARE program is successful in prioritizing and distributing grants to EJ communities. Community-based EJ organizations participate in environmental testing and have organized an effective community outreach and education campaign.

Central

DOL's Pathways Out of Poverty grants have been successful in the region. Despite having few community based EJ organizations, land donations have been secured for gardens in disadvantaged communities. EPA's Supplemental Environment Projects are central to EJ efforts, funding various environmental controls projects.

Southwest:

The EPA's EJ Action Plan has helped community efforts in addressing environmental quality in agricultural communities. Highly active grassroots organizations have achieved success in progressing the movement, evidenced by grant allocations, education campaigns, and the NM Governor's executive order addressing EJ.

Northeast:

Several successful and nationally known EJ organizations have experienced significant growth through partnerships between various grassroots organizations. Concerns include equitable distribution of pollution and exposure in urban environments. Organizations are well-represented in a legal sense, and actively participate in meetings with local and state government agencies.

Southeast:

Prominent organizations in the region are concerned with agricultural and mining workplace exposures. EPA utilizes internal mapping tools to identify and track EJ communities. Successful and multifaceted community and university partnerships contribute to EJ nationwide.

Challenges & Findings

Assessment of federal compliance and programmatic responses to EO 12898 in light of environmental justice organizations' concerns provides insight into the successes and shortfalls of federal agency implementation. It is difficult to reconcile these top-down and bottom-up viewpoints while avoiding redundancies from previous evaluation efforts. Navigating the various scales of EJ organizations, adapting to rapidly emerging issues, accounting for constantly changing demographics, and heavily relying on qualitative data also posed challenges to our research methodology. Nonetheless, through policy analysis and personal communications we were able to identify successful models of EJ strategies and areas in need of improvement.

Encouraging Trends

- » *Renewed focus of changing administration along with the appointment of prominent EJ proponents to cabinet-level positions*
- » *Funding from American Recovery & Reinvestment Act of 2009 directed toward disadvantaged communities through DOL's Pathways Out of Poverty and HUD's Healthy Homes Initiative*
- » *Census Bureau's Supplementary Poverty Measurement adjusts income calculations to more accurately represent income in poverty-stricken families*
- » *Creation of designated environmental justice positions throughout the federal government*

Shortfalls

- » *Inconsistent EJ awareness among federal employees*
- » *Limited public awareness of local, state and federal resources*
- » *Publicly unavailable and inconsistent mapping information*
- » *Underutilized federal funding and absence of social accountability in cost-benefit analyses*
- » *Inadequate EJ consideration in NEPA*
- » *Insufficient consideration of climate justice in Regional Climate Change Action Plans*
- » *Lack of environmental and public health monitoring*

Implementation

Several recommendations were made by assessing the successes and shortfalls surrounding EJ strategies within the aforementioned federal agencies. A continuation of strong leadership is imperative for the effective implementation EJ strategies throughout the government. These leaders, through collaboration with EJ organizations and communities, must come to consensus over what the term "EJ" means and how it is to be addressed. These discussions should ultimately lead to the reaffirmation of Executive Order 12898, securing that federal agencies are accountable in their missions to mitigating EJ concerns.

It is acknowledged that successful implementation of some strategies may require more human and financial resources, as well as an adequate amount of political will that is both timely and difficult to obtain. To account for these factors, recommendations have been organized around economic and temporal feasibility.

Immediate

Educate & train
federal employees

Short Term

► Engage communities
Utilize available
technology

Long Term

Management
(financial, programmatic,
and regulatory)

Recommendations

The list of recommendations (below) may not include all of the changes necessary to incorporate environmental justice into federal government operations. However, the list seeks to address key areas of deficiency including enforcement power, communication and community understanding, as well as inter-agency and inter-governmental collaboration.

Education & Training

- » Develop a consistent understanding of EJ through mandatory annual EJ training for all federal employees.
- » Conduct a public awareness campaign by engaging communities in participatory research to better address community concerns.

Technology Utilization

- » Release mapping tools (EJVIEW and/or EJSEAT) for public use to maximize benefits of available information.
- » Benchmark all regional, state, and local level mapping tools to insure consistent use of mapping data.

Community Engagement

- » Assign an EJ Community Outreach Coordinator at the regional level for all federal agencies to allow for proactive outreach.
- » Create a contact matrix of relevant federal, state, and local government EJ contacts to streamline communication between federal agencies and EJ organizations.
- » Create guidelines for responding to high-priority concerns in order to expedite response time across all federal agencies.

Management

Programmatic

- » Update NEPA to require public participation early on as part of the Environmental Assessment and require pre- and post-implementation community impact assessments.
- » Include Climate Justice as part of each region's Climate Change Action Plan.
- » Institute a nation-wide Urban Environmental Program to address the growing number of urban issues.
- » Expand CARE to build upon the historical successes of the program.

Regulatory

- » Include disease clusters as part of the National Environmental Monitoring Initiative's Intensive Monitoring and Research Sites to increase data on human health concerns.
- » Require third-party testing for pesticides to increase transparency in the testing process and minimize harmful exposures
- » Increase enforcement of the Toxic Substances Control Act to better mitigate effects of toxins.

Financial

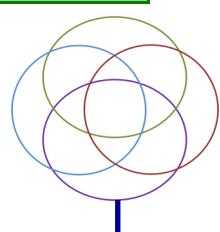
- » Incorporate social accountability (including EJ concerns) into performance and cost-benefit analysis for the budgets of federal agencies on *ExpectMore.gov*.

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To access the full report, visit: <http://www.columbia.edu/cu/mpaenvironment/pages/wksp.html> (Spring 2010)



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Table of Contents

*click page number to link to section

(1.0) INTRODUCTION	1
(1.1) METHODOLOGY.....	2
(1.2) RESEARCH CHALLENGES.....	4
(2.0) RESEARCH FINDINGS	5
(2.1) GENERAL IMPRESSIONS	5
(2.2) FEDERAL AGENCY RESPONSE TO EXECUTIVE ORDER 12898.....	9
(2.2.1) ENVIRONMENTAL PROTECTION AGENCY (EPA).....	9
(2.2.2) DEPARTMENT OF AGRICULTURE (USDA)	17
(2.2.3) DEPARTMENT OF COMMERCE: CENSUS BUREAU.....	18
(2.2.4) DEPARTMENT OF DEFENSE (DOD).....	19
(2.2.5) DEPARTMENT OF ENERGY (DOE)	21
(2.2.6) DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS)	22
(2.2.7) DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD).....	23
(2.2.8) DEPARTMENT OF THE INTERIOR (DOI).....	25
(2.2.9) DEPARTMENT OF LABOR (DOL)	27
(2.2.10) DEPARTMENT OF TRANSPORTATION (DOT)	29
(2.2.11) OFFICE OF MANAGEMENT AND BUDGET (OMB)	32
(2.3) Regional Analysis.....	37
(2.3.1) NORTHEAST	37
(2.3.1.1) REGION 1	37
(2.3.1.4) REGION 2	40
(2.3.1.7) REGION 3	41
(2.3.2) SOUTHEAST	43
(2.3.2.1) REGION 4	43
(2.3.3) CENTRAL.....	45
(2.3.3.1) REGION 5	45
(2.3.3.4) REGION 6	47
(2.3.3.7) REGION 7	49
(2.3.4) WEST.....	51
(2.3.4.1) REGION 8	51
(2.3.4.4) REGION 9	53
(2.3.4.7) REGION 10	56
(3.0) RECOMMENDATIONS.....	59
(3.1) EDUCATION AND TRAINING.....	60
(3.2) TECHNOLOGY IMPLEMENTATION IMPROVEMENT	60
(3.3) COMMUNITY ENGAGEMENT	61
(3.4) MANAGEMENT	63
(4.0) CONCLUSION	66
(5.0) REFERENCES	67
(6.0) APPENDICES.....	77
(6.1) APPENDIX A: RESEARCH INTERVIEW QUESTIONS	77
(6.2) APPENDIX B: CARE GRANT DISTRIBUTION BY STATE	78
(6.3) APPENDIX C: EPA REGION 2 FLOW CHART	79

(1.0) INTRODUCTION

In February 1994, President Clinton issued Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. The Executive Order required that federal agencies integrate environmental justice (EJ) into their mission by “identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations” (Executive Order 12898, 1994). Although some federal agencies have developed policy and implementation plans to incorporate EJ into day-to-day operations, substantial progress in achieving environmental justice remains elusive.

The Executive Order has the following four major stipulations: "(1) promote enforcement of all health and environmental statutes in areas with minority populations and low-income populations; (2) ensure greater public participation; (3) improve research and data collection relating to the health of and environment of minority populations and low-income populations; and (4) identify differential patterns of consumption of natural resources among minority populations and low-income populations" (Executive Order 12898, 1994). In 2004, the Environmental Protection Agency's (EPA's) Office of the Inspector General (OIG) issued a report finding that the EPA had not adequately implemented the Executive Order, nor had it integrated EJ into its day-to-day operations (EPA OIG, 2004). Given that the EPA is tasked with administering the environmental initiatives of the Executive Office, including the Executive Order, the lack of EJ integration is alarming.

Progress has been slow; the Executive Order, lacking formal codification and requiring only voluntary compliance, fails to authorize the enforcement of legal sanctions against federal agencies to ensure that their policies, programs, and activities do not disproportionately impact minority and low-income communities. Agency efforts also remain uncoordinated due in part to differing definitions of environmental justice. Based on our analysis, we believe that deficiencies in addressing environmental justice are best resolved through improvements in three areas: education and training of federal employees, community engagement, and revision of some management practices.

To begin the comprehensive overview of environmental justice in federal agencies needed to develop substantive recommendations, thirteen students from Columbia University’s Master of Public Administration program in Environmental Science & Policy (with Faculty Advisor E. Gail Suchman, Esq.) consulted on a project for the Natural Resources Defense Council (NRDC) and West Harlem Environmental Action (WEACT). NRDC is a forty-year old national environmental organization with 1.3 million members and a staff of 300 lawyers, scientists and policy experts working on a myriad of environmental issues. NRDC’s Urban Program focuses on environmental problems confronting major urban centers, including poor air and water quality, lack of habitat and open space, poor solid waste management, lack of access to transportation, sprawl, and environmental justice (NRDC, 2010). WEACT is a non-profit, community-based, environmental justice organization working locally and nationally to improve environmental health, protection, and policy in low-income communities and communities of color. WEACT accomplishes its mission through community organizing,

education and training, advocacy and research, and public policy development (WEACT, 2010).

The workshop group was tasked with assessing regional-level compliance with Executive Order 12898. This required an organized work plan detailing research objectives, progress reports, advising meetings, and formal briefings. The following objectives were identified as being critical to a successful analysis:

- Identify federal government and community organizations' programs and actions to promote environmental justice;
- Evaluate how existing federal EJ policies, program, and initiatives are implemented on a regional basis; and
- Make agency-specific, actionable recommendations to integrate EJ principles into day-to-day decision-making at the federal and regional levels.

The following product is a comprehensive report summarizing research findings and providing recommendations for federal agencies, many focused on the regional level.

(1.1) METHODOLOGY

The project was divided into three research phases. The goal of these phases was to sequentially reduce the scale of the research and to increase regional specificity. These phases began with a national overview, followed by a regional assessment, and concluded with an analysis along with agency specific and overarching federal recommendations.

Phase 1: National Overview

During the first phase, two preliminary research teams were formed: an Environmental Justice Team, and a Federal Agencies Team. Both teams performed a literature and web based review to develop the national overview. The Environmental Justice Team divided internally to focus research on a geographical level. A national assessment of grassroots EJ organizations was conducted via the Internet to determine 1) what environmental justice issues are specific to each region, 2) where and how community organizations focused their resources in each geographic region, and 3) how EJ organizations interacted with the government. This information was utilized to prioritize future research.

The Federal Agency Team also divided internally to focus research on specific agencies, with each member focused on two agencies. Based upon client request the initial assessment was conducted for the Environmental Protection Agency, Department of Transportation, Department of Commerce (Census Bureau), Department of Energy, Department of Health and Human Services, Department of Housing and Urban Development, Department of the Interior, Department of Agriculture, Department of Defense, Department of Labor, Office of Management and Budget. Web based research, primarily agency web sites and databases, was conducted to identify actions (e.g., policies or procedures) federal agencies take to address EJ concerns.

The national overview phase was concluded through a comparative analysis aimed at determining targeted commonalities and differences in community needs as well as the overall federal agency response to Executive Order 12898.

Phase 2: Regional Assessment/Interviews

The main research targets of the second phase included 1) interaction between communities, their representative organizations, and agency regional offices, 2) integration of EJ into regional office operations and decisions, specifically within the EPA, and 3) regional EJ initiatives and programs in other relevant agencies. Utilizing the national overview as a means to prioritize research, teams of two were developed and tasked with two EPA regions. Using the EPA regional breakdown each team researched 1) regional EJ organizations, 2) the EPA regional offices, and 3) the federal agencies important to the regions' EJ concerns. This research was conducted through personal communication with EJ organization leaders and, when defined, environmental justice regional federal representatives. A questionnaire was developed to guide this process (See Appendix 1). Each team first contacted EJ organizations prominent in the region to determine what EJ concerns are specific to the area and how the organizations promote their causes. Second, the teams contacted EPA regional offices to determine what actions the office takes in addressing the region's EJ concerns and how effectively the EPA's regional office fulfills Executive Order 12898. Finally, other agencies (e.g., Department of Interior [DOI], Department of Transportation [DOT], United States Department of Agriculture [USDA], etc.) integral to the regions' EJ concerns were contacted.

Interactions were entered into a shared database. Periodic meetings were held to discuss and identify research gaps. A comparative analysis was conducted across regions to identify where inconsistencies and commonalities existed.

Phase 3: Development of Policy Recommendations

Upon gathering regional research, the teams analyzed the methods by which each agency was addressing regional and national EJ concerns. Inconsistent EJ strategies between EPA regional office operations and other federal agencies were noted. Successful programs and partnerships were brought to the forefront and considered as models for more effective EJ strategies. Inconsistencies and inefficiencies were categorized into three areas or recommendations: Education and Training, Community Engagement, and Management. The implementations of the recommendations were further headed as either immediate, short term, or long term. These categories were developed based upon the time needed for execution and the economic and regulatory restraints that may accompany recommendations.

Based on this analysis, the team recommended federal-level EPA policy actions to more effectively address EJ issues. An advocacy piece will be developed to facilitate better communication between community-based organizations and regional agencies on EJ concerns. Additionally, the team has prepared an executive summary for the co-client's presentation to the Obama Administration.

(1.2) RESEARCH CHALLENGES

Similar to the challenges faced by EJ organizations, the research team experienced difficulties while reaching out to federal agencies at all levels of the organizations. While many agencies have publicly available EJ policies, finding agency representatives willing to speak candidly about agency-specific EJ procedures was challenging. In many cases, agency policies and procedures regarding EJ were unavailable or agency representatives responded to questions regarding current program activities referencing the general subject matter or previously published materials. Others were less versed in the topic altogether. Furthermore, in instances where agencies designated EJ contacts, these individuals were sometimes unavailable or reluctant to provide information without speaking with the agency's law or public affairs departments. When attempting to contact each EPA Region's Environmental Justice Coordinator for an interview, only a few of the coordinators were willing to speak with the team. Ultimately, the Regional EJ Coordinators decided to provide answers to our questions in a singular, "coordinated response," produced in conjunction with their headquarters. Sixty days later, upon finalizing this report, the coordinated response had not been received. Furthermore, our research efforts were somewhat constrained by the response times of other agencies.

As a team tasked with providing recommendations to the federal government, we faced the challenge of adapting to emerging EJ issues and new political developments. Changes to federal guidelines and regulations, such as the Council on Environmental Quality's draft guidance on making the NEPA process more substantive, have emerged in recent months. Additionally, in the 16 years since Executive Order 12898 was issued, various entities have evaluated agency compliance and identified procedural shortcomings or areas where the federal government could improve upon EJ policies following the Executive Order. In an attempt to avoid redundancies with previous evaluation efforts, the recommendations herein are as direct and specific as possible. However, considering the breadth of qualitative (rather than quantitative) information available from federal agencies, and the continued lack of specific action, some recommendations may be similar to those suggested by previous evaluators.

(2.0) RESEARCH FINDINGS

A substantial amount of information was collected; however, it should be noted that not all federal agencies' regional offices could be reached. Therefore, this analysis is considered general because it is based on a limited response rate by federal agencies; however, the conclusions are substantiated by sound research findings. Many of the deficiencies found in a given region may be symptomatic of agency-wide problems.

Because our impressions are based on interviews with select representatives from each agency, personal communication is generalized to protect anonymity for those that provided information. See reference section for further details.

(2.1) GENERAL IMPRESSIONS

The EJ movement in the US is predominantly driven by the efforts of grassroots organizations. These groups are most aware of the environmental conditions experienced by EJ communities. In accordance with the Executive Order, “EJ Communities” are defined as low income or minority communities that experience disproportionate levels of environmental burdens. As a result, EJ community organizations are most involved in advocating for remediation of undue environmental burdens. Since the missions and scale of each EJ organization are different, EJ institutions vary in their resource capacity and approach to taking on environmental injustices. Even the term “environmental justice” has varying definitions across EJ organizations and federal agencies. Many organizations specifically reach out to racial minorities and economically disadvantaged populations. This definition is supported by the Executive Order, which states that EJ should be achieved by “...identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions...” (Executive Order 12898, 1994).

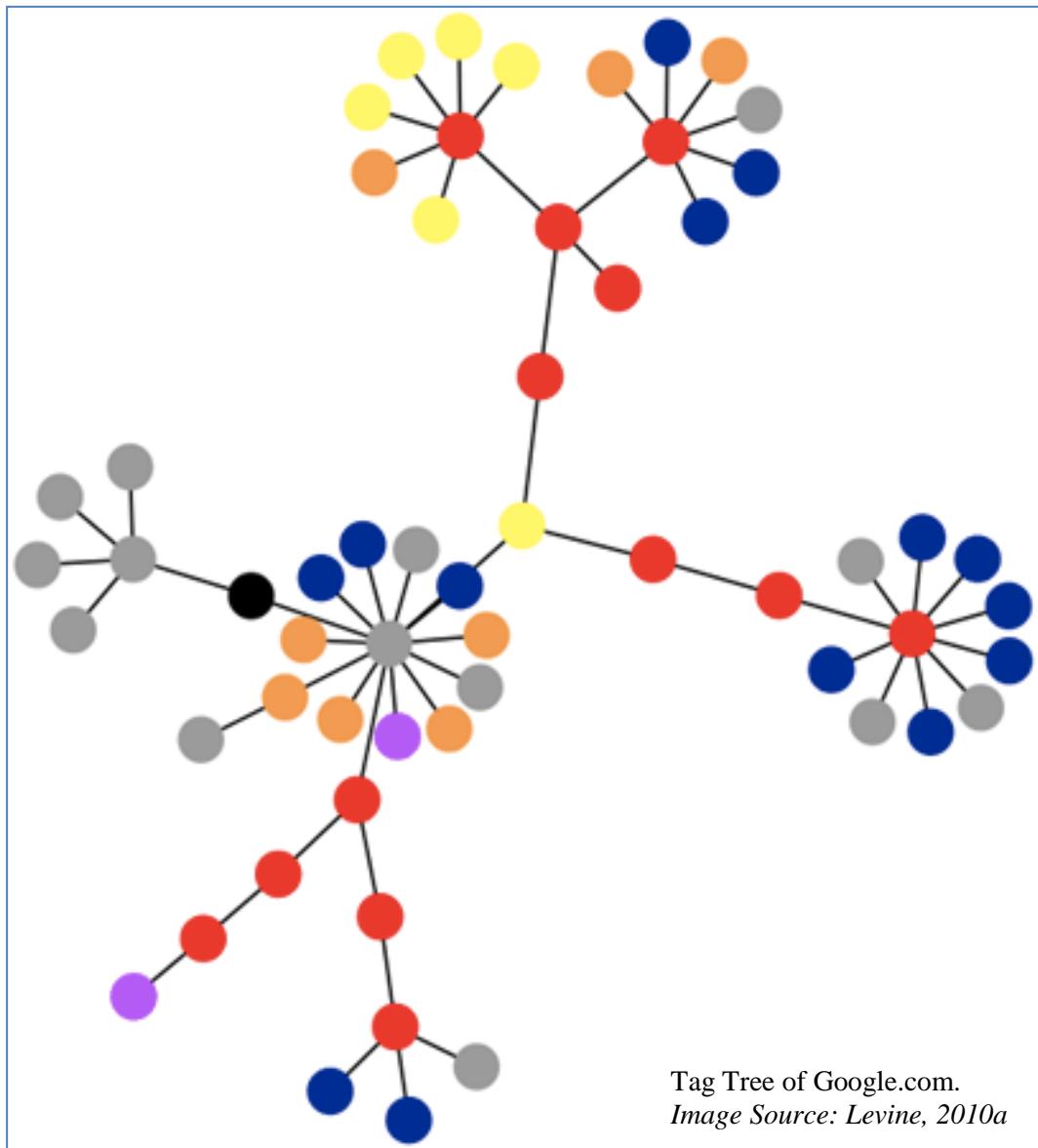
Although grassroots organizations and the Executive Order identify minority and low-income communities as EJ targets, federal agencies do not necessarily follow this trend. For example, the EPA’s National Environmental Justice Office website defines EJ as “the fair treatment and meaningful involvement of all people *regardless of* race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.” The difference in language between the Executive Order and the EPA is subtle; however, the implications for policy implementation are significant. While “race” and “income” are mentioned in the EPA definition, there is no indication that EJ efforts will be directed toward resolving disproportionate impacts in minority and/or low-income communities. This lack of a consistent, nationwide definition of EJ creates a layer of complication over federal agencies’ decisions in achieving EJ.

