

Farming in the Elkhorn Slough Watershed, Environmental Justice & the Hispanic Community

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I. Introduction

For the past two decades, a global environmental movement has challenged the disproportionate burden that environmental degradation and pollution have had on the health and well being of communities of color and low-income families. Globally, there has been a growing awareness that these problems contribute to a large number of disparities in health by race/ethnicity and social class. The Environmental Protection Agency (EPA) defines environmental justice 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.*”

Both substance and process are at the core of the notion of environmental justice. “Fair treatment” means that no group of people, including a racial, ethnic, or a 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. “Meaningful involvement” means that: (1) potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health; (2) the public's contribution can influence the regulatory agency's decision; (3) the concerns of all participants involved will be considered in the decision making process; and (4) the decision makers seek out and facilitate the involvement of those potentially affected (EPA, definition of Environmental Justice).

As Dr Robert Bullard has put it, *“Environmental justice is not a social program, it's not affirmative actions, and it's about justice (...) in terms of enforcement of regulations. We [cannot] even talk about achieving sustainable development or sustainability issues until we[acheive] justice. A lot of the groups that are trying to address these issues in the absence of dealing with race may be fooling themselves. When we talk about what's happening along the US-Mexican border and the colonias and the maquilas and the devastation that is happening along the border, the health conditions of children and workers and not understand that it's also related to our consumption patterns, consumption behavior and who has the most money to consume the most. And those are issues that may be unpopular when we sit in rooms and talk but I think that's how the environmental justice movement is forcing these issues on the table and really getting a lot of people to think about how we can start to address the disparities and the inequities and the privileged position that some people have only because of the skin color that they were born in. And that's where the justice issues come into account.”*





Figure 1 Shows a “Crop-duster” in the Central Coast of California flying low and applying pesticides. The pesticide drift through air and soil is very dangerous.

In sum, environmental justice is the goal to be achieved for all communities and persons across this Nation. Environmental justice is achieved when everyone, regardless of race, culture, or income, enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work (EPA definition of Environmental Justice).

Brief History of the Environmental Justice Movement

The term “environmental justice” first began getting mentioned in the 1980’s when many communities of color spoke up about allegations of “environmental racism”. These communities started to recognize that people of color systematically receive disproportionately greater environmental risk while white communities systematically receive better environmental protection. At that time, many of the communities of color began to question the land practices within their communities and the industrial activity that seemed to be more prevalent in their neighborhoods, compared to a majority of the white communities. What started as a grassroots movement soon became a national campaign that was called the “environmental justice movement.”

For the first ten years of the movement, “environmental justice” was defined as the skewed distributional consequences of environmental burdens to communities of color. Almost all of the cases looked at on the national level were cases about communities forced to live in or near landfills, hazardous waste facilities, and other industrial activities. Soon after, in the 1990’s, the environmental justice movement began to address issues associated with the poor as well as the people of color. It became a multi issue movement that large numbers of grassroots communities could associate their current problems with.

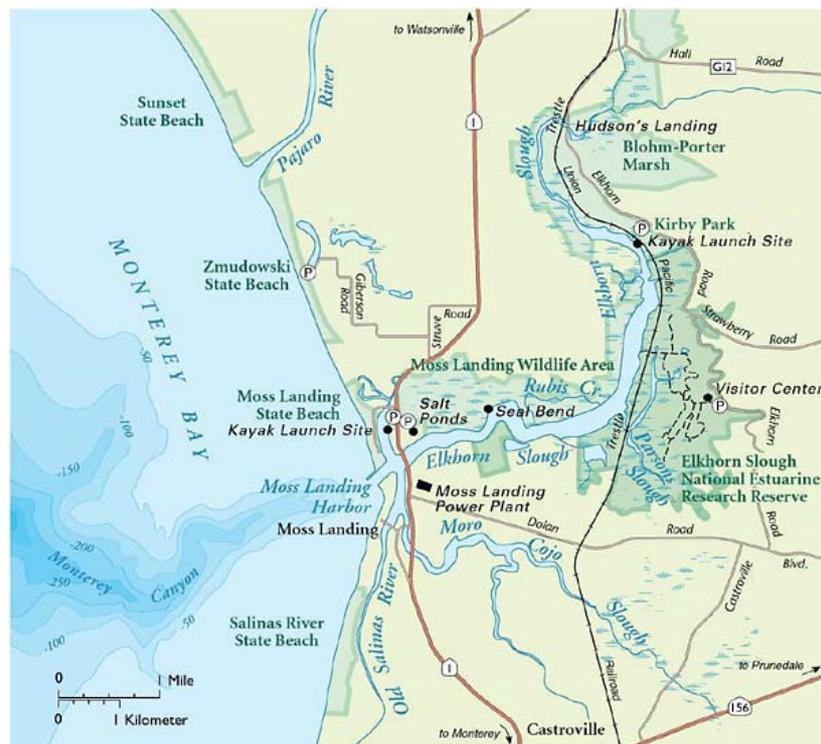
The tremendous efforts of all the grassroots organizations and political movements brought forth the First National People of Color Environmental Leadership Summit held in Washington, DC, 24-27 October 1991. Over 900 people attended this landmark summit and over 350 of the delegates were people of color. During this summit meeting, they developed 17 Principles of Environmental Justice. In February 1994, in response to these advocacy efforts, President William Clinton issued Executive Order 12898, which charged 11 federal agencies with developing policies and procedures to address the disparate impact of environmental hazards on communities of color and low-income populations. This Executive Order required all federal agencies to make environmental justice part of their mission (see appendix 1).

II. Elkhorn Slough

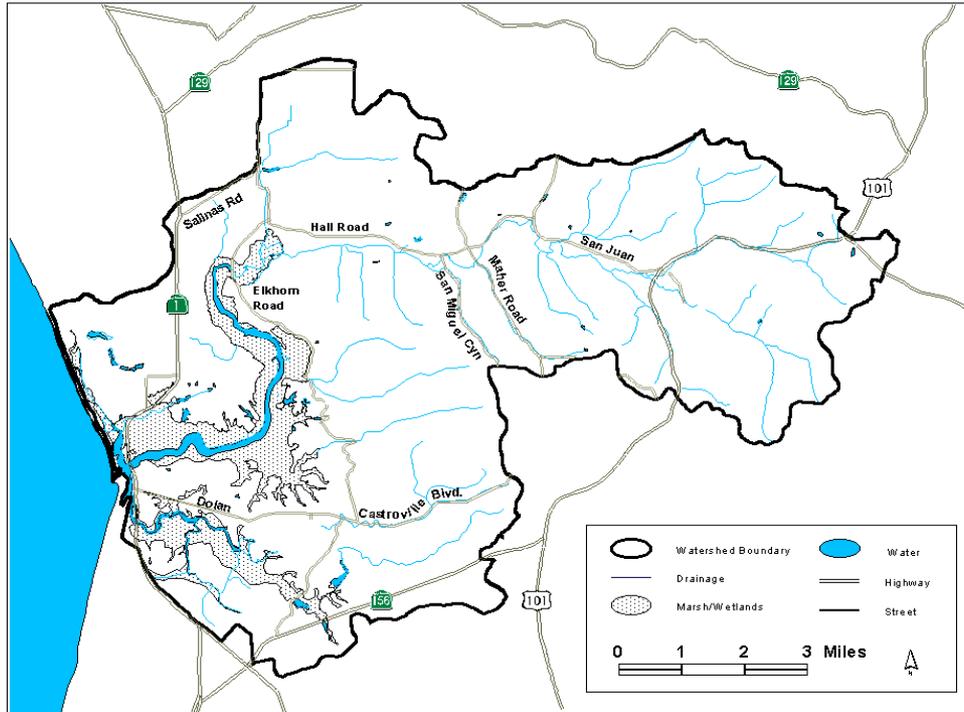
For thousands of years the Elkhorn Slough watershed in the Central Coast of California, was part of a much larger wetland system covering the mouth of the Pajaro and the Salinas Rivers. The slough was a large shallow embayment, and freshwater input was much greater than saltwater. Elkhorn Slough is cut by the San Andreas Fault near the Monterey and San Benito County lines. The slough was the mouth of the Pajaro and Salinas Rivers until a hundred years ago when the wetlands were engineered in order to allow for agriculture production. After the construction of Moss Landing Harbor in 1947, the slough was exposed to high levels of wildlife and erosion depletion. The opening at the mouth of the harbor caused the tide levels to rise and fall quickly for the first time in the history of Elkhorn Slough. Once environmentalists realized the