The findings from the regional assessment of federal agencies indicated that many federal agencies developed EJ policies after issuance of Executive Order 12898. However, many of these policies lack a procedural component outlining how EJ should be considered in day-to-day operations and decision-making. Non-EPA agencies seem only to consider EJ during the

environmental impact assessment process under the National Environmental Policy Act (NEPA). However, using the NEPA review process as the sole means of considering EJ has proven inadequate to prevent environmental damage to low-income and minority communities. This is due to the fact that public feedback regarding a project (required by NEPA) is usually not solicited until relatively late in project implementation, after several critical environmental studies (e.g., air quality and water quality) have already been conducted. Further, the capacity of NEPA as a means to achieve EJ is limited by the Code of Federal Regulations which states, “economic or social effects are not intended by themselves to require preparation of an environmental impact statement” (40 CFR 1508.14). This limits the consideration of EJ as an issue that requires careful consideration during project implementation.

Although the Executive Order was issued 16 years ago, federal agencies have been slow to integrate EJ into day-to-day operations and decision-making. This may be because the Executive Order is not codified and compliance is not required by legislation. Furthermore, many agencies could argue that they serve a support rather than mission-centered agenda, and therefore their projects do not directly impact the public in the manner which the Executive Order qualifies. However, environmental injustices continue to afflict minority and low-income communities.

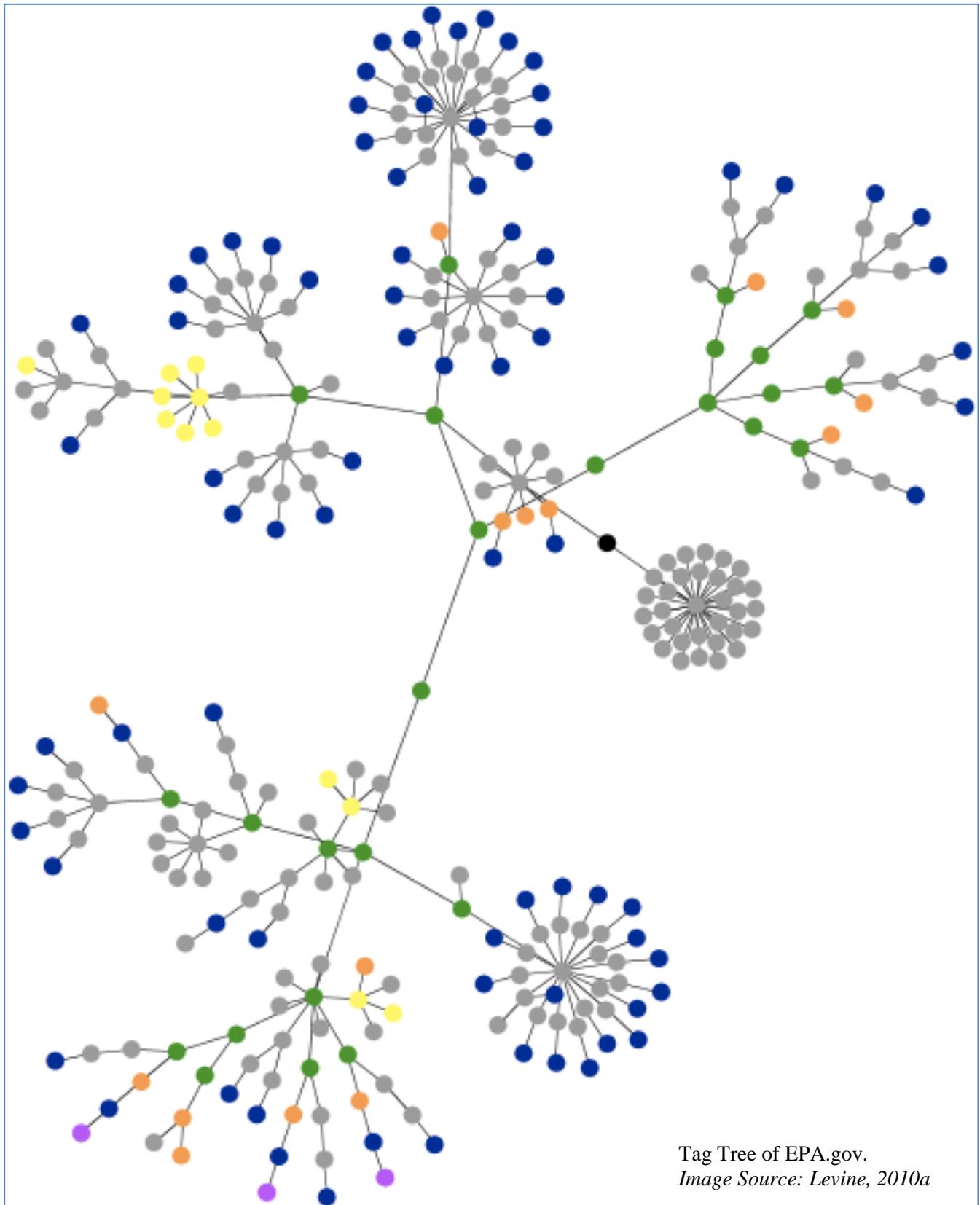
Recently, the Obama Administration has reenergized the EJ movement at the federal level. This can be seen in the appointment of EJ advocates such as Lisa Jackson and Hilda Solis to Cabinet positions in the Administration and in the creation of two senior advising positions within the EPA for EJ and civil rights. Despite this recent progress, significant steps still need to be taken to fully integrate EJ into federal agency operations. As such, the Obama Administration should consider reaffirming Executive Order 12898. The reaffirmation should include an EJ definition, and the adoption of that definition should be mandated for all federal agencies, including the EPA. Additionally, the definition should include language specifying low-income and minority groups as an integral component in identifying EJ communities. As mentioned, the lack of consistency in the definition of EJ complicates the ultimate intention of the EJ movement. In general, agencies and community organizations agree that environmental justice includes the equitable distribution of environmental burdens; however, it is unclear what specifically constitutes a disproportionate burden and how an EJ community is identified. Therefore, in order to improve federal employees’ and communities’ understanding of EJ, it is necessary to start with an understandable definition.



Displayed above and on the opposing page is a side by side comparison of “tag trees” or instructions and links built into publically available websites. The figure on the left is a tag tree for Google, a practical and universally employed online tool. The figure on the right depicts the EPA’s tag tree, with grey pedals representing other tagged pages (such as frames, stored documents, etc.) which are actually too numerous to count in two dimensions.

Clearly, Google and the EPA serve different purposes or needs and websites vary in complexity. However, the comparison is useful when considering matters of information accessibility. Individuals use the internet for illuminating unknown information, a commonality between the websites of Google and the EPA. Given the complexities of the EPA’s information sharing mechanism, there remains minimal chance of a typical end-user coming across the correct channels, uncovering answers that address an environmental concern.

When attempting to reach out to the EPA and other federal agencies, the environmental justice community experiences barriers to information sharing. One objective of this report is to minimize these barriers and illuminate information pathways for EJ organizations.



(2.2) FEDERAL AGENCY RESPONSE TO EXECUTIVE ORDER 12898

The evaluation of federal agencies specifically compares their performance to the stipulations of the Executive Order. While compliance is not necessarily representative of good overall policy concerning EJ, given the Executive Order's fairly vague language, it is at the very least a starting point for analysis of agency interest in implementing EJ policies.

The Executive Order has the following four major stipulations: "(1) promote enforcement of all health and environmental statutes in areas with minority populations and low-income populations; (2) ensure greater public participation; (3) improve research and data collection relating to the health and environment of minority populations and low-income populations; and (4) identify differential patterns of consumption of natural resources among minority populations and low-income populations" (Executive Order 12898, 1994). Therefore, agencies are evaluated based on their activities related to these stipulations. For the purposes of this report, the stipulations are shortened to "Enforcement Promotion," "Participation Increase," "Data Collection Improvement," and "Resource Consumption Patterns Identification." While not mentioned explicitly in the Executive Order, it is important to note that Federal activities that build capacity in communities have better chances of long-term success than those that do not. Therefore, we are also including a sub header addressing "Community Empowerment."

(2.2.1) ENVIRONMENTAL PROTECTION AGENCY (EPA)

The statement within the Executive Order that all agencies must address the disproportionate impacts of their activities has a unique meaning for the EPA. The EPA is not only responsible for the results of its own activities, but also for ensuring that other agencies and private entities are in compliance with national environmental standards. Because of this, they are by nature more involved in EJ efforts than any other Federal agency. A contact within OMB's Natural Resources & Environment Division indicated that EPA did not spend its entire EJ budget in 2009. Unfortunately, the under-utilization of these funds will likely affect future budget allocations for the agency's EJ programs (personal communication, March 26th, 2010).

Program success varies widely from region to region, and is strongly affected by how active grassroots EJ organizations are; if grassroots groups are more active, the EPA's programs tend to be stronger and more varied. As previously mentioned, the report does not address the full extent of EPA's regional programs as we are awaiting a coordinated response. A case study for Region 3 is included as an example of what complete information may have revealed.

(2.2.1.1) Enforcement Promotion

Of the several programs the EPA uses to work directly with vulnerable communities, Community Action for a Renewed Environment (CARE) seems to have the most promise. (See Appendix B for a map of CARE grant distribution by state). The program was initiated in 2005 for cooperative remediation programs. It is a competitive grant program that facilitates community organization for environmental remediation and environmental justice programs (EPA 2010b). In the CARE program, community members with a common environmental concern collaborate to address the environmental problem, formulate a solution, and present their case for approval to the EPA Regional CARE Coordinator. In many cases, program

associates support these communities by assisting in site assessments. The program proposals are reviewed and the most workable projects are given grants. Through CARE, EPA employees are able to conduct community outreach and educate those in close contact with site contaminants. They provide the technical expertise and framework within which community groups operate (EPA 2010b).

The EPA's Urban Environmental Program (UEP) is another program that emphasizes community empowerment but is not widely active. The UEP defines the EPA's role as a "capacity-builder and facilitator," a means of dispensing and leveraging resources and enabling participation by grassroots groups, as well as a forum for stakeholders. Members of the community, in turn, are to be the decision-makers and environmental stewards, and local governments are meant to partner with both the EPA and community groups, and to incorporate sustainability considerations into day-to-day operations (EPA, 2010e, UEP).

Today, the UEP functions mainly in New England, focusing on urban areas with high concentrations of poverty such as Providence, Hartford, and Boston. It broadly targets public health concerns wrought by environmental hazards in urban areas. The UEP works with many community groups and local government agencies but does not see its duties as limited specifically to EJ work. For example, brownfield remediation is a priority within the UEP – an issue not limited to low-income and communities of color, but often disproportionately affecting them (EPA, 2004).

EPA's Region 2 Office provides a publicly available outline of how it defines and incorporates EJ into its everyday policies and procedures. The region includes in its EJ definition the terms racial and ethnic minority, low-income, and disproportionate or adverse burden, meaning environmental conditions affect a specific demographic more so than other population demographics. In addition, Region 2 has several organizational charts (See Appendix C) that provide a step by step process of how to incorporate EJ analysis into everyday permitting and enforcement (EPA, 2010g2).

Region 2 is primarily focused on urban environmental issues, such as a community's proximity to infrastructure and industrial sites, but because Region 2 also includes Puerto Rico and the US Virgin Islands issues such as potable water are also concerns (personal communication, March 10, 2010). The Region 2 office has also built strong ties with state and local governments to insure that efforts are not duplicated. For example, the Region 2 office worked with the New York City mayor's office to help develop the 2030 plan, New York City's environmental sustainability plan and targets to be achieved by the year 2030 (personal communication, March 10, 2010).

In the Midwest, the EPA's Brownfields Program is very active, providing funds to states, local communities, tribal communities, and nonprofits to remediate brownfield sites. There are three types of brownfields grants listed by the EPA. There are Brownfields Assessment Grants, which provide funds to inventory, characterize, assess, and conduct planning and community involvement related to brownfield sites. Brownfields Revolving Loan Fund Grants provide funds for a grant recipient to capitalize a revolving fund and to make loans and provide subgrants to carry out cleanup activities at brownfield sites. There are also

Brownfields Cleanup Grants that provide funds to carry out cleanup activities at a specific brownfield site owned by the applicant (EPA, 2010a).

However, according to interviews with local grassroots workers in the Midwest, the EPA's EJ activities seem to be limited almost exclusively to hosting conferences and giving grants to large contractors who redevelop brownfields (personal communication, February 19, 2010). When asked about involvement with EPA projects, all the non-profit representatives interviewed echoed a similar sentiment; that the EPA was "too big," and functioned "at the regional level," and was not available as a resource to small, locally-oriented organizations (personal communication, February 15 and 17, 2010).

The EPA's Region 6 Office, covering the area from Louisiana to New Mexico includes several strong grassroots groups, is currently emphasizing indoor air quality efforts by providing \$150,000 total for Healthy Indoor Environments grants. The Office is also highlighting its role at listening sessions in New Orleans by making public their notes on what was said at the sessions and their action items in response to those concerns. Many of the action items were making phone calls with other agencies, so actual action in response to those sessions is still uncertain (EPA Region 6, 2010).

The 2009 Region 6 Environmental Justice Action Plan describes several steps that their office is planning to take in order to address four main issues: 1) Clean Air and Global Climate Change, 2) Clean and Safe Water, 3) Healthy Communities and Ecosystems, and 4) Compliance and Environmental Stewardship. The Clean Air and Global Climate Change actions focus on asthma and toxics; however, they do not address any climate justice concerns, or disparities in communities' ability to cope with climate change, within the area. Within Clean and Safe Water, there seems to be some integration of EJ concerns into programmatic action, as the plan calls for EJ analyses to be conducted in the NEPA analyses for every water infrastructure project.

Healthy Communities and Ecosystems initiatives include actions regarding reduced lead exposure, reduced pesticide exposure among farm workers, and ensuring emergency preparedness for vulnerable Gulf Coast communities. According to the plan, brownfields remediation grants will also be awarded, and EJ will be integrated into all Superfund site activities. Based on the proposed activities for EJ integration into Superfund, this seems to mean that more public outreach to minority communities will occur. The only action outlined for Compliance and Environmental Stewardship issues is Resource Conservation and Recovery Act evaluation and compliance monitoring. Success seems to be evaluated by the periodic issuance of EJ progress reports; however, the last progress report was issued in 2006 (EPA, 2009f).

EPA Supplemental Environmental Projects (SEPs), enforcement follow-through and settlements, are central to EJ efforts in Region 8. An example of this would be the payments from the Holly Refining and Marketing Company of Woods Cross, Utah for the installation of environmental controls (Mylott, 2008). In Pueblo, CO where approximately 38% of the population is Spanish-speaking with a median household income of \$29,112, the EPA has negotiated with Rocky Mountain Steel Mill, a large neighbor of the predominantly Hispanic

community along the Arkansas River, to fund SEPs as a settlement condition (Wenstrom, 2009).

EPA's Region 9 Office, which covers California and the Southwest, has a very active environmental justice program that provides tools to communities to complement existing efforts to promote EJ. Based upon information available on the Region 9 website, it seems that the EPA's predominant role in regional EJ is to complement and support the numerous local EJ organizations' programs and initiatives.

Lisa Jackson, the current EPA Administrator, recently announced a \$1 million/2-year commitment of \$100,000 grants to EJ efforts in Salt Lake City, UT. These projects are just beginning to come into view; however, previous commitments of this scale have included retrofitting a fleet of school buses in Pueblo, CO which serve over 2,500 school children a year, to reduce in-cabin fine particulate emissions by 56 percent (Darling, 2009).

(2.2.1.2) Participation Increase

There are two components to this activity: informing the public and being informed by the public. The EPA is currently attempting to expand both, but again, with varying degrees of success. The main components of the outreach are multilingual, targeted mailings and information posted on the Internet. For public input, the most widely used strategy is listening sessions, in which community members are able to voice their concerns to EPA employees.

In New England, EJ Small Grants guidance and EJ Collaborative Problem-Solving Grants guidance is available in both English and Spanish. However, New England has many ethnic groups, and the EPA's regional office acknowledges that it falls far short of meeting other language needs on a broad scale (EPA, 2004). The exceptions to this language deficiency are Superfund programs. Superfund programs have the resources, flexibility and site-specificity to respond to such needs. They feel that multilingual efforts are generally much more effective when approached in partnership with local organizations, which have their own translators and facilitators on hand. EPA hopes to create a translation services directory and acquire more EPA New England staff that is fluent in other languages to translate materials (EPA, 2004).

In EPA's Region 9, which includes California and the Southwest, the regional office published the "Environmental Justice Resources Guide, A Handbook for Communities and Decision-Makers" to highlight EJ achievements in the region and assist communities in identifying additional funding sources. The resources guide also identifies state-level agencies that are responsible for regulating environmental issues such as air pollution, pesticide use, and toxic and hazardous waste (EPA, 2010c, Region 9). Unfortunately this guide has not been updated since 2001.

(2.2.1.3) Data Collection Improvement

In 1999, the EPA developed a GIS-based mapping tool known as the Environmental Justice Strategic Enforcement Assessment Tool (EJSEAT). The tool uses nationally available data sets at the Census tract block level to analyze social demographic, environmental, compliance, and health indicators. Using GIS and scaled variables, the tool is able to produce a map that generates "potential EJ concern flags" for facilities located in areas (including buffer zones)

with potential EJ concerns. This tool is, however, not currently accessible to the public and is only used as a pilot program within the EPA (EPA OECA, 2009). It is likely that this tool will need to be updated given the results of the 2010 Census. In addition to mapping, some offices try to identify stakeholders with EJ concerns by using tools such as the media and community profiles to track issues (EPA, 2004). Outreach includes an internet site on EPA policies, guidance, and information, as well as an intranet site available internally to staff to access resources such as the EJ Action Plan (EPA, 2004).

The EPA does not have a standard way of calculating "low-income" across the regions; therefore, individual regions calculate low-income differently. For example, Region 4, in the Southeast, uses demographic information and multiplies the state average by 1.2 to determine the low income threshold (EPA OIG, 2004). The office also partners with local governments and educational institutions to conduct research on specific environmental topics, such as air quality in Louisville, Kentucky. In Region 5, the Great Lakes area, The DOT and EPA partnered with a variety of EJ organizations to perform EJ impact assessments. Using US Census Bureau data, they were able to quantify how minority populations were affected by EJ concerns (FHWA). These agencies also paired up with local EJ organization as well as stakeholders (EPA, 2009c, Grants).

Measuring program success often centers on evaluation of the yearly EJ action plan, which means tracking resources allocated to EJ activities and accomplishments, as well as the number of staff trained in EJ, EJ training evaluations, and EJ mapping requests (signaling that information resources are beneficial externally, not just internally for staff, where use and benefits are more difficult to measure) (EPA, 2004). Each project attempts to track both outputs (short-term results) and outcomes (long-term effects).