irreversible damages done to the slough the dikes were broken down in the 1980's to allow the tides to flow deep into the slough although the wetland occupies today only a small percentage of the huge historical wetland area.

Thus, the so-called Elkhorn Slough watershed includes what is today called Elkhorn Slough National Estuarine Research Reserve which is a major wetland (see map 1) as the broader whole basin or catchment area (see map 2)



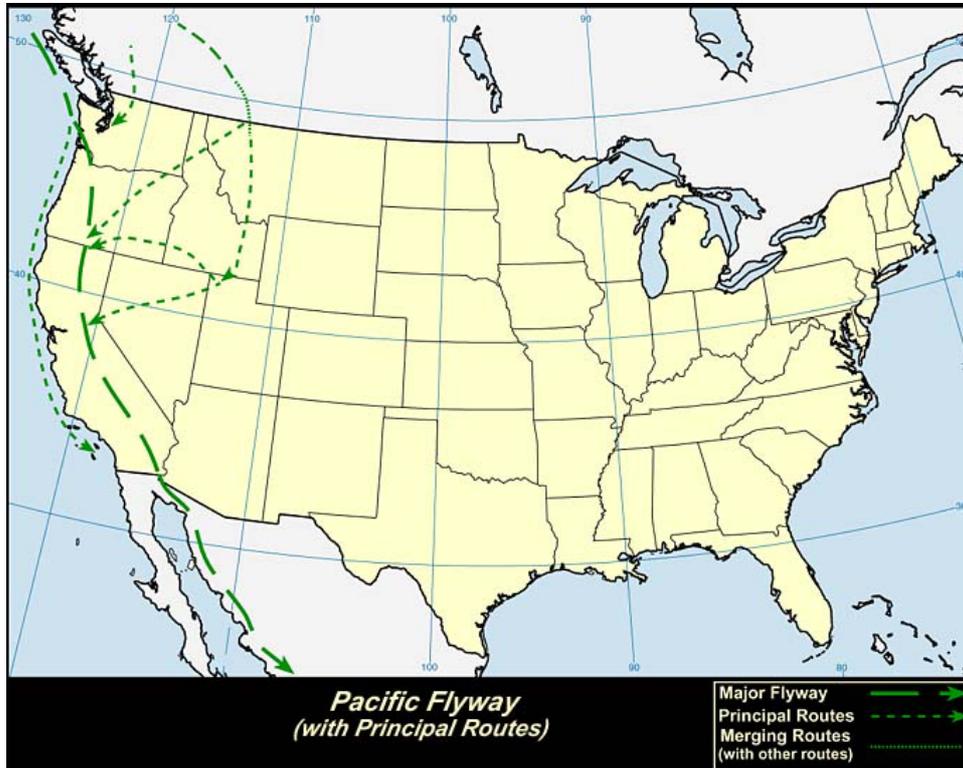
Map 1 of Elkhorn Slough National Estuarine Research Reserve



Map 2 of the Elkhorn Slough watershed

Elkhorn Slough National Reserve was created when the California Fish & Game purchased 1000 acres in 1980. By 1985, the number of reserved land was up to 1,300 acres. Elkhorn Slough is one of the relatively few coastal wetlands remaining in California. More than 400 species of invertebrates, 80 species of fish and 200 species of birds have been identified in the slough. Currently there are a number of threatened or endangered species in the slough, including the California red-legged frog and the Santa Cruz long-toed salamanders. Elkhorn Slough is the second largest remaining saltwater marsh habitat in California. The majority of freshwater enters the Reserve into the north end of the Slough through Carneros and Watsonville Creeks, two intermittent creeks with substantial flows during the winter and virtually none during the summer. Direct runoff from surrounding hills in the winter and agricultural return flows from irrigated fields contribute additional freshwater. A potentially important amount of freshwater may enter the Slough from the Salinas River via the Old Salinas River Channel and the Moss Landing Harbor.

Elkhorn Slough is also a globally important bird area. The slough is located on the Pacific Flyway, which means that it is a very important feeding and resting area for many types of migratory bird species.