EPA New England (Region 1) developed an "EJ Inventory," a database of regional EJ activities, to cross-coordinate projects, facilitate mentoring and reporting, and help determine future resource allocations (EPA, 2004). Assessments of reported EJ concerns take place in several discrete stages, including multiple fact-finding phases interspersed in the process, which incorporates background information about the environmental issue, the community at risk, EPA activity in the area, health indicators, and environmental indicators (EPA, 2004). Fact-finding also includes data assembly, which uses information at the Census block group level to map the data. Other steps in the process are site tours of the community to get the residents' perspectives; assessment planning, in which the Office of Civil Rights and Urban Affairs coordinates with program offices in the region to develop an EJ assessment; assessment implementation; and the decision-making phase, in which the EJ assessment is completed and distributed for review (EPA, 2004). Other information resources commonly incorporated into EJ analysis (besides the desktop mapping tool) include the EPA tool kit for assessing potential allegations of environmental injustice and environmental databases such as the Toxic Release Inventory, National Pollutant Discharge Elimination System discharges, waste sites and air facility emissions, and others (EPA, 2004). However, New England appears to be the only region with such activities in place.

(2.2.1.4) Resource Consumption Patterns Identification

Very little has been done by federal agencies, including the EPA, to identify how different ethnic and income groups use resources and what their particular environmental needs might be. The EJ Coordinator for Region 2, expresses a common view in believing that the government does not currently have the resources to identify EJ communities proactively, but that it should help build capacity either through distributing grants or holding training seminars (personal communication, March 10, 2010). Proactive research into resource use by different demographics is not a high priority under this framework.

(2.2.1.5) Community Empowerment

In New England, the Urban Environmental Program has been particularly successful in this area. In Hartford, it channeled EPA resources from the Brownfields Program and Enforcement Section, and held community education and outreach events like asthma fairs and community roundtables (EPA, 2010e, UEP). It is difficult to discern the extent of the UEP's involvement in many of these projects; however, its presence as a government-community liaison may be critical both in public participation and financial assistance in support of the causes of community groups. In the EPA's words, the UEP serves as a "community liaison and resource broker to EPA New England services and resources, including technical resources, expertise, and funding opportunities" (EPA, 2010e, UEP).

EPA New England engages external stakeholders through education; a Title VI workshop used for EJ training; mapping, and exchanging information about best EJ practices; listening sessions; UEP workshops and other forums to get stakeholder input; presentations of EJ policy and resources to a Board of Directors meeting of tribes on Mashantucket Pequot Reservation; and others (EPA, 2004). The regional program uses stakeholder interaction and collaborative relationships primarily to keep abreast of developing EJ issues. Large-scale collaborations include the New England Water Pollution Control Commission, the Northeast States Coordinated Air Use Management, and the Northeast Waste Management Officials Association (EPA, 2004). In 2002, EPA New England created a Spanish language auto industry compliance assistance package, and mailed it to 40 auto body shops in Lawrence, MA, a working-class community that is roughly 60 percent Hispanic (EPA, 2004)

Case Study of EPA Region 3

Region 3 publicizes a proactive EJ policy. The Region defines its commitment to EJ in assuring that “all citizens are treated and protected equally, treated fairly, and that programs, policies, and practices are protective of all populations. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.” (EPA, 2009h). The definition does not make specific reference to minority or low income communities. Personal communication with the Region 3 Environmental Justice Coordinator clarified that it is the goal of the EPA to focus on a clean environment for everyone and if there is a concern that arises, race and income are important factors that must be considered (personal communication, February 22, 2010).

The Region instituted an EJ planning and implementation process that addresses operations and procedures and develops activities to address concerns of the community. These processes will be combined into a region-wide design plan to guarantee “fair and appropriate treatment” of stakeholders, incorporate thorough data analysis and cumulative risk assessments, and engage in community outreach and coordination (EPA, 2009h). Implemented programs are intended to be reviewed and augmented for full integration into the Region’s operations.

Management accountability is stressed in the Region 3 strategy, with two full-time and one part-time employee devoted to the Office of Enforcement, Compliance and Environmental Justice at the Regional Headquarters. These employees are responsible for reviewing impact assessments that entail EJ concerns, developing mitigation options, reviewing and awarding grants, and working with project managers whose sites have been identified as containing “potential EJ issues that may impact EPA’s efforts” (EPA, 2009h).

Communication has been facilitated through the establishment of the All States EJ Workgroup whose aim is to coordinate projects and discuss varying strategies and development plans. Currently, the Workgroup consists of all six states in the Region and has recently come to include representatives from New York. The Workgroup hopes to bring Regions 1, 2, 4, and 5 into Workgroup efforts. Regional and Division Coordinators continue to attend senior management meetings, staff meetings and ongoing training sessions.

Some key initiatives in the Region include:

- Geographical inspections of target facilities (e.g., Port of Baltimore)
- Partnerships for community health (e.g., Sparrows Point area)
- Working with the Virginia Department of Environmental Quality on developing a risk-based strategy to prioritize and target inspection
- Performance partnership agreements (e.g., with Maryland, the District of Columbia, and Pennsylvania).
- Listening sessions in Maryland and the District of Columbia
- Involvement with advisory panels throughout the region
- Translation of relevant documents

Region 3 also outlined various goals, activities, and priority concerns specific to clean air and global climate change issues:

- Bus retrofitting in urban areas
- Asthma education and mitigation initiatives
- Coal River Valley and mountaintop mining removal communities
- Anacostia Watershed Toxics Alliance
- The Delaware River & Elizabeth River
- The LID Retrofit Program (DC Metropolitan Area)
- Drinking water audits for the District of Columbia
- EJ criterion in prioritizing RCRA corrective actions
- Targeted lead grant projects
- The Pesticide Environmental Stewardship Program (PESP)
- Public participation in the federal Environmental Impact Statement
- NEPAssist, EJ Geographic Assessment tool, and EJSEAT technologies

Though Region 3 appears to proactively addressed EJ concerns, the efficacy of its involvement is difficult to quantify. Many goals, activities, and priority areas are revered by the staff, but it is unclear whether these efforts significantly reduces injustices. A more thorough evaluation of the positive and negative consequences of these actions is necessary before conclusions can be drawn. Until the coordinated response is provided, this case, supplemented with other limited interactions between EPA Regional EJ Coordinators and our researchers, will be used to characterize EPA regional actions nationwide.

(2.2.2) DEPARTMENT OF AGRICULTURE (USDA)

The focus of the US Department of Agriculture (USDA) is on providing scientific and policy analysis related to agricultural practices, including chemical applications and their environmental impacts (USDA, 2010). This potentially has extensive overlap with many EJ issues related to disproportionate pesticide exposure and low fresh food availability. While the USDA does not explicitly refer to its normal activities as EJ-oriented, they do often target vulnerable communities, and are often related to environmental issues (personal communication, March 24, 2010). According to the Director of Administrative programs for the USDA-Rural Development in Southern New England, EJ is not a significant concern in the rural communities they serve (personal communication, March 31, 2010). Localized situations that come up are usually addressed through the Civil Rights Impact Analysis Process. There is very little interaction with the EPA regarding EJ issues.

(2.2.2.1) Enforcement Promotion

The USDA has several programs through which it distributes grants, information, and training concerning pesticide use reduction and switching to organic practices, both of which reduce health and safety risks for farm workers who are often low-income and Hispanic (personal communication, March 3, 2010). These programs rely on the interest of the farmer, who must approach the USDA for assistance.

According to an agency representative from Massachusetts, "every program decision and major administrative actions such as reorganizations must include a Civil Rights Impact Analysis. USDA-RD requires the use of Form 2006-38. Employees are made aware of the Department and Agency requirements and the form is required for group loan applications." The form is available from the agency website (personal communication, March 31, 2010).

(2.2.2.2) Participation Increase

The USDA published a final EJ strategy that is very similar to other agency strategies and contains many of the same goals. For instance, improving agency communications with the public and increased public participation are emphasized (Gerrard, 2009). However, their primary mechanism of public involvement continues to be either through public hearings during the NEPA process, or the RC&D councils.

The USDA agency representative said, "Locally; we are sensitive to [EJ] during our loan processing and underwriting actions. Employees are aware of the intent of the EJ initiative and consider the EJ impact as part of the underwriting and approval process (personal communication, March 31, 2010).

(2.2.2.3) Data Collection Improvement

The USDA relies on the RC&D councils to collect relevant local information and does not seem to have any centralized way of gathering data about vulnerable communities as such.

(2.2.2.4) Resource Consumption Patterns Identification

There has been no coordinated action to gather this data, although some of the RC&D council activities have focused on creating community gardens in Latino communities with culturally appropriate produce (personal communication, March 3 and 24, 2010).

(2.2.2.5) Community Empowerment

The USDA's primary contact with communities is through their Resource Conservation and Development Councils (RC&D), which are funded and staffed through their Natural Resource Conservation Service. Each of these RC&D councils is available to stakeholders in a region of the state (there are 16 in Iowa, 9 in Kansas, 12 in Nebraska, and 8 in Missouri) to support through in-kind contributions any project related to resource conservation, including but not limited to agricultural projects. (personal communication March 3, 2010). Their model is proactive, and they get frequent requests for technical assistance.

The Councils' primary stipulation for supporting a project is simply whether there is a citizen who is willing to take the lead. When a proposal is accepted, the Council arranges for and provides all equipment and training for the involved citizens. Once the project is self-sustaining, the Council phases out its involvement, leaving it in the hands of the community. Their projects almost entirely focus on the poorest rural communities (personal communication, March 24, 2010).

(2.2.3) DEPARTMENT OF COMMERCE: CENSUS BUREAU

The Census Bureau plays a significant role in any and all environmental justice efforts by providing the main source of income, ethnicity, and poverty information for the nation. Beyond having an impact on distribution of government resources and congressional districting, the Census Bureau also has authority over the poverty measurement (Census, 2010a, "About us").

(2.2.3.1) Enforcement Promotion

See Participation Increase.

(2.2.3.2) Participation Increase

Despite the Census Bureau's efforts to encourage participation in the Census, in numerous neighborhoods where there are high populations of recent and undocumented immigrants, there is a high level of distrust of Census workers (Weber, 2010). There is a dearth in communication training with Census takers regarding these groups. Few undocumented immigrants understand that the Census does not request their immigration status. Most of them do not realize the benefits of participating in the Census, such as receiving more state and federal funding and gaining more representation in Congress. As a result, there was an estimated 373,000 person undercount in Texas in the 2000 Census (Weber, 2010).

The Director of the Census Bureau attempted on several occasions to communicate directly with dubious citizens, but was unable to convince them. He was seen emerging from a police car and spoke in English to an almost entirely Spanish-speaking group (Weber, 2010).

The article explicitly reveals a part of the solution, describing the participation of a local woman in reassuring the other neighborhood residents. There could be less suspicion if local agencies actively recruited those who were fluent in the local languages and who understood the concerns of the people. It is clear that the Census is not undertaken in a way that addresses concerns of immigrant populations (Weber, 2010).

(2.2.3.3) Data Collection Improvement

As the Census Bureau has been criticized for undercounting of minority and low-income populations, it has responded with the Planning Database that determines where and why certain areas will be difficult to count. They use this as a guide to counting in those areas to try to ensure that everyone is included. They use twelve indicators based on surveys to determine whether certain communities will be difficult to count (Bruce and Robinson, 2000). The efficacy of this process and new approaches to public outreach can be more fairly judged after the much-anticipated 2010 Census results are published.

Beginning in 2011, the Census Bureau will publish a “Supplemental Poverty Measure” alongside the current poverty rate statistics. The Bureau hopes it will “provide an alternative lens to understand poverty...” (Commerce, 2010a). The Supplemental Poverty Measure will depart from current poverty statistics by accommodating atypical family sizes, type of residence, and geographical changes in the price of goods while adjusting income calculations to reflect a broader range of benefits and expenses (Commerce, 2010b).

Environmental justice groups would benefit from a more accurate poverty rating. The new measure will not be utilized to administer government services, as the design will be perfected over time. Any organization offering social services will benefit from a more accurate poverty rating. EJ organizations may be able to voice their opinions on how it should be adapted to better reflect the needs of poverty-stricken residents in their communities.

(2.2.3.4) Resource Consumption Patterns Identification

No applicable findings.

(2.2.3.5) Community Empowerment

No applicable findings.

(2.2.4) DEPARTMENT OF DEFENSE (DOD)

Department of Defense (DOD) has several environmental departments under its management. The Defense Environmental Network and Information Exchange, a database detailing DOD environmental impact assessments and related policies, is maintained by the Office of the Deputy Under-Secretary of Defense (Installations and Environment). The management structure for NEPA is highly centralized, and although information is made public, it is only available intermittently. DOD published its latest environmental justice strategy on March 24, 1995.

(2.2.4.1) Enforcement Promotion

DOD's primary focus in regards to Executive Order 12898 is on federally-recognized Native Americans and tribal organizations. More specifically, "a federally-recognized Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the most current Department of Interior list of tribes published in the Federal Register" (DOD, 2006). DOD created an agency-wide committee for environmental justice for monitoring and implementation of EJ

activities and development of EJ strategies. An annual report, similar to the department's Defense Environmental Quality Annual Report, is submitted to Congress each year. The report details specific means by which EO 12898 is implemented. The information compiled in these reports is a product of self-assessments made on low-income and minority communities living near defense installations. The minimum threshold for sufficiency is to meet NEPA guidelines.

(2.2.4.2) Participation Increase

DOD is currently working to improve its EJ practices by more closely investigating surrounding communities to better identify low-income and minority communities. Interviews are to be conducted with members of nearby communities and cross-referenced with various data sets and databases from within the agency and with other agency databases (Gerrard, 2009). Implementation of NEPA is improved by spending more time identifying low socioeconomic groups, which combines information gathered from local interviews with that of government databases. DOD will post multilingual signs, warning of potential hazards and risks associated with defense activities. The Navy communicates the dangers of consuming fish and wildlife on contaminated sites (ex: Navy posts signs along shoreline of Hunters Point Naval Shipyard in San Francisco, in four languages, warning against consumption of shellfish taken from this area) (Gerrard 2009).

(2.2.4.3) Data Collection Improvement

The department is currently working on improving data collection, analysis, and research to comply with NEPA and to assess the effects of actions on low socioeconomic groups. They revise and reissue DOD guidelines on implementing NEPA and consider environmental justice issues. The Army and Air Force must make special efforts to reach minority populations if an action will affect those communities. Signs posted to warn local communities must be written in languages commonly spoken by members of the local community. The use of additional materials that may cause additional potential harm to local communities must be included in DOD's compliance assessment pursuant EO 12898 and Title VI of the Civil Rights Act. Introduction of new material deemed potentially harmful to local communities requires guideline reassessment for NEPA compliance.

(2.2.4.4) Resource Consumption Patterns Identification

DOD uses the Restoration Advisory Boards (RABs) to encourage public involvement in cleanup at military bases. RABs include diverse groups of community members as well as military officers. These Boards improve community understanding of remediation issues.

DOD also established the Technical Assistance for Public Participation —a grant program that funds independent technical advice and consulting to communities. Under this program, DOD revises community relation plans and publishes information in nontraditional media sources used primarily by low income and minority populations.

(2.2.4.5) Community Empowerment

No applicable findings.

(2.2.5) DEPARTMENT OF ENERGY (DOE)

The DOE is mainly involved in EJ through the siting of waste disposal areas, promotion of green jobs, and energy efficiency efforts. However, concerning the last two, they share jurisdiction with state and local chambers of commerce and HUD offices. Direct community involvement most often occurs in the context of facilities siting under the environmental impact statement public comment process pursuant to NEPA. For this, they use the EPA's Environmental Justice Guidelines for their environmental impact assessments (personal communication, March 22, 2010). In the federal-level DOE Environmental Justice Strategy document (2008), they indicate that they will address the four components enumerated by the Executive Order (increasing enforcement, participation, data collection, and identifying resource consumption patterns), but it is unclear whether they have actually integrated these principles into their practices.

(2.2.5.1) Enforcement Promotion

Concerning energy efficiency efforts, the larger communities receive assistance directly from the federal office; the state DOE offices assist the smallest communities through state revolving loan funds, usually created using federal dollars. Individuals seeking assistance with energy efficiency projects receive it from the state HUD offices (personal communication, March 22, 2010).

The DOE administers a State Energy Program, which distributes funding through the state-level DOE offices for energy-related projects across the country. One such is a project in Wichita to build a biofuel production facility (personal communication, February 15, 2010). The projects are screened based on a long list of criteria, the highest priority of which is the creation of jobs. However, there is no component that targets low-income or vulnerable communities (personal communication, March 22, 2010).

The Nevada Site Office of the DOE has several ongoing environmental justice programs to ensure that the office complies with the five-year National Environmental Justice Strategy (personal communication, 22 March 2010). These programs operate out of the National Nuclear Security Administration and the Environmental Management Division of the DOE and are summarized below in Table 3.

(2.2.5.2) Participation Increase

Because the state and federal DOE offices mostly distribute funds to municipalities, with the State Energy Program going to qualified NGOs, the only contact the DOE has with the general public and environmental justice is through the Environmental Impact Assessment process (personal communication, March 22, 2010). A large portion of these activities concern clean-up related to the nation's nuclear weapons program (DOE, 2008). While EJ is explicitly included in the NEPA framework administered by the EPA, the DOE's environmental impact statement often only cursorily mentions it (DOE, 2006a; DOE 2006b).

The Nevada Site Office works directly with citizens, rather than through a community organization, to allow for more direct interaction with communities potentially affected by the Nevada Test Site. However, the Office does work with local school districts to identify "low-income" and "at-risk" schools when determining where to target their educational program.

(2.2.5.3) Data Collection Improvement

No applicable findings.

(2.2.5.4) Resource Consumption Patterns Identification

No applicable findings.

(2.2.5.5) Community Empowerment

No applicable findings.

(2.2.6) DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS)

Department of Human Health and Services (HHS) environmental justice strategy is outlined in their manual. HHS-General Administration Manual Part 30, Environmental Protection. In this manual, HHS outlines current statutory, regulatory and Executive Order environmental authorities and HHS's response to them. Part 30-00-20, specifically outlines HHS's response to this executive order and it includes a listing of programs, policies, planning and public participation processes, enforcement, and/or rulemakings related to human health or the environment and should, at a minimum: (a) promote enforcement of all health and environmental statutes in areas with minority populations and low-income populations; (b) ensure greater public participation; (c) improve research and data collection relating to the health of and environment of minority populations and low-income populations; and (d) identify differential patterns of consumption of natural resources among minority populations and low-income populations.

HHS outlined a strategy in 1995, which was prepared by the HHS Subcommittee on Environmental Justice, environmental health policy, and HHS. HHS highlights strategies and objectives in the areas of public partnerships, public education and training, services, data collection and analysis, health research, and interagency coordination (Strategic Elements for Environmental Justice, 1995). A report outlined some examples of this strategy in play as in the Mississippi Delta Project and Federal Science Manager's Conference on Environmental Justice.

(2.2.6.1) Enforcement Promotion

Within the HHS, each state has their own department of human health and services. More in-depth environmental justice strategies exist at the state level, depending on the state.

Under the HHS, the Agency for Toxic Substances and Disease Registry (ATSDR) has the responsibility for assessing scientific findings, taking public health action, and providing information to prevent harm from toxic substances. It is primarily focused on toxic releases from facilities, flaring from refineries, and contamination of local biota.

(2.2.6.2) Participation Increase

Within EPA Region 6, according to an ATSDR Senior Regional Representative, the procedure for EJ complaints in the region is that they first go to the EPA's EJ Office, and are then distributed accordingly. ATSDR does not take EJ complaints directly (personal communication, March 18, 2010).

(2.2.6.3) Data Collection Improvement

The environmental justice strategy includes, where appropriate, a timetable for undertaking identified revisions and consideration of economic and social implications of the revisions. To assist in identifying the need for ensuring protection of populations with differential consumption patterns, agencies whenever practicable and appropriate, must collect, maintain, and analyze information on the consumption patterns of populations who rely principally on fish and/or wildlife for subsistence (Department of Human Health and Services, 2010).

(2.2.6.4) Resource Consumption Patterns Identification

No applicable findings.

(2.2.6.5) Community Empowerment

ATSDR undertakes some activities that specifically target low-income and minority populations in EPA's Region 6. Primary among them are community wellness training sessions that are conducted on Saturdays so more working people can participate. There is currently a wellness training sequence being conducted in Lake Charles, LA, an unincorporated designated EJ community near a Superfund site. These trainings are six hours total, and occur on four Saturdays per month, covering topics such as reducing exposure to toxics, asthma, and how to access local health care. These trainings are followed by a "health fair," where specialists provide information to residents in a one-on-one setting, and a mobile asthma clinic is present. These wellness trainings are conducted by ATSDR in conjunction with the EPA and the Louisiana State Health Department; ATSDR works with state agencies as much as possible in order to try and establish programs that will be permanently available (personal communication, March 18, 2010).

(2.2.7) DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

HUD has extensive federal EJ guidelines that tend to follow general civil rights procedures, but region-level activity and implementation of such guidelines was difficult to determine. For several regions, HUD did not reply to inquiry, and regional websites and online region-specific information was sparse.

HUD's EJ policies comprise the following federal requirements:

- Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance.
- Title VIII of the Civil Rights Act (Fair Housing Act) prohibits discrimination in the sale, rental and financing of dwellings based on race, color, religion, sex or national origin. Any complaints filed with HUD, especially those concerned with EJ, are investigated by the Office of Fair Housing and Equal Opportunity.
- The Housing and Urban Development Act of 1968 §3 requires contractors and subcontractors to provide low- and very low-income persons training and employment opportunities generated by public housing development, operating subsidies, and modernization assistance in both metropolitan and non-metropolitan

areas. Section 3 also requires public housing contracts be awarded to those businesses providing economic opportunities for low- and very low-income persons.

- 24 CFR Part 50, the Protection and Enhancement of Environmental Quality, implements those requirements set forth by NEPA.
- 24 CFR Part 51, Environmental Criteria and Standards, provides environmental standards for determining project acceptability and necessary measures to ensure suitable living conditions. This is mostly used by HUD and Native American governments.

The Protocol for Environmental Review & Environmental Review Assurance provides criteria and standards to be used in the determination of fund allocation

Attempts to determine implementation of HUD guidelines at the regional level yielded little response from HUD representatives. A representative of the Boston regional HUD office was contacted, who indicated that e-mail would be the most appropriate form of communication. However, once research questions were emailed, the representative responded that within the region, HUD simply follows the agency's national EJ guidelines, and identified the national HUD website as a reference. Further attempts to elicit a response regarding region-specific strategies and challenges were ignored (personal communication, March 15, 2010).

(2.2.7.1) Enforcement Promotion

In response to Executive Order 12898, HUD initiated several EJ approaches. Empowerment, Tax Incentives, and Renewal Community Tax Incentives are initiatives that make \$11 billion available to businesses that are located within Empowerment Zones and Renewal Communities. Various incentives include employment credits, decreased taxes on capital gains, tax deductions on equipment and capital, and accelerated real property depreciation. Empowerment Zones and Enterprise Communities are designated on the basis of economic distress and development potential. These areas are administered by local governments or non-profit corporations. HUD is responsible for assessing whether zones and communities are achieving local goals using a Performance Measurement System.

(2.2.7.2) Participation Increase

The Office of Lead Hazard Control requires disclosure agreements be provided between tenants and landowners, especially in poor, urban, and minority neighborhoods. The Office conducts studies, provides technical assistance, outreach, and provides guidelines and policies to protect low-income families. Other projects include the Healthy Homes Demonstration Project, Green and Healthy Homes Technical Studies Program, and the Lead Education Campaign.

The Farm Workers and Colonias Initiative are located within 150 miles of the US-Mexican border. It is a legal working group that addresses needs of migrant farm workers and people living in Colonias. Additionally, HUD manuals and EJ resources include:

- Choosing an Environmentally Safe Site
- Not in My Backyard Report
- EZ/RC address locator
- Partnership for Advancing Technology in Housing

(2.2.7.3) Data Collection Improvement
(See Region 6 Case Study)

Case Study Region 6: Agriculture Street Landfill; New Orleans, LA

A swampy area formerly used as a dump by the City of New Orleans was later redeveloped and used to support public housing for low-income black families. The Agricultural Street community is a collection of 167 public housing complexes as well as 67 single-family homes. The community was started in the late 1970's, with public housing constructed first, followed by single-family homes. This community is built on top of an old landfill site approved by HUD (Palmeri, 2000). The landfill extends more than 17 feet into the ground, and was officially declared a Superfund site by the EPA. After high cancer rates were observed, the land was tested for contamination. The EPA reported 150 contaminants, 50 of which were carcinogenic. The government, specifically EPA, spent several billion dollars remediating the site. The community wishes to relocate with financial assistance from HUD, EPA, and the City of New Orleans, though negotiations are ongoing.

These problems originated from inadequate documentation and sealing of the contents of the dump site. Thorough testing should have been administered and disclosure statements should have been provided. Relocation should be provided to the community first, and clean up efforts and costs are undertaken afterwards. HUD and EPA must work together to establish a relocation priority scheme.

(2.2.7.4) Resource Consumption Patterns Identification

The Brownfield's Redevelopment Initiative specifically includes EJ into the Notice of Funding Availability, which requires that low-income, minority communities be given priority in federal funding allocation. HUD also requires that brownfield sites demonstrate how EJ is addressed in redevelopment.

(2.2.7.5) Community Empowerment

See "Enforcement Promotion" section above

(2.2.8) DEPARTMENT OF THE INTERIOR (DOI)

The Department of Interior's (DOI) decentralized management structure makes evaluating EJ plans for the entire agency difficult. After Executive Order 12898, the Office of the Secretary of Interior issued a memorandum in May 1995 stating that environmental documents should specifically analyze impacts on minority and low-income populations (DOI, 1995). If significant impacts to EJ communities were found, the bureaus "should clearly evaluate and state the environmental consequences" for those communities in the NEPA document.

Also in 1995, the DOI's Office of Environmental Policy and Compliance (OEPC) issued an Environmental Justice Strategic Plan, which is made available online (DOI, OEPC, 2009). This strategic plan outlines four goals for DOI, and breaks down information on what each bureau has done for EJ. The four strategic goals can be summarized as follows:

- Involve minority and low-income communities in environmental decision-making.
- Provide EJ training to employees; work with EJ communities to develop training which will reduce their environmental health and safety hazards.
- Expand science, research, and data collection on solutions to EJ issues.
- Use public partnership opportunities with multiple sectors to advance EJ.

The OEPC website also has points of contact for various environmental coordinators at different regional offices as well as the EJ contact at each of the bureaus of the DOI.

DOI manages large tracts of land, largely in the West. These lands are often near Native American communities. Thus, DOI should be examined in EJ evaluations dealing with these communities as well as regions in the Western US.

Efforts to contact the DOI's New England OEPC yielded only communication with a secretary, who responded that the office does not "do environmental justice," and that she would nonetheless have someone return the call. This call and further calls and e-mails were not reciprocated.

The DOI is a prominent agency in Region 6, because of the prevalence of publicly managed lands. However, the agency's activities in the field of EJ are characterized most by their absence. The Regional Environmental Coordinator indicated that EJ was "not on his radar recently" (personal communication, March 18, 2010). Despite the lack of EJ activity, DOI in the Southwest can be credited for its quality public relations. Though DOI's website has a plethora of activities listed, most of them lack dates, making the current status of these programs uncertain. It is also difficult to assess what activities are occurring in different regions, since EJ highlights are selected from the entire country and not filtered by region.

(2.2.8.1) Enforcement Promotion

United States Fish and Wildlife Service Job Corps centers on three refuges which provide training in conservation activities (Gerrard, 2009). Appalachian Clean Streams Initiative (since 1994), through the Office of Surface Mining, provides "seed money" to states to assist with efforts to remediate abandoned coal mines (DOI, OEPC, 2009). Many of the examples listed on the DOI website began in the mid-1990s, however, with their current status uncertain.

(2.2.8.2) Participation Increase

The National Park Service partners with youth corps/conservation organizers to bring disadvantaged inner city residents to urban parks and provide environmental education opportunities (Gerrard, 2009). EJ coordinators were additionally appointed in each of the eight bureaus (DOI, OEPC, 2009).

(2.2.8.3) Data Collection Improvement

The Bureau of Indian Affairs of the DOI is active in Region 9 due to the prevalence of Tribal Nations. EJ concerns in Tribal Nations are predominantly addressed through the NEPA review process (personal communication, 21 March 2010). This includes identifying and mitigating impacts to EJ in environmental assessments and environmental impact statements for all projects requiring federal approval. Additionally, the Bureau of Indian Affairs does a

substantial amount of work on behalf of Tribal Nations and works closely with Tribal authorities. Through these direct partnerships, EJ issues are generally avoided and/or resolved before becoming a major issue.

(2.2.8.4) Resource Consumption Patterns Identification

No applicable findings.

(2.2.8.5) Community Empowerment

No applicable findings.

(2.2.9) DEPARTMENT OF LABOR (DOL)

While the Department of Labor (DOL) does not have transparent EJ policies in response to President Clinton's Executive Order, the agency recently announced the new Secretary of Labor, Hilda Solis. Ms. Solis has been a very active proponent of EJ and in 2000 won the JFK Profile in Courage Award for her "pioneering work on environmental justice issues" (DOL, 2009). Ms. Solis was active in CA legislation that required the Office of Health Hazard Assessment within the Cal/EPA to establish indicators of EJ, such as an improved understanding of EJ and public health and an overall assessment of the agency's success in improving environmental quality and public health in EJ communities (Cal/EPA, 2004).

(2.2.9.1) Enforcement Promotion

The DOL encourages all grant applicants (which are required to have previous experience in serving EJ communities) and awardees to focus funds in communities where poverty rates are at or above 15% (African American Environmentalist Association, 2010). Individuals supported by the program's funds will receive: 1) recruitment and referral services, 2) occupational skills training 3) support in overcoming barriers to employment, and 4) certifications that will lead to employment (African American Environmentalist Association, 2010).

(2.2.9.2) Participation Increase

At a federal level, the EPA set up pilot training programs for minority and low-income communities under the Office of Solid and Waste and Emergency Response (OSWER). The training programs were meant to provide skills so individuals involved in the program could be employed in landfill management and solid waste management technologies (EPA, 2008). When the program was initiated in 1995, OSWER intended to expand their training efforts and partner with the DOL (EPA, 2008b). This remains to be seen and may be an avenue for further investigation.

DOL recently announced Pathways out of Poverty grant awardees, and the list includes local as well as national organizations. Many of the grants were awarded to support and train high school drop-outs, veterans, and criminal offenders or otherwise disadvantaged individuals. A smaller fraction of the grants went to specified minorities or individuals with limited proficiency in English (DOL, 2010).

(2.2.9.3) Data Collection Improvement

When contacting the DOL, environmental justice policy information was not immediately available. Under the presumption that the Center for Faith-Based and Community Initiatives (CFBCI) mission was closely related to environmental justice, CFBCI's Washington D.C. office was our first call. Upon requesting an opportunity to speak with an office representative about environmental justice issues within the DOL, the CFBCI associate referred the call to DOL's information hotline. After submitting an environmental justice "research request" over the phone with a DOL associate (via hotline), a DOL representative returned the call. However, the point of contact suggested by the DOL representative did not return calls.

(2.2.9.4) Resource Consumption Patterns Identification

At levels of regional concern, the DOL may be involved with EJ issues associated with immigrant workers. Dangerous work conditions such as poor ventilation, toxics exposure, and health and safety law violations can be a larger problem for minority, immigrant, and low-income workers. The Asian Immigrant Women Advocates is an example of a California EJ organization that reaches out to the DOL on issues of workplace hazards for immigrant workers (Asian Immigrant Women Advocates, 2003).

An example of a direct connection between EJ and DOL is within a state partnership between the New York State Department of Environmental Conservation (NYDEC) and New York State DOL (NYDOL). The two state-level agencies, along with other state-level participants, established the Environmental Justice Interagency Taskforce (NYDEC, 2008). The purpose of the task force is to establish lines of communication between the agencies and ensure representation of the state's minority communities during decision-making processes.

The New Mexico Department of Workforce Solutions (NMDWS) works closely with local and community organizations. A human rights division handles complaints regarding worker discrimination and justice issues (NMDWS, 2009). A NMSWS representative stated that approximately seven to nine grant applications were submitted to the DOL for the Pathways out of Poverty Grants (personal communication, March 23, 2010). The NMDWS office was aware of the grants, indicating proactive involvement by the state as well as DOL information dissemination regarding grant availability. Unfortunately, the NMDWS round of grant applications was denied by the DOL. The NMDWS office expressed disappointment in the lost grant opportunities because the applicants worked hard to meet the requirements of the grant application and thought there was a good chance they'd receive federal funding. The applicants included community colleges as well as grassroots organizations supporting seasonal farm workers and Native Americans. Fortunately, the NMDWS did receive a State Energy Partnership Grant that could be used for disadvantaged communities within New Mexico.

(2.2.9.5) Community Empowerment

With \$150 million in funding from the American Recovery and Reinvestment Act of 2009, the DOL established "Pathways out of Poverty" to help national nonprofits and local organizations assist disadvantaged workers such as those in EJ communities (African American Environmentalist Association, 2010). It is also considered a green jobs training program, as the funds are used to assist individuals in finding work in energy efficiency and renewable energy industries.

(2.2.10) DEPARTMENT OF TRANSPORTATION (DOT)

DOT seeks to avoid disproportionately high and adverse impacts on minority and low-income populations through the minimization and/or the mitigation of unavoidable impacts by identifying concerns early in the planning phase and providing offsetting initiatives and enhancement measures to benefit affected communities and neighborhoods.

Federal agencies such as the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) staff work with and oversee state DOTs, the Metropolitan Planning Organization (MPO), transit providers, and other local agencies to ensure Title VI and EJ considerations are integral to all surface transportation activities. In addition to making sure that federal transportation regulations and policies affirm and reinforce nondiscrimination, federal staff takes other important actions to ensure compliance of regional, state, local, metropolitan entities with Title VI, implement EJ principles. They also attempt to identify effective practices, potential models, and other technical assistance resources to promote the integration of environmental justice into all planning, development, and implementation activities.

The Federal-Aid Highway Act of 1970 established further basis for equitable treatment of communities affected by transportation projects (DOT, 2010). The Act requires consideration of the anticipated effects of proposed transportation projects upon residences, businesses, farms, and accessibility to public facilities, tax base, and other community resources.

The Environmental Justice Strategy upholds the process in NEPA and Title VI (DOT, 1997). The Strategy lists comments from state agencies: proposed Order duplicates existing processes and imposes burdens on state agencies, urging that more flexibility be granted to states.

In 1998, the FHWA issued an internal order to implement the principles of the DOT and Executive Order 12898 by incorporating environmental justice principles in all FHWA programs, policies and activities (FHWA Website, 2006). Furthermore, the FHWA and Federal Transit Authority (FAT) issued a memorandum in 1999 describing actions and clarification to field offices on how environmental justice actions should be implemented. The memorandum emphasizes the need to incorporate environmental justice into the planning actions before a project is underway (FHWA Website, 2009). DOT and FHWA use race and low income to describe the communities in its environmental justice description. Low income is defined by the US Department of Human Health and Services as at or below poverty level guidelines (personal communication, March 10, 2010).

The FHWA has no regional offices, but state offices and regional resource centers that provide technical and training support (personal communication, March 10, 2010). For example, the South Carolina division of the Federal Highway Administration's planning and environment section deals heavily with environmental issues. According to a planning and environmental specialist, the office conducts environmental assessments according to NEPA and EPA requirements. From the planning stages of transportation plans, environmental justice concerns are addressed. The office uses census information to compare poverty level of the state average with the area affected to identify environmental justice communities (personal communication, March 10, 2010).

According to this specialist, since the Executive Order and subsequent DOT Order, the office has undergone extensive training and participated in various conferences on environmental justice in an effort to foster greater understanding of the issue. The office also holds regular public outreach meetings and forums for discussion, especially on major highway projects (personal communication, March 10, 2010). The office does have a process in place to handle complaints, but is mainly concerned with addressing the complaints through Title VI of the Civil Rights Act of 1964. The office also has a civil rights coordinator to deal with local complaints, and if the complaint is serious, a committee is formed including members of headquarters.

(2.1.10.1) Enforcement Promotion

For Region 2, an official response never came from New Jersey's or New York's DOT department headquarters. However, from informal discussions with DOT employees, it appears that there is a lack of awareness concerning EJ and Executive Order 12898. The employees did say that they do take community makeup and impact into consideration when conceiving a project per the instruction of the EPA. The DOT employees thought that city transportation was more applicable to EJ issues given that public transportation, such as subways, had more of a day-to-day impact on access to resources and employment.

A representative from Montpelier, Vermont FHWA office (Region 1) emphasized that Vermont is not diverse and the FHWA therefore lacks a proactive EJ program in the area. In his experience, EJ is mostly just a procedural response, a series of environmental compliance measures with NEPA for any projects that require NEPA funding, on a project-by-project basis. EJ is only a consideration in large construction initiatives, with noise, traffic, and land-use impacts considerations, rather than a factor in day-to-day maintenance activities. He believes that state agencies may be much more active in EJ issues. The FHWA in Vermont delegates much responsibility for local activities to VTrans, the state-level agency (personal communication, March 22, 2010).

FHWA interaction with the EPA has been limited to EJ training, but this has not taken place in three to four years. Additionally, the office receives many EJ documents and pamphlets from the EPA (personal communication, March 22, 2010).

In Region 8, The Department of Transportation has collected extensive information through the Environmental Impact Statements on the I-70 Northwest and US-36 Corridors by assessing Hispanic and low-income neighborhoods they travel through in Denver, CO, Garfield, Eagle, and Summit counties (Colorado Department of Transportation, 2004). The EIS evaluated impacts on noise, disruption of community cohesion, and the diminution of aesthetic value, though stated little concerning impacts on bicycle access and public transportation. Indirectly, the impact of second home owners in "ski country" along with final public transportation decisions could influence where low-income residents will reside; and subsidized housing to maintain a service sector within the corridor falls more under the ordinances of HUD. This dynamic between low and medium income service sector residents and the encroaching value of property occurs across the nation. In this instance, efforts should be coordinated with the Region 8 EPA EJ offices in order for them to adequately answer questions. Along with a public

library in downtown Denver, the EPA easily has the most public presence among the region's governmental agencies in matters of air quality and alternative transportation, and will most likely continue to be a point of contact for much of the roadway construction.

Within Region 9, EJ is a major concern for the FHWA and the FTA, the agencies responsible for exposure to mobile source emissions and access to public transportation (personal communication, March 5, 2010). Again, EJ is primarily addressed through regional transportation plans and the NEPA review process for both agencies (personal communication, March 5, 2010). One example using a regional transportation plan to promote EJ comes from the Southern California Regional Transportation Plan. This is a 20-year plan that includes objectives and policies that address equity and accessibility issues in transportation planning. This long-term plan also utilizes performance metrics to identify transportation-related environmental burdens. These measures can be used to identify if a disproportionate impact is occurring in low-income and/or minority communities.

While the FHWA and FTA identify EJ as a major concern, there are some limits to the extent to which these agencies may address the issues. Transportation-related EJ issues are also concerned with emissions and air quality impacts. However, FHWA and FTA do not have the authority to regulate vehicular emissions.

(2.2.10.2) Participation Increase

The Vermont representative emphasized that the DOT wants to pay more attention to the benefits of a project than the distribution of harms. Projects should provide equal transportation access to all - as he put it, "mitigation with a blind eye." That is, richer communities do not get special priority for projects like noise walls, and benefits should be evenly distributed. This seems to detract from the notion of giving priority to disadvantaged communities where it might be needed and compensating for shortfalls in such areas (personal communication, March 22, 2010).

Vermont is not often confronted with these issues directly, and most EJ concerns are concentrated in Burlington, one of the largest metropolitan areas in Vermont (but still small by the standards of urban areas throughout the rest of the country). He could think of no interaction with EJ groups, but like other states, cites the NEPA process as a forum for public involvement, including public hearings and meetings, open comment periods by e-mail, and informative documents posted on the web (personal communication, March 22, 2010).