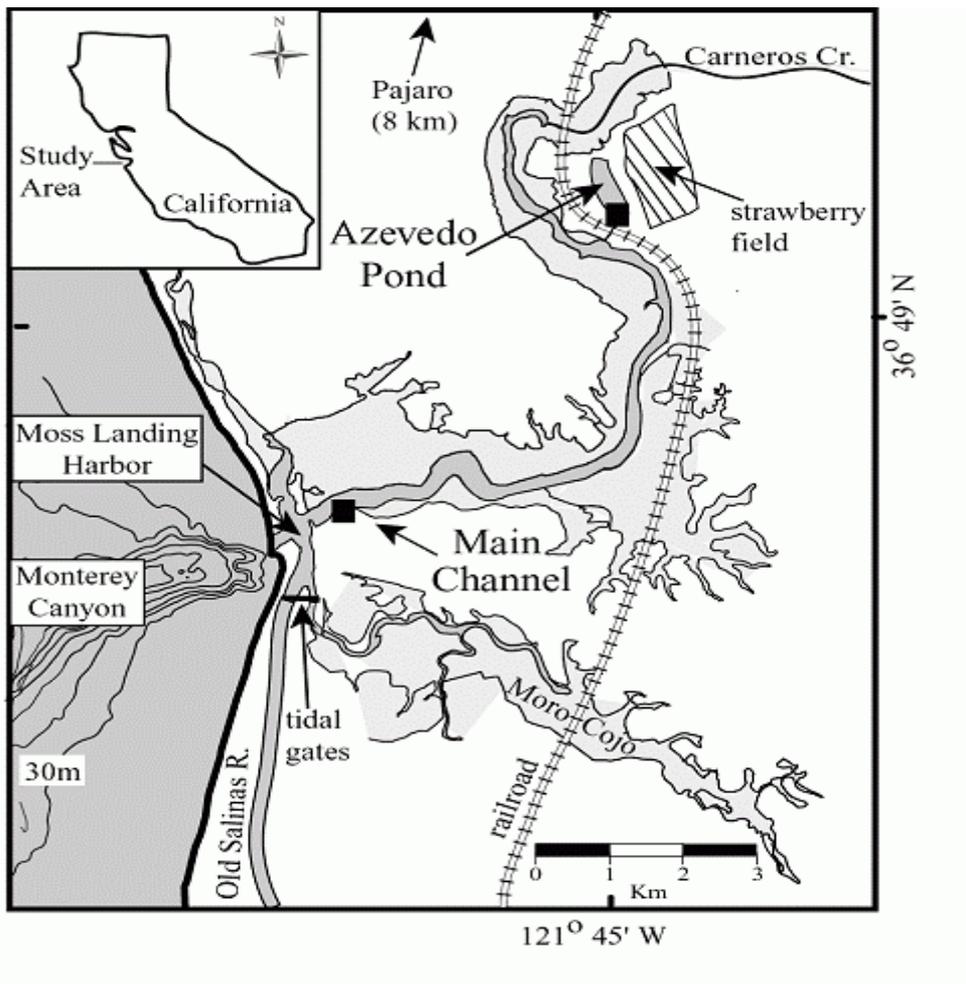


The slough is also visited by the California sea otters. It is one of the places selected for the reintroduction of individuals rehabilitated by the Monterey Bay Aquarium (Recarte).





The whole watershed is also extremely productive agriculturally, especially for many cool season vegetables, as well as strawberries, raspberries, and cut flowers. In 2002, 24% of the Reserve was under cultivation, 8% of which was in strawberry production alone (ALBA). The remainder of the landscape is covered with small (5-20 acre) “ranchettes”, non-native eucalyptus groves, grasslands, oak savanna, and maritime chaparral. Much of the land in cultivation is very steep, with many fields having over a 10% incline, lined with strawberries and other crops. Due to the sandy soils and the hilly terrain in this watershed, agricultural production leads to enormous amounts of erosion and sedimentation of waterways.



Furthermore, nutrients from nitrate and phosphate based fertilizers end up in the waterways, as well as many pesticides that are soluble in water or attach to soil particles that make their way downhill. DDE, a degenerate of DDT, is one such example of a pesticide that locks onto soil particles and does not become a problem until that soil leaves the field and enters a water body. In 1998 following an El Niño winter, a large amount of DDE was flushed into Elkhorn Slough, wiping out (in the words of Prof

Berkey, from a speech at the Monterey Institute of International Studies) an entire generation of Caspian Terns that were not yet born.



Caspian Tern (*Sterna caspia*)

Additionally, very high rates of sedimentation can actually cause an estuary to turn into a mud flat, dramatically changing the ecology and life forms it can support. This has already started to happen to Elkhorn Slough. It is when erosion on the magnitude of 33 tons per acre per year occurs (the highest erosion rates west of the Mississippi River) that concerted action must be taken to work with farmers in the watershed. It has the worst erosion problems in the whole west half of the United States.

The agricultural sector is the top employer of the region and brings in more profits than any other industry in Monterey County, but it is also a major source of sedimentation, excess nutrients, and pesticides ending up in our surface and ground waters. Severe nitrate contamination is shutting down wells all over the region. One of the greatest challenges for the Monterey Bay region and particularly the Elkhorn Slough watershed is to balance both a vital agricultural industry and resource protection. Fortunately, many strategies which protect the viability of agriculture are often complementary with the strategies that protect the natural resource base upon which agricultural production depends.

One regulatory program is of particular importance in this context: the Elkhorn Slough Watershed Permit Coordination Program. It was established in the fall of 1998 when six local, state and federal agencies entered into watershed-based agreements with the

USDA Natural Resources Conservation Service (NRCS) and the Resource Conservation District of Monterey County RDC). The program permits NRCS and the RCD to provide farmers and land managers with design and construction specifications for resource enhancing projects utilizing 10 pre-approved conservation practices. It incorporates erosion control and riparian enhancement practices making it easier for the agricultural community to participate in implementing voluntary conservation projects. Special conditions on the timing, location, and method of installation are included in the plans provided to the participants to avoid or mitigate negative impacts on water quality and sensitive species and habitats. It alleviates the disincentive farmers and land managers experience when considering the regulatory review and permitting process when they wish to restore or enhance natural resource conditions on their property and provides land managers with an alternative to multiple permit applications, while ensuring that they utilize the regulatory agency approved conservation practice standards of the NRCS and the RCD. The program is part of a broader voluntary system of sustainable agriculture, the so-called Partners in Restoration Programs (PIRs) an initiative of Sustainable Conservation, a San Francisco-based nonprofit.

III. The problem

64% of the population of Salinas and 47% of the population of Monterey County is Hispanic (U.S. Census 2000). The Elkhorn Slough watershed area is home to the highest percentage (80%) of Hispanic farmers and farm workers in the United States. It is also home to some of the most diverse farming conditions anywhere. It just so happens that almost all the Hispanic farmers (close to 95% of the Hispanic population) are farming the upper highlands of the slough, where heavy erosion and pesticide drift is a common occurrence. In the lower part of the slough, the flat fertile lands support a vibrant agricultural scene. The lush areas are in high demand and may be rented to several different growers during the span of a year for a hefty price. In the slough highlands, however, the story is much different.



Figure 2 Shows a strawberry field in the Elkhorn Slough that has been destroyed due to water saturation (Courtesy of ALBA)

The steep grade of the hills in the highlands forces farmers to deal with great amounts of erosion. Renters on these lands constantly battle a loss of soil and the impaired productivity that goes along with it. As a result, the difficult lands of this watershed, one of the few with affordable land for rent, are much cheaper to rent or buy for the smaller farmer. Studies have shown that levels of degradation in the slough area correspond to ethnicity. Those farmers who typically make less, are underrepresented and marginalized are forced, through economic constraints, to farm the worst land.

There are a number of social and ecological problems facing Elkhorn Slough and its watershed area. A majority of these problems are either directly or indirectly related to environmental justice issues affecting the large Hispanic population in the Central Coast of California. Ecologically, the main problems are soil degradation, pesticide contamination, water quality, habitat loss, and species diversity. Socially, the main problems are racism, health concerns regarding water and pesticide exposure, living conditions, and wage discrimination.