Youth Corps projects, usually highway work crews, provide summer employment opportunities to disadvantaged high school students. The program is open to anyone and is not exclusive to EJ communities (personal communication, March 22, 2010).

(2.2.10.3) Data Collection Improvement

The implementation of EJ strategies in program administration is meant to improve data collection, monitoring, and analysis tools that assess the needs of, and analyze the potential impacts on minority and low-income populations.

Case studies by region revealed that EJ metrics used were based upon individual projects, and included components such as assessment of project goals (whether the area needs more jobs, commuting lanes, etc.); assessment of area growth (e.g., more jobs, less congestion, increase in average wages); tools such as American Community Survey, a data resource that prepares a more accurate, timely and comprehensive profile of communities for public use; a videoconferencing network to implement distance learning projects; and cross-tabulations for EJ analysis with the Census Transportation Planning Package, used to analyze demographic and travel trends and develop or update existing travel trends models.

The FHWA takes into account the presence of low-income or high-minority communities in the vicinity of a project. They use the US Department of Health and Human Services (DHHS) definition of low-income, which is the federal poverty line. A FHWA representative noted that the Department of Housing and Urban Development (HUD) threshold for low-income is much higher. Therefore, they come across some cases where a neighborhood might appear to be low-income but is not strictly identified as an EJ community. They use Census data to identify such communities, and most of the mapping and data analysis labor is contracted out (personal communication, March 22, 2010).

(2.2.10.4) Resource Consumption Patterns Identification

No applicable findings.

(2.2.10.5) Community Empowerment

No applicable findings.

(2.2.11) OFFICE OF MANAGEMENT AND BUDGET (OMB)

The Office of Management and Budget (OMB) is the largest office in the Executive Office. Their primary objective regarding EJ is to increase transparent EJ policies in response to President Clinton's Executive Order. The OMB is responsible for the following: improving the implementation of the Paperwork Reduction Act, the Small Business Paperwork Relief Act, Information Collection Review, Paperwork Reduction Act compliance, Office of Information and Regulatory Affairs Reports in XML format and information collection budget for the US Government (OMB 2010). These efforts are utilized in the EJ movement to increase efficiency across all participating federal agencies.

The US OMB has a unique opportunity in that it, perhaps more than any other federal agency, is capable of affecting EJ initiatives and programs across agencies and sectors. As an example, the Natural Resources & Environment Division within OMB considers historical spending and in working with the EPA, determines an EJ specific budget for the EPA (personal communication, March 26th, 2010). In addition to the budget specific responsibilities, OMB also oversees how agencies spend their allotted budgets and whether or not those agencies are performing well. In 2005, OMB developed ExpectMore.gov, which serves as a performance monitoring system for the federal budget. Specifically, the Program Assessment Tool within ExpectMore.gov, assesses federal program performance (ExpectMore.gov, 2009).

(2.2.11.1) Enforcement Promotion

A coal plant in Tennessee is producing fly ash at its production facilities and this ash is being shipped from Tennessee to a Black community in Alabama, where it is being placed in a landfill. Environmental organizations such as the African American Environmentalist Association have opposed this measure. Instead of spending the money to use the ash in cement and concrete production, the Tennessee Valley Authority continues to ship this toxic ash to the Alabama landfills. A hearing on the matter was held March 31, 2009 and April 30, 2009. At these oversight hearings, OMB was required to consider this as an environmental justice issue in light of Executive Order 12898.

(2.2.11.2) Participation Increase

No applicable findings.

(2.2.11.3) Data Collection Improvement

In accordance with the OMB Bulletin No. 00-02, Guidance on Aggregation and Allocation of Data on Race for Use in Civil Rights Monitoring and Enforcement, requires agencies to offer persons the option of selecting multiple races when reporting information on race to Federal data collectors (OMB, 2000). The impact of this requirement on EJ goals is currently unknown.

(2.2.11.4) Resource Consumption Patterns Identification

No applicable findings.

(2.2.11.5) Community Empowerment

No applicable findings.

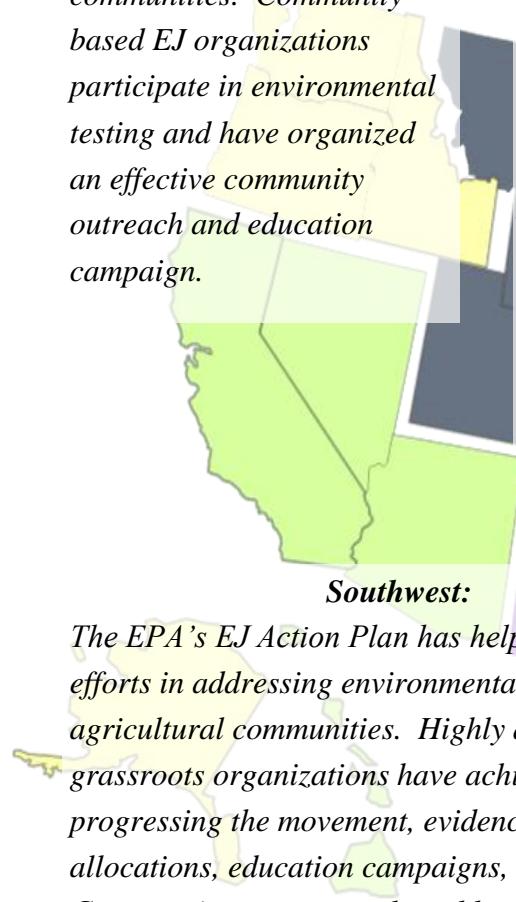
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Regional Analysis

Federal Agency Response to EJ Organizational Concerns

Northwest:

The EPA's CARE program is successful in prioritizing and distributing grants to EJ communities. Community-based EJ organizations participate in environmental testing and have organized an effective community outreach and education campaign.



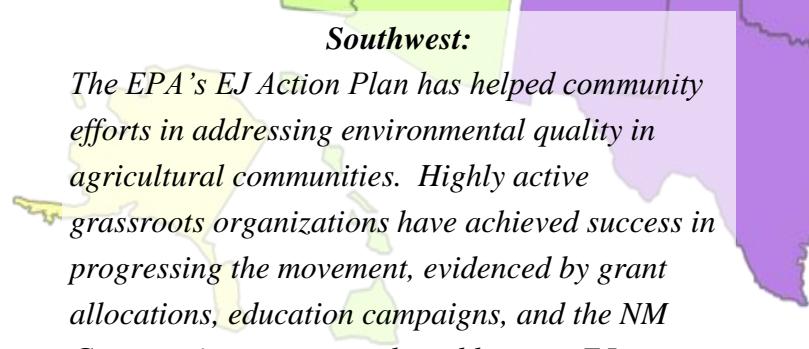
Central

DOL's Pathways Out of Poverty grants have been successful in the region. Despite having few community based EJ organizations, land donations have been secured for gardens in disadvantaged communities. EPA's Supplemental Environment Projects are central to EJ efforts, funding various environmental controls projects.



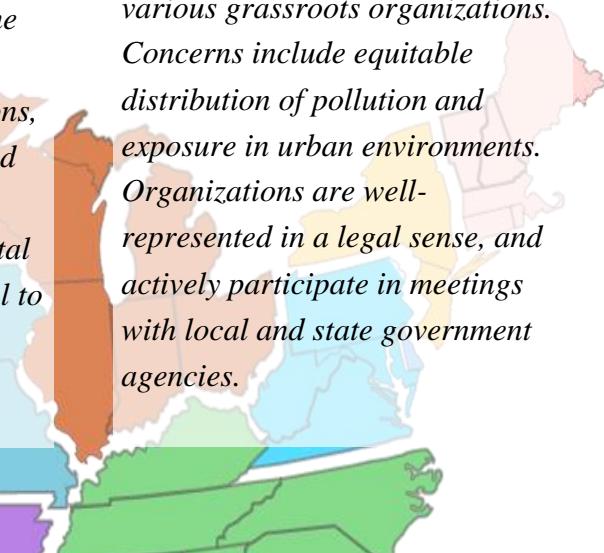
Southwest:

The EPA's EJ Action Plan has helped community efforts in addressing environmental quality in agricultural communities. Highly active grassroots organizations have achieved success in progressing the movement, evidenced by grant allocations, education campaigns, and the NM Governor's executive order addressing EJ.



Northeast:

Several successful and nationally known EJ organizations have experienced significant growth through partnerships between various grassroots organizations. Concerns include equitable distribution of pollution and exposure in urban environments. Organizations are well-represented in a legal sense, and actively participate in meetings with local and state government agencies.



Southeast:

Prominent organizations in the region are concerned with agricultural and mining workplace exposures. EPA utilizes internal mapping tools to identify and track EJ communities. Successful and multifaceted community and university partnerships contribute to EJ nationwide.

The Regional Analysis that follows is based on information obtained during three months of research and interviews. The opposing map highlights a few of the research team's interesting findings. The findings highlighted on the map are generalized by geographical region, even though these specific aspects of the environmental justice movement are not necessarily unique to any one region.

(2.3) Regional Analysis

In the first phase of our research, the team collected regional data on environmental justice concerns nationwide. The following analysis exemplifies some of the progress made, but in no way accounts for the breadth and depth of all EJ organizations and their individual concerns. The research was categorized by EPA regions and has been compiled into geographic regions for purposes of this report. Each EPA region's findings are presented as "Background" and "Environmental Justice Concerns and Related Activities."

(2.3.1) NORTHEAST

(2.3.1.1) REGION 1

Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, and 10 Tribal Nations

(2.3.1.2) Background

EPA Region 1 (New England states and tribes) is one of the least demographically diverse regions in the country, particularly rural Northern New England. Nevertheless, the region contains vast disparities in wealth and dispersion of minority populations, making a region-level profile deceptive. Metropolitan areas contain both high concentrations of wealth and poverty. In many urban areas of New England, the multi-racial population is increasing. Overall, Caucasians constitute 88.3 percent of the population, while for Northern New England alone (Maine, Vermont, and New Hampshire), this figure rises to 94.5 percent (Federal Reserve Bank of Boston, 2007). Connecticut has one of the highest per capita incomes in the nation, while Maine's rests well below the national average. Unemployment for the region as a whole is generally below the national average (Federal Reserve Bank of Boston, 2007). New England's poverty rate hovered around 9 percent, lower than the national average, but 5 percent of communities had poverty rates upwards of 20 percent (Borgos, 2006). Hartford, for example, is one of the poorest cities in the country, with a per capita income of \$11,087 (EPA, 2010e, UEP).

Region 1 has unique natural resources and exports from the rest of the country, including granite, lobster, codfish, maple syrup, cranberries, and industrial and commercial machinery. Highly diverse and low income urban areas, such as Providence, RI, tend to be major industrial centers and are home to a disproportionate concentration of polluting industries (EPA, 2010e, UEP).

(2.3.1.3) Environmental Justice Concerns and Related Activities

Air pollution is a central environmental justice concern in urban areas of New England, with many community groups working on related projects, such as asthma campaigns and initiatives to lower transportation-related greenhouse gas emissions.

In Boston, MA, the EJ organization Alternatives for Community and the Environment (ACE) was originally founded by lawyers who envisioned a bottom-up model, comprised of and led by constituents, for environmental organizing and advocacy (Alternatives for Community and the Environment, 2010). It has grown considerably since its inception, particularly through

partnerships with other local grassroots groups, and maintains its community-based model. ACE has scored many environmental victories over the past 15 years, largely by creating a broad and politically-active base of more than 40 neighborhood groups, representing over 3,500 residents of Greater Boston (ACE, 2010). Among their accomplishments, they worked with neighborhood coalitions to block the local siting of an asphalt plant in Chelsea, MA. They successfully organized for new regulations on solid waste-related facilities. And they were involved in lobbying the state legislature to enact the first Environmental Justice Policy in 2002 (ACE, 2010).

ACE formed a Transit Rider's union to develop strategy for better public transit in Greater Boston. They also created the Roxbury Environmental Empowerment Project (REEP)-- an approach to EJ issues that engaged local youth and formed school-based EJ programs (ACE, 2010). REEP is a hands-on educational campaign whose curriculum engages students to launch and lead their own community projects.

ACE coordinates the Massachusetts Environmental Justice Assistance Network (MEJAN), which includes more than 200 attorneys, law firms, public health professionals, and environmental consultants. MEJAN provides pro bono legal and technical assistance to neighborhood groups in low-income neighborhoods or neighborhoods of color to address environmental health problems (ACE, 2010). ACE relies primarily on the volunteer services of attorneys and membership donations.

ACE is responsible for the Climate Change Adaptation Advisory Committee, which reports to the Massachusetts legislature about strategies to prepare for rising sea levels and temperatures and increased floods and droughts (ACE, 2010). ACE is also organizing a series of workshops to develop recommendations for Boston's update to its Climate Action Plan, including methods to deal with further effects of climate change and strategies to build a greener economy (ACE, 2010). Additionally, ACE director, Kalila Barnett, was sent to the Copenhagen Conference on Climate Change as part of a delegation of U.S.-based organizers working on climate justice (ACE, 2010). ACE's ambitions, as recounted on their website, are "to connect U.S. grassroots campaigns to global movements that are also working on the intersections of ecological sustainability and social justice. The delegation hopes to collaborate with organizers from the Global South to address climate change and help overturn the view of the U.S. as a monolithic 'rich country'" (ACE, 2010). Through such campaigns, ACE attempts to break out of its local niche of activism and take action on a global scale; initiatives particularly suited for emerging contexts such as climate justice.

The New England environmental justice community as a whole is well-represented from a legal standpoint, thanks to the Conservation Law Foundation (CLF), a region-wide, nonprofit, member-supported advocacy group, with offices in Brunswick, ME; Boston, MA; Concord, NH; Providence, RI; and Montpelier, VT. CLF deals primarily with air pollution issues, urban revitalization, and the reduction of land consumption. In collaboration with community groups, CLF accomplishes its environmental and community protection mission mainly through lawsuits. These can be seen as short-term outputs, but they aspire to provide urban revitalization and healthier communities. CLF finds many avenues to address emissions problems, whose outcomes, in turn, influence myriad urban health and justice concerns.

Much of its work on smart growth deals with rural communities and partnerships, like those with the Vermont Smart Growth Collaborative and Massachusetts Smart Growth Alliance, give it greater leverage on rural issues (Conservation Law Foundation, 2010). Most CLF projects tie into the impact of emissions on local communities and on climate change as well as environmental preservation. In partnership with public transportation infrastructure advocacy groups like the New England Rail Coalition, it attempts to strengthen regional and metropolitan rail and bus lines, additionally battling to make the Massachusetts Bay Transit Authority more affordable and better funded. An innovative Pay-as-You-Drive project would advocate variable automobile insurance rates, effectively penalizing more driving (CLF, 2010).

CLF published several advocacy documents to aid its work with politicians, including a Briefing Book for gubernatorial candidates complete with policy recommendations, letters to Massachusetts senators, and comments on the 20-year transportation plan (CLF, 2010).

Environmental Justice groups are far more active in southern New England states. Since CLF has offices in each state, however, and New England states are relatively small, their litigation services are able to manage each state adequately along with major urban centers.

Many organizations in New England establish contact with other agencies and local and state governments. The Environmental Justice League of Rhode Island, for example, partners with the Healthy Housing Collaborative, part of the Rhode Island Department of Health, while most of their partners are other community groups and projects (Environmental Justice League of Rhode Island, 2010). Additionally, the group provides a comprehensive list of who to call with an EJ concern, with a separate local agency listing for each concern, from air pollution to failing septic systems to improper dumping or disposal of solid waste (Environmental Justice League of Rhode Island, 2010). Notably, almost all of the listings are for state agencies. No EPA regional contacts are provided.

Collaboration for Better Work Environment for Brazilians, a grant and community-based partnership under the auspices of the University of Massachusetts-Lowell, “[brought] Brazilian immigrant workers together to participate in the investigation of the numerous hazards they face at work and the development of feasible and viable solutions to the health problems generated by daily exposure to those hazards” (National Institutes of Health, 2007). The project ran from 2003 to 2008. Outreach workers promoted occupational safety and health, and owing to its connection to the university, provided training programs in research methods and promoted emphasis on monitoring and data collection. Demographic data collection on Brazilian immigrant workers and the occupational hazards they face was used to identify workplace hazards faced by Brazilian housecleaners, janitors, and construction workers, as well as to develop educational materials for low literacy rate work sectors and to design policy recommendations (Siqueira, n.d.). Data used included blood samples of workers, worker-compensation cases filed, and fatalities of the immigrant workers (Siqueira, n. d.). The project was funded by the National Institute of Environmental Health Sciences, part of the National Institutes of Health; much of its research and reporting has been conducted by C. Eduardo Siqueira MD, a faculty member at University of Massachusetts-Lowell (National Institutes of Health, 2007).

Most groups do not appear to conduct their own data analysis. Many groups' websites instead simply include a reference to Scorecard, a site that tracks geographic areas subject to unequal environmental burdens, and includes an unequal burdens locator, which serves as a proxy for data collection and monitoring by many organizations, and as a standardized metric for communities.

(2.3.1.4) REGION 2

New Jersey, New York, Puerto Rico, US Virgin Islands and 7 Tribal Nations

(2.3.1.5) Background

Region 2 is one of the most ethnically diverse areas in the US. According to the U.S. Census Bureau the region is approximately 58% white, 17% black, 16% Latino, 7% Asian, and 2% identified as other (Census, 2008a). There are also extensive resource inequalities in this area. For example, within the city of New York 11% of people living below the poverty line are white, yet white people make up 35% of the city's population (City-Data.com, 2010c).

Region 2 has many notable environmental justice organizations, including WEACT, Sustainable South Bronx, and UPROSE. The focus of the majority of the environmental justice groups in this region tends to be urban, as Region 2 is the most densely populated region. Many of the initiatives have focused on mitigation or more equitable distribution of pollution. For instance, WEACT advocated for the hybrid-fuel buses because bus terminals in Harlem were exposing residents to a disproportionate amount of pollution from the bus emissions. Other common issues are proximity of transportation infrastructure, proximity to industrial sites, and increased contaminant levels near lower income and minority communities.

(2.3.1.6) Environmental Justice Concerns and Related Activities

Region 2 is home to several nationally known EJ groups. WE ACT for Environmental Justice is located in New York City's West Harlem. It was founded in 1988 to address ongoing environmental issues relating to the North River Sewage Treatment Plant and the city's plans to install a bus depot in a densely populated area within the community (WE ACT, 2010). WE ACT lead two successful campaigns. One was to gain better management and maintenance of the sewage plant so it would not leak noxious gases, and the other was to make the city use low emission buses and to enforce idling rules for buses at the depot. They were able to gain key support from city council members by engaging the community to lead successful protests. Since those successes, WE ACT has expanded its focus to campaign for greater government accountability and transparency relating to EJ issues, as well as advocating for such issues as climate justice and "green" jobs.

Sustainable South Bronx is located in the industrial area of the New York City's South Bronx. The community there has the highest level of poverty and unemployment in the City and has poor health due to close proximity to expressways and industrial centers (Sustainable South Bronx, 2009). The organization has had numerous innovative initiatives to reach EJ goals. Sustainable South Bronx is active in educating the community about the urban environment and how to add more green space to the industrial area. Under the initiative "Green the

Ghetto” the organization was able to secure \$30 million in order to build parks and bicycle paths along the waterfront so that local residents can gain the benefits of having green space (Sustainable South Bronx, 2009). Also, Sustainable South Bronx has created “green” jobs in the community by training people in building “green” roofs, operating “green” technology, and providing training in horticulture, landscaping, and bio-mediation through its BEST Academy (Sustainable South Bronx, 2009).

UPROSE, which is an acronym for United Puerto Rican Organization of Sunset Park, is located in Brooklyn, New York. They have been active in engaging the community’s youth to participate in EJ issues such as climate justice, transportation, and green space. Successes have been retrofitting twelve diesel trucks and purchasing four hybrid buses to give clean transportation to the community and conduct Toxic Tours (UPROSE, 2010). In addition, UPROSE also successfully lobbied for the new construction of public housing to be energy efficient and include “green” technology. For the future, UPROSE is focusing on climate justice, clean transportation, lobbying the city for additional parks, and rehabilitating brownfields for community use.

(2.3.1.7) REGION 3

Delaware, Pennsylvania, District of Columbia, Maryland, Virginia and West Virginia

(2.3.1.8) Background

Region 3 comprises Delaware, Pennsylvania, District of Columbia, Maryland, Virginia and West Virginia. The region has a total population of 29.5 million (Census Bureau, 2009a). Maryland and the District of Columbia have the greatest density with over 500 people per square mile, while West Virginia has less than 149 people per square mile. On average, 12.38% of the Region’s population lives below the poverty line, slightly above the national average (Census Bureau, 2008c). Poverty is most concentrated in the urban areas and in Southern West Virginia. The majority of the region identifies as white (68.9%). Approximately 22% identify as black, 5% identify as Latino, and 3% identify as Asian (Census Bureau, 2009a). Major industries in the area lie in education, health services, public administration, manufacturing, retail, and resource extraction.

(2.3.1.9) Environmental Justice Concerns and Related Activities

In addition to the EPA Region 3 case study, each state agency responsible for environmental protection in the region has an EJ agent responsible for community outreach and forming partnerships with the EPA at large. Each state issued reports assessing the status of EJ within their boundaries. The degrees to which these reports are easily accessible via the government website and to what degree the states’ EJ identification and protection efforts extend vary. However, personal communication with representatives is incomplete. A substantive analysis of these variances cannot be determined until these information gaps are filled.

Region 3 has many grassroots organizations that focus on EJ issues. Issues span urban and rural spheres, ranging from exposure to vehicle exhaust in the inner cities of Philadelphia,

Baltimore, and the District of Columbia, to waterway contamination in the Delaware River and Chesapeake Bay, and to mountaintop removal operations in West Virginia.

Chester Residents Concerned for Quality Living (CRQL) is a local, community based organization that fights for environmental protection in Chester, Pennsylvania. The group started when studies showed that 90% of all toxic chemicals in Delaware County originated in Chester and all municipal waste was burned in Chester incinerators. Despite the group's confrontation of the issue in 1992, they still faced challenges in affecting decision-making in Pennsylvania's Department of Environmental Protection. This department continuously approved permits for the construction of waste facilities in Chester. An interview conducted in 1998 with the chairmen of the CRQL exemplifies some of the major themes grassroots organizations and communities face when interacting with various levels of government (Scharr deProphetis, 1998). Ten years have passed since the interview, but these challenges persist throughout the region. For this reason, most grassroots organizations in Region 3, especially those that are relatively small in scale, continue to interact mainly with state EJ coordinators and their local governments.

Alternatively, some EJ organizations engage in federal lobbying efforts and protests. Citizens for Clean Power is a Delaware-based grassroots coalition dedicated to changing regulatory programs through litigation and lobbying efforts. This organization is concerned with clean energy investments such as offshore wind farms. They also seek to ensure current forms of energy--specifically the Indian Point nuclear power facility--are properly monitored and penalized for violations. Similarly, grassroots organizations concerned with mountaintop removal operations, such as the West Virginia based Coal River Mountain Watch, interact at the federal level by filing petitions and lobbying. The group has also challenged the Army Corps of Engineers permits of valley fills, resulting in the suspension of valley fill permits in the region (Earthjustice, 2006). The need for litigation suggests affiliate agencies do not work in congruence with EJ organizations and communities. Current regulatory framework is either inadequate or not enforced.

Since Region 3 includes the District of Columbia, there are many national EJ organizations headquartered in the city or have regional offices located nearby. Many of these organizations are multi-purposed; they do not solely focus on EJ issues. Such organizations include the NRDC, Earthjustice, the Sierra Club, World Wildlife Fund, the Nature Conservancy, and several others.

(2.3.2) SOUTHEAST

(2.3.2.1) REGION 4

Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Mississippi, Alabama, and 6 Tribal Nations.

(2.3.2.2) Background

The US EPA's Region 4 covers the southeastern United States, from the Mississippi River in the west to the Atlantic Ocean in the East. The region has several major highways: Interstate-95 and Interstate-10 being the most prominent. The region's major industry is tourism (EPA, 2010g). These coastlines are also home to 98% of commercial marine species. Local major industries involve natural resource extraction, timber production, paper mills, manufacturing activities, construction, agriculture and farming, and mineral mining (EPA, 2010g).

This region has one of the largest and fastest growing populations. It is home to the Smokey Mountains, and one-third of the nation's remaining wetlands. These unique landscapes are home to some of the greatest biological diversity found in the nation. The region is mainly rural with the range of persons per square mile between 60 and 294. The regional range for persons below poverty level is 12 to 20% with Mississippi being the highest. The regional racial demographics are as follows: 70% white, 22% black, 0.46% American Indian, 1.4% Asian, 0.2% Hawaiian, and 6.2% Hispanic (Census Bureau, 2008c).

(2.3.2.3) Environmental Justice Concerns and Related Activities

The EJ organizations in the regions are concerned with a wide range of environmental projects and focuses. Examples include Superfund and brownfield sites, housing issues, toxic chemicals, hazardous waste facilities, traffic/highway issues, and farmers' rights (EPA, 2010g). The majority of the concerns are community-based.

However, there are several national EJ organizations with field offices in the area, such as Earth Justice and the Sierra Club (Earth Justice, 2010; Sierra Club, 2008). The region also has regionally-focused EJ organizations. For example, the Federation of Southern Cooperatives Land Assistance Fund (FSCLAF), which deals with land issues and agriculture among minorities in the region, and the Environmental Justice Resource Center (EJRC) at Clark Atlanta University in Atlanta, Georgia (Federation of Southern Cooperatives Land Assistance Fund, 2010). The EJRC was formed to serve as a research, policy, and information center on issues relating to EJ, race and the environment, civil and human rights, land use planning, brownfields, transportation equity, suburban sprawl, and climate justice (Environmental Justice Resource Center, 2010). The region has state focused EJ organizations, such as the Mississippi Center for Justice and the Farmerworkers Association of Central Florida. There are also many community-based EJ organizations in the region as well.

The Farm Workers Association of Florida (FWAF) is a state-wide EJ organization associated with farmworker rights. Farmworkers consist of low-income black, Latino, and Haitian workers. Many workers are undocumented immigrants who are afraid to voice concerns when constantly working with pesticides. The goal of FWAF is to build a strong multi-racial economically viable organization of farmworkers in Florida, empowering farmworkers to

respond to and gain control over the social, political, economic, and workplace issues that affect their lives (Farm Workers Association of Florida , 2010). The FWAF provides training on health and safety issue to both the farmworkers and local healthcare providers. The FWAF also promotes advocacy to reduce the use of pesticides. The FWAF partners with other non-for-profit organizations and state and national groups to influence policy affecting farmworkers on both a national and state level. The first issue for farmworkers is the lack of effective regulations protecting farmworkers from harmful pesticides (personal communication, March 4, 2010). According to FWAF, the EPA has worked for ten years revising protection standards for farmworkers, but the revision is still not available.

The organization is also concerned with emerging studies on pesticides as endocrine disruptors. FWAF is currently monitoring the Endocrine Disruption Prevention Act of 2009. H.R.4190-Endocrine Disruption Prevention Act of 2009 is currently in review by the House Committee on Energy and Commerce. This act authorizes the National Institute of Environmental Health Sciences to conduct a research program on endocrine disruptors, to prevent and reduce the production of, and exposure to, chemicals that disrupt the development of children before they are born and cause lifelong health and function impairment (US Congressional Website, 2009). FWAF is concerned with increasing the strength of the regulations governing farmworkers rights, as well as enforcement and accountability. According to FWAF, the Department of Agriculture allots funds to each state to enforce worker protection standards (personal communication, March 4, 2010). However, enforcement standards have recently increased, and no additional funds have been provided.

(2.3.3) CENTRAL

(2.3.3.1) REGION 5

Michigan, Indiana, Illinois, Wisconsin, Ohio, Minnesota and 35 Tribal Nations.

(2.3.3.2) Background

According to the US Census Bureau, Region 5 has a total population of 51.6 million. Region 5's racial profile is primarily Caucasian with 80% of the population identifying as white, 11% black, 6% Hispanic, and 3% Asian. Approximately 12% live below the poverty line, less than the national average of 13.2%.

Industrial work is prevalent in Region 5 with Michigan and Ohio offering a higher percentage of manufacturing jobs (City-Data.com, 2010a). Michigan is also a major hub for automotive manufacturing plants. Indiana's industry is focused mainly on fuels and minerals with a primary focus on coal extraction (Shaffer, 2007). Illinois and Ohio also have significant coal reserves and mining activity. Wisconsin has a large paper and lumber industry (City-Data.com, 2010b).

(2.3.3.3) Environmental Justice Concerns and Related Activities

Because Region 5 is situated around the Great Lakes, pollution of this fresh water system is a major risk. The Great Lakes provide fishing, recreational activities, fresh water, and an ecosystem for numerous forms of wildlife. Regions 5 also has a large amount of unoccupied land that serves as home to wildlife and as recreation to nearby communities (EPA, 2010f).

There are various EJ concerns in Region 5. Michigan's large automotive industry has recently come under scrutiny from EJ organizations like the Ann Arbor Ecology Center. The Ecology Center combats the use of toxins in the manufacturing of automobiles. These toxins have the potential to come into contact with vehicle owners and manufacturing workers. Furthermore, many manufacturing jobs place employees into close proximity with volatile organic compounds and other forms of airborne pollution (Ecology Center, 2007).

The mining industry, primarily in Indiana, Illinois, and Ohio, pollutes local waterways and continues to expose workers to unsafe environmental conditions. These effects are more pronounced in the uranium mines in Indiana. Toxin exposure in housing is also an EJ concern. Illinois has gone so far as to list unsafe zip codes where lead and asbestos exposure is a risk (Illinois Worknet Center, 2010).

Current federally funded EJ projects in Region 5 include brownfields sites. Brownfields are defined as real property, but its effective use is prevented by the presence or potential presence of an environmental issue (EPA, 2010a). EJ organizations are able to apply for grants through EPA's brownfields program to restore these sites to environmentally pristine conditions. EJ organizations can receive grants to assist in area-wide pilot planning programs, brownfield assessments, revolving loan funds, cleanup, job training, research, technical assistance, and targeted brownfields assessments.

EJ organizations in Region 5 appear to be focused on specific EJ concerns and these groups also tend to be more localized, representing particular communities. For example, EJAM, Environmental Justice Advocates of Minnesota, focuses solely on EJ concerns in the state of Minnesota (Environmental Justice Advocates of Minnesota, 2010). Even more localized is LVEJO, the Little Village Environmental Justice Organization located in Illinois. It focuses solely on the city of Chicago and some suburbs (Little Village Environmental Justice Organization, 2010).

However, although these EJ groups may be more State- and local-community focused, there are several examples where these groups have reached out to federal agencies for funding or to collaborate on an issue. One example of this can be seen with Detroiters Working for Environmental Justice (DWEJ), an EJ group operating out of Detroit, Michigan. This organization focuses on Southeast Michigan and performs education and advocacy work to address EJ concerns (DWEJ, 2010). In 2009 the EPA selected DWEJ to receive a \$200,000 grant for job training. With this money DWEJ plans to train 80 students in green jobs. DWEJ is one of the more prominent EJ groups in Michigan, and to help send out its message, DWEJ performs news interviews and also holds employment conferences (DWEJ, 2010).

Although EJ groups in region five are oftentimes small and localized, many of these groups have made tremendous progress. The Southwest Detroit Environmental Vision (SDEV) group worked for several years with the Delray community in Detroit, Michigan and the Wayne County air quality management district to combat the pollution activities of local industry. These industrial processes were slowly polluting nearby neighborhoods and the county failed to offer any resolutions. At an impasse, the Delray residents enlisted the aid of SDEV.

SDEV helped the community file a lawsuit against the polluting companies, and in 1999 they began class-action litigation. Along with the lawsuit, SDEV assisted in the organization of public demonstrations to increase public awareness of the damages. Eventually, the Delray community and SDEV were successful at forcing local industries to reduce their emissions. Unfortunately, with the passing of time and the influx of new companies, these reductions were only temporary. But although the community and SDEV must confront these industries again, their increased public awareness may be the leverage they need to staunch the high emissions of local polluters in the future (University of Michigan, 2010).

This increased public awareness of EJ issues in Delray, Michigan has allowed Wayne County to receive a \$500,000 grant from the EPA and a \$200,000 grant from Ford in order to design and carryout a two year air quality study (University of Michigan, 2010). By carrying out this study with the EPA's support, the Delray community will be able to gather quantitative evidence to support their claims against polluting industries, hopefully leading to increased state and federal enforcement against the polluters.

(2.3.3.4) REGION 6

New Mexico, Texas, Oklahoma, Arkansas, and Louisiana, and 66 Tribal Nations

(2.3.3.5) Background

Region 6 of the EPA is characterized by high racial diversity; the population is 27.8% Hispanic, 13.7% black, and 2.0% Native American (Census Bureau, 2008c). Additionally, the median household income for Region 6 is lower than the national median of \$52,029; Region 6 median household incomes range from \$38,820 in Arkansas to \$50,049 in Texas (Census Bureau, 2008c). The region also faces diverse environmental challenges, with water scarcity in the deserts of New Mexico and toxic chemicals in the Mississippi River Valley.

The economies and labor forces of these states are as diverse as their environments, although there are some strong industries and trends. For instance, crude oil and natural gas extraction are very strong industries in New Mexico, Texas, and Oklahoma. Agricultural activity is prevalent in Texas, Oklahoma, and Arkansas. Louisiana is something of an anomaly, with prominent seafood and chemical industries (State of Louisiana, 2010). In all of these states, however, cars are the primary mode of transit, with extensive highway systems crossing through the region.

(2.3.3.6) Environmental Justice Concerns and Related Activities

Diverse challenges also extend to the field of environmental justice concerns in Region 6. Of special note, New Orleans is facing major environmental justice considerations with cleanup after Hurricane Katrina. These considerations will be discussed further in the case study of the Deep South Center for Environmental Justice. Other concerns include air quality, water quality, access to basic services, access to jobs, toxic chemicals, and green buildings (Southwest Organizing Project, 2010). One essential aspect of these concerns is that they tend to be local in nature; an air quality issue with benzene may dominate environmental justice priorities in Houston, TX but may be a non-issue elsewhere (EPA, 2009h).

Most of the prominent environmental justice organizations in Region 6 originated as local initiatives. A sample of the many organizations includes the Southwest Organizing Project, the Southwest Network for Environmental and Economic Justice, the Deep South Center for Environmental Justice (DSCEJ), and Citizens for Environmental Justice. A national environmental organization, the Sierra Club, has a regional office for environmental justice in El Paso, TX. The Southwest Organizing Project has had a great deal of success at the state level; they encouraged the Governor of New Mexico to issue an environmental justice executive order, and have acted to decrease air and water pollution from Intel in Albuquerque, NM (Southwest Organizing Project, 2010).

Case Study: The Deep South Center for Environmental Justice in New Orleans, LA

The Deep South Center for Environmental Justice (DSCEJ) is an organization in New Orleans, LA which interacts frequently with federal agencies. They are a multifaceted organization with a variety of programs, and are founded on a community/university partnership with Dillard University. DSCEJ has several long-established worker training programs in hazardous waste to empower local community members, and they continue to expand the types of training they provide (DSCEJ, 2010). Post-Hurricane Katrina, their mission has focused on empowering the citizenry of New Orleans to govern themselves and participate in rebuilding the City, training and mobilizing minority workers for cleanup, facilitating communication among stakeholders, and cleanup standards. They have also been involved in quantifying the toxic impacts of the hurricane; through a partnership with NRDC, they tested soil around the City and found elevated levels of arsenic, which were not present prior to the hurricane (DSCEJ, 2010).

The Assistant Director of DSCEJ provided insight into the type and quality of interaction between DSCEJ and various federal agencies. DSCEJ primarily interacts with federal agencies through applying for federal grants. Their interaction with the National Institute for Environmental Health Sciences (NIEHS), which is a subset of the Department of Health and Human Services, has been long-standing and positive. NIEHS tends to fund the kind of comprehensive training programs that DSCEJ conducts, and has been very open to bottom-up communication with community members. They have also received funding from the Department of Labor and Housing and Urban Development, and have benefited from American Recovery and Reinvestment Act stimulus funds. However, they have received only limited funding from the EPA (personal communication, 23 February 2010).

The EPA was historically not very open to communication with DSCEJ; with the Obama Administration, however, the EPA “seems to be trying to open up” (personal communication, 23 February 2010). Examples of improvements included the listening sessions held in New Orleans in 2009 and 2010, Lisa Jackson speaking at the 2010 Conference on Environmental Justice, Air Quality, Goods Movement and Green Jobs in New Orleans. Previously, the EPA had not conducted listening sessions in the area. Though she felt there had been positive movement with the new Administration, Dr. Lewis remained skeptical of the EPA’s willingness to act on the new communication: “the verdict is not in on the follow-through” (personal communication, February 23, 2010).

In terms of advice for other environmental justice organizations, Dr. Lewis emphasized the importance of quantification. She discussed that environmental organizations had to first prove disproportionate impacts to minorities with hard science before it was ever accepted by federal agencies. From federal agencies, she would like to see more funding for community-based research or collaborations with community-based organizations, better consideration to reviewers for grant proposals so that competing peers are not used to rate proposals, and more networking opportunities for grant awardees through conferences and meetings (personal communication, February 23, 2010).

(2.3.3.7) REGION 7

Iowa, Kansas, Nebraska, and Missouri, and 9 Tribal Nations

(2.3.3.8) Background

The total population of EPA's Region 7 is approximately 13.4 million, with 46% of those living in rural areas. The proportion of people living in rural areas nationwide is only 20%, indicating that this area has an above-average likelihood of facing environmental and social problems related to rural or agricultural areas. The poverty rate is slightly below the national average, at 12.2% and 88% of the people in the region identify as white, with the next largest ethnic group being blacks at 7.1%, followed closely by Latinos at 5%. The combined population of all nine Native American tribes is less than 1% of the total for the region (Census Bureau, 2000).

The majority of the land is used for agriculture, primarily corn, soybeans, and wheat (EPA, 2009g). The region suffers from steep population declines, stemming largely from lack of economic diversity, which leads to poverty (personal communication, March 24, 2010). There are not many urban areas, though hundreds of tiny communities are scattered throughout the region (personal communication, March 24, 2010). Because of declining agricultural prices, poverty rates in the rural areas are increasing, and there has been mass emigration for the past decade. The highest priority for agencies and non-governmental organizations (NGOs) in the region is to revitalize rural areas, and stabilize the population (personal communication, March 24, 2010).

(2.3.3.9) Environmental Justice Concerns and Related Activities

The EPA's Region 7 Environmental Justice Program 2009 Draft Action Plan identifies the primary EJ problems facing urban areas in the region as poor air quality from industrial and energy production, brownfields related to mining and chemical processing, and lack of municipal services. In the rural areas, the major problems are pesticide exposures for farm workers and poor water quality from farming activities. The regional EPA distributes grants for brownfield redevelopment, but does little to address any of the other problems they have identified (EPA, 2009g).

Despite the prevalence of agriculture in the region, lack of fresh food has also been identified as a problem by several non-profit organizations, in both urban and rural areas (personal communication, February 17, 2010). Most of the crops grown are cash crops and, therefore, many fresh foods must be shipped in from elsewhere. There have been several programs, initiated by both government and NGOs, that have sought to address this problem with varying success (*Ibid.*).

This region differed from some of the others in several key ways. First, despite the presence of EJ concerns, there are very few public or non-profit agencies seeking to directly address environmental inequality in the region. Second, according to the aforementioned Scorecard online tool, which combines US Census Bureau and EPA Toxic Release Inventory data to determine if a demographic is disproportionately exposed to pollution, there is very little environmental injustice in the metropolitan areas. In some cases, wealthy white people are more exposed than other demographics (Scorecard.org, 2010).

A non-profit based in Southwest Iowa called AgConnect presents a good example of such efforts. This group helps secure land donations for community gardens in Latino communities. They focus on culturally appropriate produce, and also help the families not only meet their own food needs, but start farmers' markets as a source of income (personal communication, March 3, 2010). They are one of several small projects and NGOs that work to assist Latino communities in the rural areas of the region.