The environmental justice concerns that are relevant to migrant farm workers, and are taking place in the Elkhorn Slough watershed are:

1. Low number of permits given to Hispanic farmers
2. Substantially lower marketing prices

3. Farming on the poorest quality and most contaminated land
4. Nitrate leaching and pesticide exposure
5. Poor living conditions

Permits

The approximately 80% of the watershed's Hispanic farmers are Spanish-speaking, who often lack access to traditional sources of government and extension information and support. Since the erosion and natural resource degradation in the Elkhorn Slough watershed must be controlled at the source, many landowners, government, and environmental groups are interested in promoting sustainable resource management practices. They came together to improve and protect the area's natural and agricultural resources through a variety of strategies the main one being the PIR Permit Coordination Program previously described. In order to farm these highly erodible lands, a farmer first needs to apply for a permit from the USDA or another state organization. The problem with applying for these permits is that generally Latino farmers don't feel comfortable dealing with federal agencies and regulatory organizations. A recent study in the Elkhorn Slough watershed by Daniel Mountjoy showed that no farmers used the technical assistance or support from government and state agencies, while to stop soil erosion one must work with them. Dr. Mountjoy found that the main reason for Latinos not working with governmental agencies is due to the language barrier and racism. Generally, Hispanics receive their information from family, friends, and industry.

Much of the extension is in English only and many of the field days and classes put on to help farmers are too time-consuming, expensive, and academically challenging. Local NGOs, aware of these conditions, are beginning to implement programs to focus on Spanish speaking programs and classes.

Efforts have been made to provide technical assistance to those working the most degraded land, but traditional extensions have mostly failed to reach these farmers because of cultural and language barriers, as well as inappropriateness of the technical advice when applied to limited-resource small-scale growers. The common suggestion to apply for a government conservation grant or cost-match program simply is not realistic for those who do not understand the application and/or reporting forms nor

have the extra money to put up for the match. Additionally, barriers exist simply because of being a renter. Very few Latino farmers own the land they farm on and subsequently have challenges making long-term improvements that might enhance environmental sustainability.

Marketing

Another problem that contributes to the environmental injustice in the Elkhorn Slough watershed is the substantially lower marketing prices that Hispanics receive for their produce. The number of marketing options for small growers is very slim. They can either sell to farmers markets and restaurants or sell to large brokers, who market farm products all over the world. In most cases, small farmers end up selling their produce to a middleman or broker. Most brokers get their work by travelling around farm communities looking for farmers to prey on. They are known for focusing on Latino farmers who are not too familiar with the system and in many cases do not have the language skills needed to communicate with dealers.

Recent studies by universities and NGOs have shown that Hispanic farmers are taken advantage of more than farmers from any other nationality when it comes to marketing. In many cases, their products are of a higher quality, but the question is why that does not reflected in the purchase price offered by the brokers. Is it due to racism and lack of the English language? Are we confronting a situation of environmental injustice?

Land Quality

Due to industrialized agriculture and the use of mass amounts of highly toxic synthetic and natural pesticides, much of the land in the Elkhorn Slough watershed is of poor quality and eroded. Even though the Hispanic population in the Elkhorn Slough is above 80%, they are still forced to farm the small, and steep areas that no one else wants to farm. The steep slopes of the Elkhorn Slough are prone to yearly erosion and landslides. In many cases, the winter strawberry beds are completely washed out in a heavy storm.

The poor land quality is also directly related to the lack of permits given to Latino farmers. The land that the Hispanic farmers must farm is always the land that needs permits to prevent erosion. Because these permits are tough to obtain and very expensive, farmers will try and make it through the winter and spring with poor erosion prevention techniques. It is almost inevitable that the heavy winter rains wash out the good topsoil of the lands without erosion control permits.

Furthermore, pesticide drift and pesticide exposure is harmful to the health of the farm workers and their families. As universities, private organizations, non-profits, and health groups do more and more research, the stack of evidence showing just how harmful these chemicals are to humans is rapidly growing. Still, in California in the 1990's, there was a documented 31% increase of pesticide use. This includes a 129% increase in use of known carcinogens and a 54% increase in nerve affecting toxins.

These real threats obviously pose the greatest risk to the employees and farmers walking the fields weeding, tending, and harvesting the crops. In the Tri-County area of the watershed, as in much of agriculture, these farm workers are predominantly of Latino origin. Everyday thousands of Latino men and women wake up with the sun to go to work and be exposed to these deadly chemicals sometimes for less than minimum wage. In addition to being exposed daily to the pesticides in the fields, the residue from these substances gets carried into the home on their clothes and shoes. These women and men who are being poisoned daily literally have to detoxify when coming home to their family before they can hold their children.

Nitrate Leaching

Unfortunately, nitrate contamination of groundwater from excessive fertilization on agricultural fields has become a major problem in the Central Coast of California.

The issue of nitrate leaching in the Salinas Valley Watershed has been recognized as a serious problem for the last 50 years. Studies of nitrate contamination of the watershed were underway as early as 1953 and 35% of wells tested in northern Monterey County,

including the Salinas Valley, had nitrate concentrations greater 45 ppm, the state and federal maximum contaminant level. Above this number, the water we drink, bathe in, and clean with is considered contaminated and a risk to human health. More recent analysis using nitrate-quick-tests have shown some wells in Salinas measuring as high as 150 ppm.

Contrary to what some may have us believe, this form of nitrate may potentially be toxic to humans. High levels of nitrate are thought to cause various illnesses in adults and may cause infant methaemoglobinaemia (a lack of oxygen delivery to the body which results in various symptoms from headache to death and can cause drawn blood to appear chocolate brown) and gastric cancers.

Groundwater nitrate contamination occurs in most areas dominated by conventional agriculture. As excessive amounts fertilizers are applied over and over, nitrate concentrations build in the soil and either they arrive to Elkhorn Slough as storm run-off water or, as the chemical accumulates in the ground below, it eventually begins to be leached into the underground aquifers below, thus contaminating the water supply for a much larger region.

This poses major environmental justice issues for the area as the watershed's high Latino population uses a large portion of these resources. The quick and dirty answer to drinking contaminated water is that the populations affected should simply buy bottled water. Unfortunately, this isn't a realistic option. The Latino population earns far less income than whites in the area and many families live below the federal poverty line. Forcing anybody to purchase expensive bottled or bulk water when the public water supply is supposed to be safe is unacceptable. Forcing low-income residents to choose between spending money on clean water or hospital bills is simply an injustice.

Living Conditions

The extremely poor living conditions that Hispanic farmers are subject to while living in the Elkhorn Slough watershed area are a huge concern in itself. Eric Bach, cited by Eric Schlosser, describes what he encountered while doing research in the Salinas

Valley and Elkhorn Slough by stating, *“I met with strawberry workers and an old labor camp - a small slum set amid rolling hills and strawberry fields not far from town. For most of the year this bleak collection of grey wooden barracks housed about 350 residents, mainly strawberry workers and their families. But at the peak of the harvest hundreds more crammed into its forty apartments.”*

A recent interview with a Triple M Ranch (a new organic farming/education NGO) marketing coordinator explained what it was like the first few weeks on the new land. Dina recaps: *“The first two weeks on the new land involved a major clean up. Every day we would walk to 100 acres and clean up the remains from the previous farmers. The things I found were mind blowing. The outskirts of the property were surrounded with pallet and cardboard makeshift homes. If that’s what you want to call them. Against the trees would be broken mirrors that the farmers would use to wash up in the mornings. I never imagined anything like this still went on in California.”*

Main Problems of the Communities

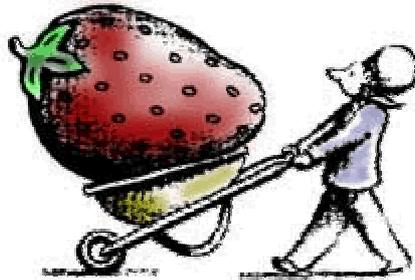
The main problems that the local communities face are directly related to the health and sanitation issues that are prevalent at the workplace. In the mid-1990’s there was a major outbreak of tuberculosis in the Monterey County. After more research, scientists discovered that the tuberculosis outbreak was directly related to the overcrowded living quarters and poor building design.

Many have the barracks and housing for farm workers do not have windows nor proper ventilation. It is not uncommon to find 5 or 10 farm workers living in a garage space. These poor living conditions lead to disease and other health issues for families and farmers. Also, farmers with families can bring home pesticide residue from a hard days work and spread it throughout their family. Women and children in the fields are also subject to pesticide exposure. In contrast, in organic farms, you can find a number of children roaming the property on bikes and in playhouses on any given weekend. These types of healthy actions promote environmental justice.

There is also a problem of isolation among Latinos within communities. Many farmers are illegal aliens and are afraid to be part of the community due to the possibility of being deported. They end up staying in overcrowded housing and are exposed to more problems.

Why is the Elkhorn Slough an environmental justice issue area?

The strawberry is known to migrant farm workers as “*la fruta del diablo*”, in English, “the fruit of the devil”. The strawberry is referred to as the devil because of the social, economic, and environmental implications associated with it. Picking strawberries is some of the lowest paid, most difficult, and least desirable farm work in California. Since the Elkhorn Slough watershed agricultural land is covered with strawberry fields, it only makes it more vulnerable to environmental injustice.



At times when a piece-rate wage is in effect, farm workers must perform all tasks as fast as they possibly can. Piece-rate wages mean that workers are paid by the amount of berries they pick in the fastest amount of time. There might be 2 weeks of 12 hours days, followed by a week of no work, depending upon the weather and the market. There is a huge undercurrent of anxiety in a field being harvested at piece-rate.

The reason why the Elkhorn Slough watershed is an environmental justice issue area is because of the five reasons stated in the problems section above. The five issues (permits, marketing, land quality, nitrate leaching, and living conditions) touch on the most important aspects of environmental justice concern. There are health and sanitation issues associated with the living conditions of the farmers and farm workers. Secondly, there are pollution and property issues associated with the pesticide drift and

the areas Hispanics are left to farm in the slough. All of these issues combined, make the Elkhorn Slough watershed one of the largest environmental justice issue area in the United States.

IV. Grassroots Movements

The grassroots movements are growing in California to help put an end to the environmental justice issues associated with farm workers, but it is still in the infant stage at best. We are beginning to see a small number of NGO's devote programs to environmental justice issues. Organizations that work with migrant and Latino communities are starting to apply for federal grants that are directly focused on Latino environmental justice issues. An excellent example of a local NGO focusing on environmental justice issues is the Agriculture Land-Based Training Association (ALBA). Their main focus is to provide more workshops and programs to empower the Hispanic communities. ALBA has excelled in offering courses that are mostly free, scheduled for afternoon or evening hours to accommodate working people, are bilingual, and ran in a way to be interactive and understandable to folks of differing education levels. ALBA specifically does outreach on Spanish radio, newspaper, and with direct mailings in Spanish to capture this audience.

A number of universities are focusing on the social aspects of Hispanic communities. Many graduate students are doing research in Elkhorn Slough. The University of California - Santa Cruz *Center for Justice, Tolerance, and Community* aims to put an end to environmental injustice and to educate communities about what can be done. This Center is a cutting-edge, applied research center. The UC - Santa Cruz faculty, staff, and associated researchers work with an international mix of community activists, affiliated researchers, and students. The Center provides serious research to elevate the quality of public debate, timely policy analysis to aid community leaders and decision-makers, and outreach and education to improve public discourse on challenging topics (Manuel Pastor, from CJTC's newsletter and web page). One of its main goals is the help low-income communities respond to the challenges of rapidly changing labor markets. Their primary focus is in California and the Central Coast, but it does work

and explore international, comparative, and historical issues. The Center's main activities are extensive research in the key areas of environmental justice, projects with community organizations, and interaction with policymakers.

V. Tentative Solutions

There are a number of proposed solutions in the cases of environmental injustice among Latino farm workers in the Elkhorn Slough watershed. A focus on solutioning access to the single PIR permit instead of having to get multiple expensive permits, which leads to a situation in which Latino farmers end up spending their own money to try to stop soil erosion and pesticide drift simply because of its impact on productivity when perhaps it could cost them less and result in better ecological management for the Reserve should be one of the main targets. One solution to stop environmental injustice is to promote "adaptive management" on the state level among farming organizations and communities. Adaptive management looks at the large-scale ecosystem by deliberate experimentation and systematic monitoring of the results (Salafsky). Dr Daniel Mountjoy found that the USDA programs in the Elkhorn Slough watershed were not implementing any evaluation or development programs for the farm workers. There was no product research and development or evaluation of the overall project. Historically with Hispanic communities like to look at all the possibly options and later evaluate when farming. This way, if something doesn't work one year, they can change it for the next season. But the existing programs do not allow for such flexibility.

Another solution would be to provide more education on the harms associated with pesticide exposure. For pesticide safety education to be successful --successful as measured by farm workers behaving safely-- it must address farm worker control of pesticide safety. This control has two dimensions: content and process (Sheppard). On the content side, farm workers must be educated and informed about how and why certain behaviors will reduce their exposure. On the process side, farm works should be shown how to develop the skills needed to make sure the rules are followed. Finally, most would expect that a greater emphasis on these aspects of self-efficacy in training farm workers would lead to greater change in behavior.



Figure Shows a farmer outreach meeting among the Latino community. The gap is finally closing between outreach and Latino farmers.



Figure Shows farmers working together in the Elkhorn Slough to protect against pesticide drift and runoff.

Another solution that could lower the number of environmental injustice cases among Latino farmers is for more farmers in the slough to change to organic farming. For example, many farmers are switching to organic production practices because the market prices are better than conventional prices. Organic production eliminates the use of synthetic pesticides and fertilizers, and generally results in water quality

improvements as a result. Better for the farmer (and his or her farm workers) and better for the environment.