A law firm called Plains Justice is one of the only organizations in the region that specifically addresses environmental justice in its work. The firm specializes in facilities siting issues, energy policy, and air and water pollution. They are a small, non-profit operation, and have not been involved in any nationally publicized cases (Plains Justice, 2010).

Initiated in Kansas City, MO by the local Congressman Emanuel Cleaver III, a project known as the Green Impact Zone has received millions of dollars in stimulus grants, but is still in the planning phase. The target community is an extremely degraded neighborhood of about 150 square blocks that suffers from high vacancy and high unemployment. Through deployment of public-private partnerships and grant funding, the municipal government seeks to bring jobs to the area, specifically to improve energy efficiency. The overall goals include weatherization of all homes, installation of smart grid equipment, and job training programs throughout the community (Green Impact Zone, 2010).

(2.3.4) WEST

(2.3.4.1) REGION 8

Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming, and 27 Tribal Nations

(2.3.4.2) Background

Locating effective practices of the EJ agenda in Region 8 is quite difficult. Finding institutions which coordinate successfully with one another while centering on a common mission, is a matter of independent EJ interests and governmental and private resources reaching each other from their own unique perspectives. The central research question is whether regional and federal commitments within the EPA for Colorado, Utah, Montana, Wyoming and the Dakotas have matched the demands of the Region's constituents for EJ. Region 8 consists of a predominantly Caucasian population living above the national average per-capita income along with a sizable population of 1st nation citizens, migrant workers, and rural poor (Census, 2010b). The scale of EJ initiatives from the Region 8 are inevitably constrained by the current budget for grants and support. Challenges unique to this region are a product of the vast expanses of mountainous land which dictate the spacing of villages and cities.

(2.3.4.3) Environmental Justice Concerns and Related Activities

Few independent EJ organizations originate from Region 8 states, with the exception of Native American governance. EJ matters that are initiated by communities and individuals vary in organizational and financial capacity, and base their campaign on their proximity to an environmental health concern. Entities willing to address matters of EJ are typically private law firms in the larger metropolitan centers. Distance and finances most likely inhibits much of the rural Native American community from committing to legal defense.

Brownfields and their rehabilitation are a prominent component in Region 8 EJ, especially because of the tailings from an array of mining operations. The Anvil Mountain housing development in San Juan County, CO is an example of a resourceful reuse of land contaminated by the smelting industry. The phased development will include 49 housing units meeting the needs of low-income families while incorporating green design and construction concepts (Tetra Tech EM Inc., 2009).

In contrast, the Skull Valley Band of Goshute Indians and Ohngoo Gaudadeh Devia (a Goshute or “Mountain Community”) has filed in contention with the Nuclear Regulatory Commission Atomic Safety Licensing Board, challenging Private Fuel Storage, LLC's “temporary” storage of 40,000 tons of commercial, high-level radioactive waste not far from the formerly proposed permanent location at Yucca Mountain, Nevada (Kamps, 2001). When complete, the permanent site would represent the largest store of nuclear waste product currently within the US. National-level foundations, Honor the Earth and the Indigenous Environmental Network, have taken up the cause of protecting this relatively tiny Native American community, which undoubtedly adds to national pressure to commit to a long-term solution.

Many homes among poor rural areas in the region were constructed before 1938, coinciding with the advent of lead based paint up until its ban in 1979. In the more populated Pueblo, CO, the county courthouse awarded the group Citizens for Clean Air in Pueblo \$280,273 to retrofit homes with radon grounding, and to decontaminate homes of lead, mold, and legacy household

chemicals (Mylott, 2009). In 2008, a similar campaign reached 192 homes in the Wind River Indian Reservation of Wyoming.

Rocky Mountain College in Montana and the University of Colorado at Boulder have Environmental Justice Assemblies; however, the University of Colorado at Boulder works very much in isolation from the larger EJ community. Rocky Mountain College primarily partners with Tribal Assistance Programs under its department of American Indian Affairs. Setting aside state level public offices, which strictly speaking are not obliged to adhere to Executive Order 12898, this alliance includes the EJ office of EPA Region 8, the Montana-Wyoming Tribal Leaders Council, and the Montana Migrant & Seasonal Farmworker Council (Rocky Mountain College - Environmental Justice in Montana, n.d.). These partnerships have addressed asbestos exposure in Libby, MT, the Zortman Landusky Mine tailings in the Fort Belknap Indian Reservation, fly ash transport on the Crow Reservation, hazardous waste storage in Opportunity, MT, home decontamination in Butte, MT, and the building of energy efficient glacier homes on the Blackfeet reservation (straddling the Canadian border).

Now factoring in state-level initiatives, Montana has passed its own legislation banning the market and exchange of mercury-based thermostats, and passing this legislation was the direct result of Women's Voices of the Earth, an advocacy group with state-level presence. In Utah, the GreenAction group has been central in challenging Stericycle INC, a medical disposal company which uses incinerators indiscriminately for both biohazard and medical waste. In 2002, GreenAction won a definitive victory over Stericycle in the Gila River Indian reservation in Arizona (Greenaction, 2002).

Beyond the objective criteria for this analysis, at the time of this report, a population of Sioux Nation in the Cheyene River Valley as well has US residents residing within its boundaries have endured an ice storm over the Winter of 2009-2010 which has knocked out heat, electricity, and communication, and has thrust this rural area, larger than Rhode Island and Delaware combined, into a state of emergency. Because the region is not sovereign to the US, it is unlikely to gain the formal status of a national disaster. Due to their already-compromised grid and water systems, the storms have disproportionately impacted reservation residents. As an offering of solidarity, neighboring tribal leaders have chosen to break their treaty obligations in order to assist within Cheyenne River territory (Ortman, 2010).

Much of Region 8 covers a strip of land which spans what T. Boone Pickens proclaimed as "the Saudi Arabia of Wind." Taking a proactive stance on the infrastructural challenges to the region, a strong national allegiance of shareholding energy suppliers and tribal governments are promoting wind farming and radical remodeling of the hydrological system (Council on Utility Policy & Spears, 2005). Priorities for the region should include renewable energy resources, revision of the current power grid, and energy independence for the tribes of the Great Plains.

The above analysis of Rocky Mountain environmental groups and their relationship to the EPA, describes the central avenue for which EJ concerns are met in this region. Other federal agencies do not have an explicit EJ presence for these particular states of the nation. All environmental assessments of documented federal programs reviewed for this report that are

mission-based and directly serve the public of this region, either included an Environmental Justice evaluation and concluded that there was no EJ concern, or in the case of Best Available Retrofit Technology, are not required to address the state of environmental inequalities or how the technology would relieve social discontent.

One might expect that other government offices, despite their lack of asserting their own EJ program, would be identified in the EPA literature as participants in showcase EJ communities or CARE grants stakeholders within the Rockies. The United States Geological Survey could be integral to mapping and delineating EJ communities (Kelly, 2010). Although agencies may have published their general environmental commitment to EJ for state or regional offices, among the action plans covering up to the year 2012 and change documents covering year 2014, no partnering agencies are credited within the EPA action plans through the region 8 offices nor do the nationally-selected showcase neighborhoods within Salt Lake City, Utah document other federal agencies as partners to these EPA commitments (EPA, 2008c).

(2.3.4.4) REGION 9

California, Nevada, Arizona, Hawaii, Pacific Islands and over 140 Tribal Nations

(2.3.4.5) Background

Nearly half of the population within Region 9 identifies as white. Approximately 35% of the population is Hispanic or Latino and less than 6% are Black or African American alone. It should be noted that the demographic information is from the 2000 Census and includes information for the states of Arizona, California, Hawaii, and Nevada only. Therefore, demographic information for Pacific Islands and tribal nations is not included.

The region has experienced a significant amount of growth in the last decade. Arizona and Nevada are the fastest growing states and have grown by 26.7 percent and 30.1 percent, respectively. The rapid increase in population has the potential to increase the prevalence and/or size of EJ communities.

The poverty rate in Region 9 is 12.6 percent. While this number is lower than the national average of 13.2 percent, the statistic does not offer an accurate portrayal of poverty levels within EJ communities alone. For instance, the community of Pacoima, California is disproportionately exposed to industrial and transportation-related emissions from over 300 industrial facilities and three highways surrounding the community. Unlike the rest of Region 9, the poverty level in Pacoima was 19.4 percent in 2000 and the Latino community made up 85 percent of the population (Census Bureau, 2000).

(2.3.4.6) Environmental Justice Concerns and Related Activities

The EJ movement in Region 9 is driven primarily by grassroots organizations. In California, organizations such as Communities for a Better Environment, the Center on Race, Poverty & the Environment, Environmental Health Coalition, and The City Project advocate for EJ through their myriad programs and initiatives. Additionally, the Sonora Environmental Research Institute in Tucson, Arizona is a non-profit research organization that provides technical assistance to communities through identification and analysis of pollution sources

and solutions to these environmental problems. In Nevada and Hawaii, the EJ movement seems to be enmeshed in the general environmental movement. Based on internet research, it seems that most of these grassroots organizations do not specifically target disproportionate impacts to minority or low-income communities; however, through an organization's efforts to address general environmental issues, EJ issues are also resolved. For instance, Kahea is a community-based organization in Hawaii devoted to protecting Hawaii's natural resources. While they do not specifically emphasize EJ issues, their efforts in preventing chemical dumping near reefs and beaches simultaneously help protect residents of these areas (Kahea, 2009). Therefore, while there are major urban centers that are not represented by a specific EJ organization, it does not necessarily follow that EJ issues are overlooked in these locations.

Major EJ concerns in Region 9 are associated with exposure to toxic emissions from stationary and mobile sources (e.g., industrial manufacturing facilities, highways), agriculture-related pollution exposure (e.g., pesticides, herbicides, fertilizers, dairy farms), access to green space, and transportation. To address these concerns, EJ organizations, such as Communities for a Better Environment and Environmental Health Coalition, run educational programs to help communities build the capacity to relieve the burden of these problems. Additionally, EJ organizations run other programs to advocate for reducing pollution exposure in disproportionately impacted communities. These programs may include lobbying for more stringent environmental policies, clean up campaigns, media campaigns to increase awareness of pollution exposure, and community planning.

Organizations may also offer services to EJ communities. One example is the Center on Race, Poverty & the Environment, which offers legal representation for low-income and communities of color. Through these programs, EJ organizations are working to improve environmental conditions in disproportionately affected communities.

EJ organizations in Region 9 are predominantly funded through donations from individuals and foundations. Organizations may also apply for a myriad of EPA grants targeting either EJ or other specific environmental issues. Recently, Communities for a Better Environment received a grant through the EPA Environmental Justice Small Grants program to quantify mobile source emissions in the Hegenberger Corridor in East Oakland. Additionally, the Community Action for a Renewed Environment (CARE) program is another EPA grant-distributing program funding EJ projects in Region 9. In 2009, Environmental Health Coalition received a grant to implement risk reduction strategies to reduce exposure to diesel emissions in the Barrio Logan and Old Town National City communities of San Diego.

EJ organizations in Region 9 have been largely successful at effectuating change in the communities they serve. For instance, in 2003, the Center on Race, Poverty & the Environment worked with community groups to enhance public participation in the political process in order to reduce exposure to agriculture-related air pollution in the San Joaquin Valley in California. Ultimately, the Center and the community groups were successful in incorporating agricultural sources into Clean Air Act permit programs through SB 700, legislation regulating agricultural air pollution in California.

Additionally, from 1999 to 2005 The City Project successfully rallied community, civil rights, environmental, business, and civic organizations to create the Los Angeles State Historic Park on 32 acres of open space. The lot was originally slated to be developed as warehouses; however, through community empowerment and publication of the report “The Cornfield and the Flow of History: People, Place, and Culture,” The City Project and the community were able to stop this development in favor of open space.

The California Department of Pesticide Regulation: A Case Study of a Successful Program

The California Department of Pesticide Regulation (DPR) actively works toward fair treatment of all people meaning “that no one group of people, including racial, ethnic, or socioeconomic groups, should be disproportionately impacted by pesticides” and all of the people that could be affected “have an opportunity to participate in the regulatory process (California DPR, 2009a). Public participation and transparency are very important to the success of the DPR. In their 2008 Strategic Plan they proclaim “stakeholder participation is crucial to our success,” and through their numerous actions and activities they hold true to this statement (California DPR, 2009b).

In response to the 2004 Environmental Justice Action Plan released by the California EPA (Cal/EPA), the DPR conducted a study on ambient air quality in an agricultural community. The Parlier project was the first time a government agency did continual air monitoring of a single community for 12 consecutive months (California DPR, 2009b). To promote the study, the DPR held several public meetings and an open house with the agendas and minutes translated into Spanish, as 97% of the community was Hispanic. The project plans were drawn up after three rounds of public comment and subject to change based on inputs from the local and technical advisory groups. Starting in January 2006 and ending the following December, the DPR looked at 40 airborne pesticides and other pollutants, such as ozone, present in the air in a rural community surrounded by agriculture in the San Joaquin Valley. For this project, DPR joined with a local advisory board to introduce the community to the plan, decide upon locations, release preliminary results, and to supplement their work as needed along the way. The greatest potential health threats came from acrolein and formaldehyde, chemicals found throughout the state due to the high levels of motor traffic and industrial emissions. The final report was published in December of 2009. The study prompted the DPR to re-evaluate risk assessments for a couple of the pesticides and compounds found, as well as re-evaluate permitted uses for a specific compound used as a fumigant. The DPR is now working with Cal/EPA’s Office of Environmental Health Hazard Assessment to address the concerns regarding levels of acrolein and formaldehyde found in air samples statewide. This knowledge will be used to help build a statewide air monitoring network looking at ambient air quality across different communities in different situations. This was also an important study as there are currently no state or federal standards for pesticide emissions in the air. Their findings could be used to help develop such standards.

The DPR supports projects and activities that reduce risks to communities and workers. One way is through the Pest Management Grant Program which provides funding toward projects that promote least toxic pest management practices. Although funding was temporarily suspended, it is innovation like this that is needed in the future. The program is successful because it rewards improvement and good behavior. Other activities include investing in new technologies that help reduce pesticide drift, and continual community outreach and education. These activities all support the working goals and objectives of the department, providing communication and transparency to the people.

Ensuring environmental justice is identified as one of five goals in the DPR's 2008 Strategic Plan. To attain this goal, the DPR has identified the following four objectives (California DPR, 2009b):

1. Accord the highest respect and value to every individual and community by developing and conducting our programs, policies, and activities in a manner that promotes equity and affords fair treatment, accessibility, and protection for all Californians, regardless of race, age, culture, income, or geographic location.
2. Develop and ensure execution of DPR's EJ Strategy and Implementation Plan.
3. Ensure that DPR's EJ Strategy and Implementation Plan address current and emerging challenges through consultation with stakeholders.
4. Maintain transparency and effectiveness in public participation through the use of advisory committees, workshops, and other forums.

(2.3.4.7) REGION 10

Alaska, Idaho, Oregon, Washington and 267 Tribes

(2.3.4.8) Background

In this region, nearly one in four people are a racial minority (22% non-White) with 12% of the regional population living under the poverty level (US Census Bureau, 2008). With the exception of Alaska, states in Region 10 are well-developed and readily accessible, though all states have a well-developed economy. All major urban centers are represented by the EPA.

Major industries in this region include the chemical industry, local governments, paints and coatings, automotive service and repair, construction industry, metal finishing, transportation, printing, and agriculture. All of these industries have facilities responsible for environmental degradation. Many of the contaminated sites are in minority neighborhoods.

(2.3.4.9) Environmental Justice Concerns and Related Activities

Recent programs affiliated with the EPA CARE program (the primary EPA EJ grant program in Region 10) include “Working Together to Keep the Coastal and Nelson Island Communities and Environment Clean,” a Level 1 cooperative agreement with the Nunakauyarmiut Tribe in Toksook Bay, Alaska. This federally recognized tribal government organized a group of volunteers, along with help from nearby tribes, to preserve the Yukon Delta National Wildlife Refuge. Specific tasks include identifying toxics and prioritizing them for remediation. They are continuing to expand their community of supporters some of which include nearby point-source polluters (EPA, 2010b).

The Northwest Communities Education Center (NCEC) in Granger, Washington created “The Well-Being Project,” a Level I CARE cooperative agreement that aims at improving upon several environmental hazards in the Yakima Valley area (EPA 2010b). Issues addressed include hazardous waste disposal, trash burning, pesticide exposure, composting, livestock pathogens, and wood-burning stoves. They are also conducting private groundwater well testing and well treatment. The NCEC is a nonprofit community organization geared towards community development and revitalization.

The Josiah Hill III Clinic in Portland, Oregon is in its Level I funding stage for its campaign series “Healthy Places, Healthy People.” The program promotes green building and environmentally friendly housing and communities. They meet with home and property owners and consult with them on ways in which they can operate in a more environmentally-conscious manner. Partners include; Portland State University, Multnomah County Environmental Health, Cully Neighborhood Residents, North/Northeast Business Association, Metro, Multnomah County Office of Sustainability, and Enterprise Community Partners (EPA 2010b).



Executive Order 12898 Tag Cloud. *Image Source: Levine, 2010b*

Parsing language can sometimes offer insight into the emphasis, themes, and main objects of a narrative or message. A popular form of parsed language in contemporary media is the "tag cloud" which is a cluster of words varying in size depending on the frequency in which they are referenced. The image above is a tag cloud of the top 50 words from the Executive Order 12898, which are mapped depending on their association. The most popular word from the text, the word "justice" is highlighted in orange for artistic license.

(3.0) RECOMMENDATIONS

An overarching recommendation for the federal government, as it fully incorporates EJ into policies and procedures, is the establishment and adoption of a consistent definition for environmental justice. The definition shall use the language of the Executive Order 12898 and include the following terms: minority populations, low-income populations, adverse health effects, and adverse environmental effects. A consistent EJ definition across agencies and varying functions of the government would assist in establishing policies that prevent future environmental injustices. The federal government could achieve this through a reaffirmation of President Clinton's original Executive Order 12898. Strong and focused leadership within the EPA and other federal agencies could aid in achieving these objectives and reinvigorate the EJ movement.

Recommendations that involve higher human capital, policy alterations, and technology development are anticipated to require more time for implementation and are categorized as such: Education and Training, Technology Implementation Improvement, Community Engagement, and Management. Management recommendations are further divided into Programmatic, Financial, and Regulatory categories. While the list of recommendations that follows is fairly comprehensive, it may not include all of the changes necessary to incorporate environmental justice into all federal government operations.

The recommendations address the following areas of deficiency: enforcement power, communication and community understanding, and inter-agency and inter-governmental collaboration. Additional policy recommendations that should be considered (given additional time and monetary resources) include: (1) soliciting feedback from EJ community organizations regarding the new poverty measurement system proposed by the Obama Administration and (2) increasing budgetary allocations for both human capital and projects according to agency request.

Soliciting feedback on the new poverty measurement system would provide the Department of Commerce with information on how the change in federal policy would affect local communities. This would promote public participation in the federal decision-making process; however, substantial effort would be required to ensure that the new poverty metrics are well-understood and that outreach was effectively initiated to encourage a robust community response. Additionally, EJ initiatives, by their nature, require outreach and community involvement on the part of federal employees. This involvement requires expansion of existing programs, and creation of new programs, to realize the goals of EJ per the Executive Order. For most agencies, this will require additional staff, grants, and capital allocations from the OMB. However, the budgetary decisions and actions of the OMB are at the discretion of that agency and outside of the scope and time frame of the recommendations discussed below.

(3.1) EDUCATION AND TRAINING

(3.1.1) Issue: Lack of awareness of EJ issues among some federal employees.

(3.1.1.0) Recommended Action: In order to improve awareness among federal employees, the federal government should require every federal employee to undergo environmental justice training. This training could discuss the Executive Order and the respective federal agency's response to the order. A well-designed EJ training program would include a recurring, online, self-paced training module to be reviewed and retested annually.

(3.1.1.1) Rationale: Every federal agency, including the EPA, conducts regular training which prepares the employees to accomplish the mission of the agency. This established regimen provides a perfect, low-cost opportunity to include environmental justice training, both as stand-alone training and integrated, agency-specific training. In accomplishing this training, agents will be more attuned to public inquiries with EJ needs, and have more command in representing their respective agency.