Finally, another solution to the environmental justice concerns in the Elkhorn Slough is to engage in ethnic farmer outreach. There are a small number of environmental NGOs that are beginning to provide technical assistance. An excellent example is the work of the Agriculture and Land-Based Training Association (ALBA, which means “dawn” in Spanish). It has excelled in offering courses that are mostly free, scheduled for afternoon or evening hours to accommodate working people, are bilingual, and ran in a way to be interactive and understandable to folks of differing education levels. ALBA specifically does outreach on Spanish radio, newspaper, and with direct mailings in Spanish to capture this audience.

the **Ecological Farming Association**

*La Fresa Más Dulce:
Producción Sustentable de Fresas
en un Mundo sin Bromuro de Metilo*

*The Sweetest Berry:
Integrated Approaches to
Post-Methyl Bromide Strawberry Production*

Appendix 1

EXECUTIVE ORDER 12898

FEDERAL ACTIONS TO ADDRESS ENVIRONMENTAL JUSTICE IN MINORITY POPULATIONS AND LOW-INCOME POPULATIONS

By the authority vested in me as President by the Constitution and the laws of the United States of America, it hereby ordered as follows:

Section 1-1. Implementation.

1-101. Agency Responsibilities. To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, 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 populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands.

1-102. Creation of an Interagency Working Group on Environmental Justice.

(a) Within 3 months of the date of this order, the Administrator of the Environmental Protection Agency ("Administrator") or the Administrator's designee shall convene an interagency Federal Working Group on Environmental Justice ("Working Group"). The Working Group shall comprise the heads of the following executive agencies and offices, or their designees: (a) Department of Defense; (b) Department of Health and Human Services; (c) Department of Housing and Urban Development; (d) Department of Labor; (e) Department of Agriculture; (f) Department of Transportation; (g) Department of Justice; (h) Department of the Interior; (i) Department of Commerce; (j) Department of Energy; (k) Environmental Protection Agency; (l) Office of Management and Budget; (m) Office of Science and Technology Policy; (n) Office of the Deputy Assistant to the President for Environmental Policy; (o) Office of the Assistant to the President for Domestic Policy; (p) National Economic Council; (q) Council of Economic Advisers; and (r) other such Government officials as the President may designate. The Working Group shall report to the President through the Deputy through

the Deputy Assistant to the President for Environmental Policy and the Assistant to the President for Domestic Policy.

(b) The Working Group shall:

- (1) provide guidance to Federal agencies on criteria for identifying disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.
- (2) coordinate with, provide guidance to, and serve as a clearinghouse for, each Federal agency as it develops an environmental justice strategy as required by section 1-103 of this order, in order to ensure that the administration, interpretation and enforcement of programs, activities and policies are undertaken in a consistent manner;
- (3) assist in coordinating research by, and stimulating cooperation among, the Environmental Protection Agency, the Department of Health and Human Services, the Department of Housing and Urban Development, and other agencies conducting research or other activities in accordance with section 3-3 of this order;
- (4) assist in coordinating data collection, required by this order;
- (5) examine existing data and studies on environmental justice;
- (6) hold public meetings as required in section 5-502(d) of this order; and
- (7) develop interagency model projects on environmental justice that evidence cooperation among Federal agencies.

1-103. Development of Agency Strategies.

(a) Except as provided in section 6-605 of this order, each Federal agency shall develop an agency-wide environmental justice strategy, as set forth in subsections (b)-(e) of this section that identifies and addresses disproportionately high and adverse human health or environmental effects of its programs, policies, or activities on minority populations and low-income populations. The environmental justice strategy shall list programs, policies, planning and public participation practices, enforcement and/or rulemakings related to human health or the environment that should be revised to, at a minimum: (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. In addition, the environmental justice strategy shall include, where

appropriate, a timetable for undertaking identified revisions and consideration of economic and social implications of the revisions.

- (b) Within 4 months of the date of this order, each Federal agency shall identify an internal administrative process for developing its environmental justice strategy, and shall inform the Working Group of the process.
- (c) Within 6 months of the date of this order, each Federal agency shall provide the Working Group with an outline of its proposed environmental justice strategy.
- (d) Within 10 months of the date of this order, each Federal agency shall provide the Working Group with its proposed environmental justice strategy.
- (e) Within 12 months of the date of this order, each Federal agency shall finalize its environmental justice strategy and provide a copy and written description of its strategy to the Working Group. During the 12-month period from the date of this order, each Federal agency, as part of its environmental justice strategy, shall identify several specific projects that can be promptly undertaken to address particular concerns identified during the development of the proposed environmental justice strategy, and a schedule for implementing those projects.
- (f) Within 24 months of the date of this order, each Federal agency shall report to the Working Group on its progress in implementing its agency-wide environmental justice strategy.
- (g) Federal agencies shall provide additional periodic reports to the Working Group.

1-104. Reports to the President. Within 14 months of the date of this order, the Working Group shall submit to the President, through the Office of the Deputy Assistant to the President for Environmental Policy and the Office of the Assistant to the President for Domestic Policy, a report that describes the implementation of this order, and includes the final environmental justice strategies described in section 1-103(e) of this order.

Sec. 2-2. Federal Agency Responsibilities for Federal Programs. Each Federal agency shall conduct its programs, policies, and activities that substantially effect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting

persons (including populations) to discrimination under, such programs, policies, and activities, because of their race, color, or national origin.

Sec. 3-3. Research, Data Collection, and Analysis.

3-301. Human Health and Environmental Research and Analysis.

(a) Environmental human health research, whenever practicable and appropriate, shall include diverse segments of the population in epidemiological and clinical studies, including segments at high risk from environmental hazards, such as minority populations, low-income populations and workers who may be exposed to substantial environmental hazards.

(b) Environmental human health analyses, whenever practicable and appropriate, shall identify multiple and cumulative exposures.

(c) Federal agencies shall provide minority populations and low-income populations the opportunity to comment on the development and design of research strategies undertaken pursuant to this order.

3-302. Human Health and Environmental Data Collection and Analysis. To the extent permitted by existing law, including the Privacy Act, as amended (5 U.S.C. section 552a):

(a) each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income. To the extent practicable and appropriate, Federal agencies shall use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.

(b) In connection with the development and implementation of agency strategies in section 1-103 of this order, each Federal agency, whenever practicable and appropriate, shall collect, maintain and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding facilities or sites expected to have a substantial environmental, human health, or economic effect on the surrounding populations, when such facilities or sites become

the subject of a substantial Federal environmental administrative or judicial action. Such information shall be made available to the public, unless prohibited by law: and

(c) Each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding Federal facilities that are:

(1) subject to the reporting requirements under the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. section 11001-11050 as mandated in Executive Order No. 12856; and (2) expected to have a substantial environmental, human health, or economic effect on surrounding populations.

(d) In carrying out the responsibilities in this section, each Federal agency, whenever practicable and appropriate, shall share information and eliminate unnecessary duplication of efforts through the use of existing data systems and cooperative agreements among Federal agencies and with States, local, and tribal governments.

Sec. 4-4. Subsistence Consumption of Fish and Wildlife.

4-401. Consumption Patterns. In order to assist in identifying the need for ensuring protection of populations with differential patterns of subsistence consumption of fish and wildlife, Federal agencies, whenever practicable and appropriate, shall collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. Federal agencies shall communicate to the public the risk of those consumption patterns.

4-402. Guidance. Federal agencies, whenever practicable and appropriate, shall work in a coordinated manner to publish guidance reflecting the latest scientific information available concerning methods for evaluating the human health risks associated with the consumption of pollutant-bearing fish or wildlife. Agencies shall consider such guidance in developing their policies and rules.

Sec. 5-5. Public Participation and Access to Information.

(a) The public may submit recommendations to Federal agencies relating to the incorporation of environmental justice principles into Federal agency programs or policies. Each Federal agency shall convey such recommendations to the Working Group.

(b) Each Federal agency may, whenever practicable and appropriate, translate crucial public documents, notices and hearings relating to human health or the environment for limited English-speaking populations.

(c) Each Federal agency shall work to ensure that public documents, notices, and hearings relating to human health or the environment are concise, understandable, and readily accessible to the public.

(d) The Working Group shall hold public meetings, as appropriate, for the purpose of fact-finding, receiving public comments, and conducting inquiries concerning environmental justice. The Working Group shall prepare for public review a summary of the contents and recommendations discussed at the public meetings.

Sec. 6-6. General Provisions.

6-601. Responsibility for Agency Implementation. The head of each Federal agency shall be responsible for ensuring compliance with this order. Each Federal agency shall conduct internal reviews and take such other steps as may be necessary to monitor compliance with this order.

6-602. Executive Order No. 12250. This Executive Order is intended to supplement but not supersede Executive Order No. 12250, which requires consistent and effective implementation of various laws prohibiting discriminatory practices in programs receiving Federal financial assistance. Nothing herein shall limit the effect or mandate of Executive Order No. 12250.

6-603. Executive Order No. 12875. This Executive Order is not intended to limit the effect or mandate of Executive Order No. 12875.

6-604. Scope. For the purposes of this order, Federal agency means any agency on the Working Group, and such other agencies as may be designated by the President, that conducts any Federal program or activity that substantially effects human health or the environment. Independent agencies are requested to comply with the provisions of this order.

6-605. Petitions for Exemptions. The head of a Federal agency may petition the President for an exemption from the requirements of this order on the grounds that all or

some of the petitioning agency's programs or activities should not be subject to the requirements of this order.

6-606. Native American Programs. Each Federal agency responsibility set forth under this order shall apply equally to Native American programs. In addition, the Department of the Interior, in coordination with the Working Group, and after consultation with tribal leaders, shall coordinate steps to be taken pursuant to this order that address Federally-recognized Indian tribes.

6-607. Costs. Unless otherwise provided by law, Federal agencies shall assume the financial costs of complying with this order.

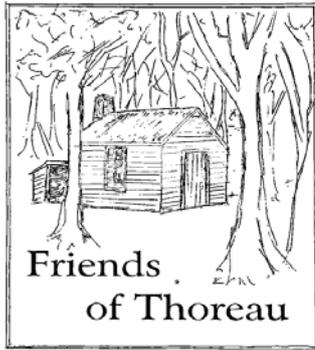
6-608. General. Federal agencies shall implement this order consistent with, and to the extent permitted by, existing law.

6-609. Judicial Review. This order is intended only to improve the internal management of the executive branch and is not intended to, nor does it create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any person. This order shall not be construed to create any right to judicial review involving the compliance or noncompliance of the United States, its agencies, its officers, or any other person with this order.

WILLIAM J. CLINTON

THE WHITE HOUSE

February 11, 1994.



Farming in the Elkhorn Slough Watershed, Environmental Justice & the Hispanic Community

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[Main Page](#)
[Guiding Students Discussion](#)
[Links to Online Resources](#)
[Illustration Credits](#)
[Works Cited and Additional](#)

Scholars' Debate

In the last two decades of the 20th Century the Environmental Justice movement has become a US wide phenomenon. Although hundreds of cases have been documented and ethnic and low-income groups have brought many environmental justice cases to the courts, no single judge has admitted that remediation belongs to the judiciary. Environmental justice remains an action-oriented technique used mainly at the political and administrative levels. Paradoxically what is at its origins is the recognition that civil rights and environmental degradation are inextricably linked, and civil rights is an issue area usually developed both by political/administrative action and judicial litigation.

More specifically, the issue is whether Title VI of the 1964 Civil Rights Act can be used to remedy environmental injustice. This idea should be, and has been, tested first concerning issues which nobody contents are in the core of environmental injustice (discrimination against African Americans in industrial urban settings): the siting of noxious facilities in poor and minority neighborhoods (Rinquist). Title VI, Section 601 of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or ethnic origin in any program or activity that receives federal funding. Title VI, Section 602, requires that every agency empowered to grant federal funds “effectuate the provisions of Section 601”. Federal Agencies different from the EPA have constructed this mandate as prohibiting actions that result in a discriminatory effect as well as intentional discrimination. But in 2001, in the case *Alexander v. Sandoval* (532 US 275), the US Supreme Court asserted that Section 601 prohibits only intentional discrimination and that it does not create a private right of action (only an agency, for example, the PA, can enforce it). There are still doubts on whether when an injury is demonstrated private parties can use Title VI under another law (Section 1983 of 42 USC). In any case, the EPA keeps on bringing law suits against state or federal agencies permits which result in a discrimination because the permit adds to a situation of environmental injustice (for example, because a hazardous waste facility is permitted in an area where the ratio of African American population is really high and the already established noxious facilities are many more than the usual number o such facilities in other counties or towns). So the EPA's complaint procedure offers an important opportunity for communities facing environmental discrimination to challenge state agencies in a federal forum (Long), although the use of the court system is seen more as a missed opportunity than a reality (Yang, *Environmental Reg* 2002).

Do you think that environmental justice deals with issues that easily enforceable through the court system?

One of the most contended points in environmental justice analysis is whether or not there is enough evidence of discrimination or if the data are distorted in order to produce that impression when dealing with statistics of locations of environmental services (Rinquist). Is it easy to prove discriminatory intent when deciding about the siting of facilities or about the enforcement of environmental regulations, or even about the implementation of environmental policies? Could it be that some communities are

targeted not because of racism but because of the value of real state or because the decision might be confronted with social opposition than when they are planned in richer (more socially powerful) communities?