(3.1.2) Issue: Lack of public awareness concerning how to approach local environmental justice concerns.

(3.1.2.0) Recommended Action: In order to build capacity to identify and address environmental injustices, the EPA should conduct a public awareness campaign in each region to ensure that citizens can identify environmental injustices and understand how best to seek assistance. The campaign should include community-based participatory research elements to continually improve the EPA's awareness of which burdens impact communities most. The public awareness campaign can be accomplished through mass mailing of pamphlets detailing the definition of environmental justice, points of contact within the EPA and other federal agencies by region, a sampling of environmental justice organizations in the region, and specific concerns that may affect that region.

(3.1.2.1) Rationale: The public must be aware of their regional environmental justice representatives and their options for assistance. This information may be inaccessible to some EJ communities due to technological limitations or lack of communication between regional offices of federal agencies and community members. Therefore, conducting a nationwide campaign at the regional level would increase public awareness on what constitutes an EJ concern and how it could be identified and addressed by a community or the EPA.

(3.2) TECHNOLOGY IMPLEMENTATION IMPROVEMENT

(3.2.3) Issue: Publicly inaccessible quantitative mapping tools.

(3.2.3.0) Recommended Action: In order to maximize the use of existing mapping tools, the EPA should release EJSEAT and EJVIEW to the public.

(3.2.3.1) Rationale: Mapping tools such as EJSEAT and EJVIEW are available as a pilot program to those within the EPA. These tools can be used to identify environmental justice communities, allocate resources properly, and serve as a tool for compliance and enforcement. By making these tools publicly available, the public will be able to check the progress of the EPA in improving EJ communities. This would also increase accountability within the EPA and improve data and information sharing.

(3.2.4) Issue: Uncertainty regarding the consistency of data used for state-level, private organization, and EPA mapping tools.

(3.2.4.0) Recommended Action: In order to ensure that data used for mapping tools is consistent, the EPA should periodically benchmark their tools and data sets against similar tools and information used by state-level environmental agencies and private organizations.

(3.2.4.1) Rationale: State environmental protection agencies and private organizations (such as New York State Department of Environmental Protection and Cedar Grove Institute for Sustainable Communities in North Carolina) are developing environmental justice mapping tools. It is unclear how data used in state-level and private mapping tools compares to the data used in EPA mapping tools. Therefore, implementation of a benchmarking mechanism would ensure more broad and efficient use of mapping technology and available data.

(3.3) COMMUNITY ENGAGEMENT

(3.3.1) Issue: Some federal agency EJ representatives are not dedicated solely to EJ issues and are therefore less attentive to community concerns.

(3.3.1.0) Recommended Action: In order to have well-trained and available staff to address EJ concerns, all agencies should assign an EJ coordinator whose sole duty is to perform community outreach and address EJ concerns.

(3.3.1.1) Rationale: Agencies are using community outreach programs, but feedback does not always impact policy decisions and some stakeholders are left out of the discussion. Having a dedicated EJ coordinator will increase communication with overlooked minority groups and allow for more consistent communication between agencies and community members, leading to more salient changes in agency operations. Furthermore, having dedicated EJ staff will improve agency understanding of EJ issues. For example, when the DOI Regional Coordinator for the Southwest was contacted for an interview, he was surprised that his name being listed under "EJ" on the website, and shared that he was not aware of EJ issues within the region.

(3.3.2) Issue: Direct communication between federal agencies and EJ organizations is slow and ineffective.

(3.3.2.0) Recommendation: In order to streamline communication between federal agencies and EJ organizations, the regional EPA office should establish a contact matrix to clarify communication and assistance pathways through all federal agencies. Ideally, the contact matrix would serve as a permanent tool by referring to specific positions within departments, as opposed to listing individual names that are subject to change.

(3.3.2.1) Rationale: Contacting EJ representatives at federal agencies is often time consuming for the public and the federal employee. Redirecting misguided inquiries slows information sharing and can delay agency responses to EJ issues. Having a contact matrix will enable EJ organizations as well as community members to seek out proper contacts and to provide information where it can be most effective. Typically, a federal agency's online EJ contact list is unwieldy, containing regional, bureau, and headquarters contacts, making it difficult to identify the desired individual. Creating a contact matrix would resolve this issue. Ideally, this matrix would function similar to EPA Region 9's existing EJ Resource Guide (EPA, 2010d), but incorporate all federal agencies. Once this matrix has been created it needs to be maintained and updated on a regular basis.

(3.3.3) Issue: EPA is slow to respond to community complaints on EJ issues.

(3.3.3.0) Recommendation: In order to increase response times to urgent complaints, the EPA should create guidelines that streamline high priority community feedback to ensure rapid enforcement and compliance.

(3.3.3.1) Rationale: There are multiple avenues for contacting agency representatives, but the federal government should use its enforcement power to prioritize and mitigate the environmental threats that directly impact human health.

(3.3.4) Issue: EPA community listening sessions are infrequent and inconsistently effective.

(3.3.4.0) Recommended Action: In order to improve the effectiveness and frequency of EJ listening sessions, the EPA should develop guidelines to formalize listening sessions and make other community outreach technologies available. Listening session guidelines should also require community follow-up sessions for the EPA to share its progress on concerns identified by the community.

(3.3.4.1) Rationale: Developing a standardized process with follow-up sessions will allow the EPA hold itself accountable for responding to EJ issues, making sure that community feedback is effectively incorporated into operations.

(3.3.5) Issue: Federal agencies are not directly benefiting from data and research collected by regional EJ organizations.

(3.3.5.0) Recommended Action: In order to improve collaboration among federal agencies and EJ organizations, the EPA should develop an EJ organization contact database to facilitate networking and proactive communication.

(3.3.5.1) Rationale: Collaboration between federal agencies and EJ organizations is oftentimes informal. Having an organization database would increase agency awareness of organizations in the region, the types of projects they are working on, and provide contacts for networking. Furthermore, the increased collaboration between federal agencies and EJ groups will lead to resource pooling that will make tackling issues easier and more efficient.

(3.3.6) Issue: It is unlikely that federal-level agencies are financially or logically capable of performing thorough EJ assessments on all communities in the region.

(3.3.6.0) Recommended Action: In order to assess the presence of EJ concerns in all communities, the EPA should collaborate with local governments to increase knowledge of local-level concerns.

(3.3.6.1) Rationale: Since local governments are most intimate with their own local issues, they will be more effective at identifying potential EJ communities and concerns in their region. This would not only help gather useful community level data, but will also allow the agencies to identify issues in their early, less noticeable stages.

(3.4) MANAGEMENT

Programmatic

(3.4.1) Issue: A community's perception of an environmental project often differs from an agency's perception of the same project.

(3.4.1.0) Recommended Action: In order to build a database of best practices for community interaction, the Council on Environmental Quality/EPA should require pre- and post-project implementation community impact assessments through the NEPA environmental review process.

(3.4.1.1) Rationale: Conducting pre- and post-project implementation community impact assessments would provide a basis for comparison of community perceptions of development projects. Feedback from assessments would allow agencies to better implement projects in the future and would facilitate information-sharing with other agencies. Overall, this will increase knowledge exchange and improve practices for future projects that may cause community discontent.

(3.4.2) Issue: EJ is underweighted in the NEPA review process.

(3.4.2.0) Recommended Action: In order to emphasize the consideration of EJ during the NEPA review process, each federal agency should develop internal guidelines detailing the procedural requirements necessary to adequately consider EJ in the NEPA review process. Agencies with existing guidelines (such as the EPA and the DOT) should update their guidelines.

(3.4.2.1) Rationale: Research findings indicated that EJ is often overlooked or brushed aside in the NEPA review process. Development of internal guidelines should standardize a process for improving the EJ consideration as part of NEPA.

(3.4.2.2) Recommended Action: In order to emphasize the consideration of EJ during the NEPA review process, federal agencies should require that public participation be solicited prior to preparation of resource intensive studies during the NEPA review process.

(3.4.2.3) Rationale: Public participation and public comments are generally considered relatively late in the NEPA review process. By the time the public can react to a project, air quality, transportation, or other costly studies have already been performed, making it politically and financially difficult to effectively consider public concerns.

(3.4.3) Issue: Impacts from climate change will disproportionately impact EJ communities.

(3.4.3.0) Recommended Action: In order to prevent potentially significant impacts related to climate justice, the EPA should ensure that a climate justice is considered in regional Climate Change Action Plans.

(3.4.3.1) Rationale: Each regional EPA office is required to prepare a Climate Change Action Plan to identify how the region will adapt to and mitigate impacts from climate change. Relative to more affluent communities, EJ communities lack the capacity to adapt to and mitigate impacts from climate change, thereby making the impacts of climate change relatively worse in these communities. To avoid potentially disproportionate impacts, each EPA region should incorporate a climate justice section into their respective Climate Change Action Plans.

(3.4.4) Issue: No nationwide programs exist within EPA to specifically address urban environmental issues.

(3.4.4.0) Recommended Action: In order to address the growing number of urban environmental issues, the EPA should launch a nationwide Urban Environmental Program.

(3.4.4.1) Rationale: The New England Urban Environmental Program (UEP) is considered a "capacity building" program because it acts as a liaison between the Region 1 EPA office, EJ community groups, and individuals. It is also a means of distributing grants. The UEP utilizes a public health focus to target urban EJ initiatives and is a way for groups to gain legitimacy, aggregate community interests, and form useful partnerships.

(3.4.5) Issue: The EPA's existing grant programs have the potential to positively impact more EJ communities.

(3.4.5.0) Recommended Action: In order to positively impact more communities, the EPA should expand and promote the CARE program through outreach activities at the EPA regional office level.

(3.4.5.1) Rationale: The CARE program has been successful across many regions. Since many of the changes necessary to eliminate environmental injustices are difficult to achieve within federal constraints, the EPA should increase the number of grant programs or revolving loan funds to meet immediate community needs. Without the ability to systematically figure out which communities qualify as "EJ communities," small grants may be the most efficient way to address issues.

Financial

(3.4.6) Issue: Lack of accountability and transparency in federal spending related to EJ.

(3.4.6.0) Recommended Action: In order to more accurately evaluate the success of federal programs, including EJ related programs, the OMB should explore new ways to incorporate social accountability (including) environmental justice into its evaluations of budget use and cost-benefit analyses.

(3.4.6.1) Rationale: The current evaluation system used by OMB is insufficient to accurately capture the benefits of meaningful public involvement on environmental injustice. Social cost benefit analyses are undertaken routinely by researchers and some governments, including in the Netherlands (Ruijs 2008). Incorporation of this practice into the OMB's evaluation would enhance the rigor and accuracy of the process and could be showcased on ExpectMore.gov.

Regulatory

(3.4.7) Issue: Persistent public exposure to toxins continues, despite existing legislation regulating the use of hazardous materials.

(3.4.7.0) Recommended Action: In order to prevent hazardous chemical contamination from being generated during manufacturing processes, the EPA should adopt more rigorous standards for new chemical approval under the Toxic Substances Control Act.

(3.4.7.1) Rationale: The Toxic Substances Control Act is precautionary legislation, and if enforced more stringently would greatly reduce the problems associated with toxic exposures, including health risks, cleanup costs, and other problems. According to the EPA's Office of the Inspector General, the EPA's current method of enforcement has severe limitations, including reliance on modeling to determine toxicity, as opposed to actual testing (EPA, Office of Inspector General, 2010). This oversight leaves communities vulnerable, and increases the long-term costs of economic output.

(3.4.8) Issue: Lack of effective environmental monitoring in EJ communities.

(3.4.8.0) Recommended Action: In order to evaluate human health effects in the context of ecosystems, the EPA should add human disease clusters to Intensive Monitoring and Research Sites under the umbrella of the National Environmental Monitoring Initiatives.

(3.4.8.1) Rationale: Many factors that affect human health are not currently regulated, such as green space, soil contamination, and availability of fresh foods. These problems are not necessarily recognized under existing environmental monitoring protocols. Similarly, disease clusters are also not specifically, systematically targeted for ecological monitoring and research. If an ecosystem approach were applied to monitoring recognized disease clusters, data collection and subsequent solution-seeking would benefit greatly. Given that the National Environmental Monitoring Initiatives are currently trying to bring together different monitoring systems for an ecosystem approach to monitoring, inclusion of a new target on disease clusters is appropriate and timely.

(3.4.9) Issue: Pesticides continue to expose EJ communities to harmful toxins.

(3.4.9.0) Recommended Action: In order to prevent harmful exposure by vulnerable communities to pesticides, the EPA should require testing of new pesticides by third parties, and avoid conflict of interest problems associated with using industry studies for the approval process.

(3.4.9.1) Rationale: On multiple occasions, scientists have highlighted the ethical conflicts associated with involving the pesticide industry in the EPA's pesticide approval process (Union of Concerned Scientists, 2006; Pesticide Action Network of North America 2007).

Since health problems that have been linked to pesticide exposure persist in vulnerable communities (Pesticide Action Network of North America, 2010), the EPA should require extensive testing by an independent agency chosen by the EPA, but funded by the industry.

(4.0) CONCLUSION

Looking back at the years since 1994, it is clear that substantial progress has been made since the issuance of the Executive Order. The EPA has frequently taken the lead on EJ initiatives. There remains a chasm, however, between current federal initiatives and areas of need, as evidenced by the plethora of grassroots organizations necessary to safeguard vulnerable communities from environmental injustices. Additionally, great variability in implementation of EJ initiatives exists across multiple agencies and even within a single agency across multiple regions. Our findings illustrate the need for both more interagency coordination and more effective and actionable communication with EJ organizations. Much political activism and useful coordination has taken place between EJ organizations and state and local governments; this type of partnership, in addition to proactive EJ programs, must become more entrenched at the federal level for every agency we have researched.

Many agency publications celebrate extensive EJ consideration and comprehensive action plans, but it quickly became evident in our conversations with many regional representatives that agencies lack a procedural component delineating EJ incorporation into day-to-day decision-making. Some lack a basic awareness of what constitutes EJ and the appropriate programmatic response to address it.

Active government leadership and coordination is essential to collectively define EJ and to implement this definition as a government-wide standard. With proper vision and leadership, the Executive Order may become a central component of today's federal policy agenda and a lens through which all other policy actions can be considered. This is a necessary improvement if EJ communities across the nation are to be significantly targeted for enforcement of new or existing environmental regulations. An exclusively public health angle is insufficient in combating environmental threats. Policies and initiatives should actively include defining characteristics of these communities in their language, including race and socioeconomic status.

Environmental injustices persist in every region of the country, often invisible except for the efforts of EJ organizations. Our hopes are that the Executive Order of 16 years ago can be meaningfully strengthened and repositioned by the current administration to ensure that government agencies work more closely with these groups to target each EJ issues. Specific populations suffering disproportionate adverse effects from environmental harms must be rigorously identified and prioritized in enforcement decisions.

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A note on personal communication:

To protect the anonymity of agency representatives contacted during the course of research, individual names have been excluded from this report. Should the reader wish to obtain further information, please contact the authors at lw2370@columbia.edu and rcj2109@columbia.com.

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(6.0) APPENDICES

(6.1) APPENDIX A: RESEARCH INTERVIEW QUESTIONS

Environmental Justice Organizations

What is the community profile?

Are there major urban centers not represented by an EJ organization?

What are the EJ organizations concerns and major projects?

How are the EJ organizations funded?

Has the organization assessed regional EJ issues related to climate change?

How does the EJ group interact with the community?

What are the successes of EJ organizations and where have they failed?

Other than the EPA, with what agencies (state or federal) does the EJ organization interact?

Environmental Protection Agency, Regional Offices

How does the office define EJ communities and issues?

What is the office's role in responding to EO 12898?

What is the procedural response to EJ issues in the region?

How does the regional office interact with marginalized communities and conduct "outreach?"

Does the office direct grants toward EJ communities?

Is there a proactive "climate justice" program?

What state or federal agencies does the regional EPA office interact with in addressing EJ issues?

Agencies other than the EPA

How does the agency define EJ?

What is the action plan for addressing EJ?

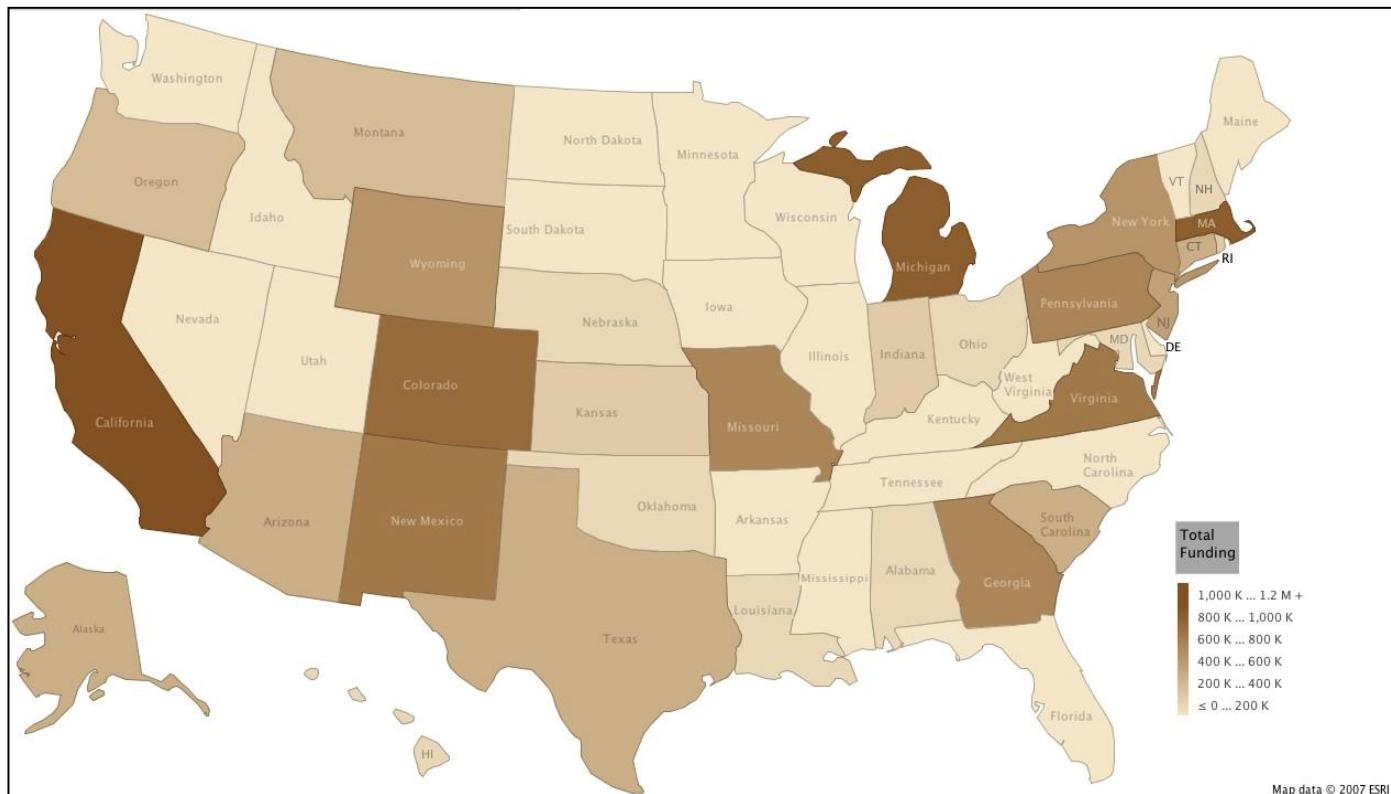
How has the agency responded to EO 12898?

How does the agency interact with the EPA regional offices?

How do the agencies interact with EJ communities?

(6.2) APPENDIX B: CARE GRANT DISTRIBUTION BY STATE

Not represented on this map are the US Virgin Islands, which received approximately \$550,000 in CARE grant money between 2005 and 2009. Other sovereign regions including American Samoa, Guam, Northern Marianas, Puerto Rico, and the national capital itself, District of Columbia, were not recipient jurisdictions for CARE grants during this same timeframe.



Care Grants by state, 2005-2009. Image Source: Levine, 2010c

(6.3) APPENDIX C: EPA REGION 2 FLOW CHART

EPA Region 2 Process for Factoring Environmental Justice into Permit Decision-Making