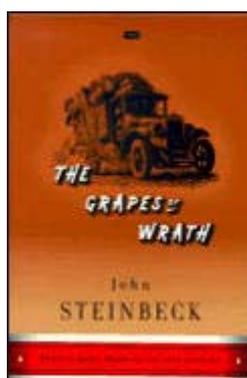
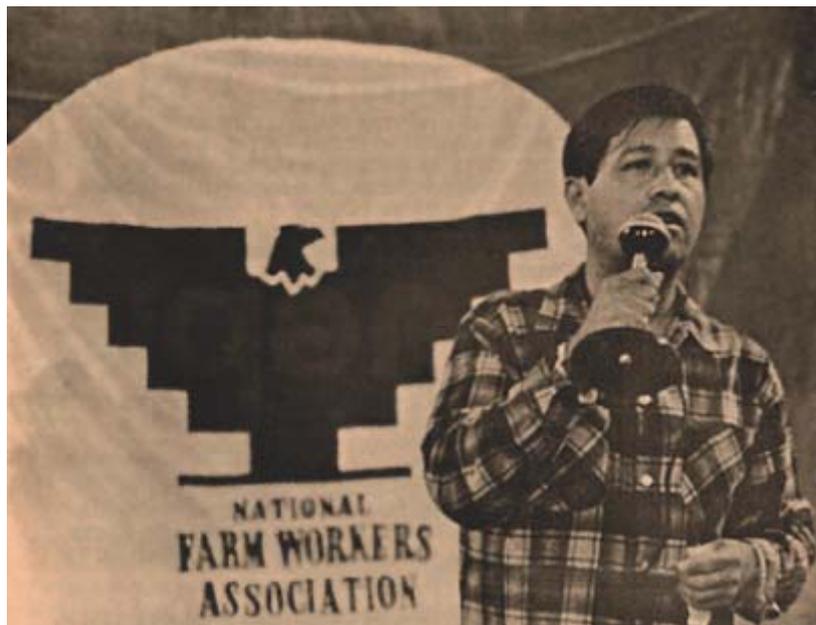
Political action at the Congressional level has been lacking. One could only cite the 1992 Residential Lead Based Paint Reduction Act and appropriated \$ 375 million for inspection and abatement action in low income housing as the only statute linked to environmental justice (Rinquist). Should Congress try to do more? Is it not the appropriate power to redress environmental injustice?

At the presidential level, action was triggered in 1994 by the approval by President Clinton of Executive Order 12898 (see Appendix 1). This Order, with its memorandum on Environmental Justice, is analysed in the Section on Guiding Students' Discussion. Although some programs foreseen by the EPA as an implementation of the Executive Order have been suspended, President's Bush Administration has committed to continue the policy (Whitman).

Administrative action of the EPA in the implementation of the Order is based in several areas: the Guiding Students' Discussion Section will deal with them.

The environmental justice movement, in any case, was originally understood as a mechanism to solution clearly focused issues: the discrimination produced by the siting of noxious facilities in African or Native American neighborhoods. It is because of this sociological background that the connection between the environmental conditions and the civil rights movement was easily made. The problems of farmers, in general, and of Hispanic farmers, in particular, were originally completely out of the picture. As Eileen Gauna has put it, farm workers face a special dilemma. *“Out of over 300 law review articles on environmental justice, less than a handful specifically address farmworkers as an environmental justice issue. The same is likely true for the over 117 books on environmental justice published thus far with the work of Dr. Moses being the exception.”* Why is it that it has taken almost 20 years to make the connection between farming and environmental justice notwithstanding the fact that the images of immigrant farmers conditions immediately recall very traditional and easily recognizable (and even stereotyped in US history) situations of social discrimination

since 1911, when the Japanese immigrants brought to the California fields (80,000 arrived between 1898 and 1907), after the Chinese Exclusion Act of 1882, started to be substituted by Mexican Americans? Is it not strange that Steinbeck's 1939 "*Grapes of Wrath*", McWilliams "*Factories in the Fields*", or the 1966 media coverage of Joan Baez's march along Cesar Chavez's (and the United Farm Workers union) did so easily fall into oblivion?



Whatever the reasons might be, and notwithstanding those historical precedents (Steinberg) the idea that farm workers are faced with environmental injustice because of the land they are left to farm, the lack of technical assistance, and the marketing/sales of products is still relatively new.

The fastest growing and most profitable segment of California's farm economy is the cultivation of high-value specialty crops. Unfortunately, it has also become the one most dependent of cheap labor, which is in many cases the use of illegal immigrants who will work endless hours for low wages just to make enough money to support themselves and their family. Illegal immigrants widely reviled and often depicted as welfare cheats, are in effect subsidizing the most important sector of the California economy (Schlosser).

Due to the small number of books and literature available about farm workers environmental injustice is not used as a policy process to prevent the fact that thousands of Latino farm workers are being taken advantage of and given the lowest quality and most contaminated land available to manage. Almost all of the literature available is focused on environmental justice associated with communities near brown fields, hazardous waste facilities, and air toxics exposures.

The issue of environmental justice among farm workers is not only associated with pesticide exposure (Gauna, Yang Environmental Reg 2002), even though heavy pesticide exposure incidences were some of the first environmental justice cases looked at among Hispanic workers. Pesticide exposure happens because of two primary reasons, lack of adequate housing facilities where to wash the exposed skin and clothing, which prolongs the absorption time, and overhead pesticide drift since housing is located nears the fields, as well as runoff storage in cesspools (Labrash). Other public health diseases, mainly waterborne, are also typical which combined with the lack of medical insurance and the physical distances from clinics (the closing of the main regional hospital in Salinas was decided by referendum in 2003) creates a population of "medically undeserved" (Labrash).

The particular incidence of cancer rates in Hispanic farm workers (a recent study by the Cancer Registry Institute of California, conducted in 140,000 United Farm Workers of

American union, found that, compared to general Hispanic population the farm workers are on average 60% more likely to get leukemia or cervical, uterine, stomach cancers) is an issue of public concern since long time ago, perhaps triggered by the recurrent lack of explanation to the McFarland statistics (the California Hispanic based small town whose ratio of unexplained numbers of cancers has tragically become world famous). Do you think that the lack of scientific explanation should amount to lack of action?

These public health (environmental health) issues should not lead to forget that there are other five main issues of environmental injustice in the Elkhorn Slough watershed are: permits, marketing, land quality, nitrate leaching, and living conditions.

Scholars are slowly beginning to focus and conduct research on environmental justice and how it pertains to illegal aliens. In 1965, the US Congress changed the immigration law, resulting in skyrocketing immigration numbers. The national farm worker population has become increasingly Latino and Mexican during the past decade. In 1998, 81% of all migrant and seasonal farm workers in the United States were foreign-born, and 95% of those were born in Mexico.

Focusing on the facts of the Case Study, clearly, one of the biggest debates concerning environmental justice among Latino farm workers is the issue of whether or not **illegal immigrants** have rights. While the majority of farm workers in the U.S. are citizens or legal residents, in 1994-1995 the National Agricultural Workers Survey found that 37% of the farm workers in the U.S. were undocumented. These undocumented workers are highly vulnerable to environmental injustice and denial of their rights because of the constant threat of deportation. The legislation history regarding farm workers' rights reflects a legacy of racism and discrimination against people of color and immigrants.

There are two different views regarding illegal farm workers. First, the conservatives, seemingly interested in catering to corporate demands for cheap labor, push for huge immigration numbers while downplaying the legality of the workers. Second, the liberals believe they are the champions of the underdog and promote interests of illegal aliens as if legal status were irrelevant.

Jeff Chang, an environmental justice activist believes that California's Proposition 187 (Appendix 2), the anti-immigration ruling, was a step in the wrong direction and a backlash to the environmental justice movement in the 1990's. In California, a grassroots group named Save Our State (SOS) began to promote the now infamous Proposition 187, which passed with overwhelming support in 1994. The ballot initiative eliminated most state-provided benefits for illegal immigrants, including non-emergency healthcare and school education. It gave great impulse to Governor Pete Wilson's re-election. Although the courts declared most of its content unconstitutional, it set the pace for political anti-immigration legislation in other States and at the Federal level (Jacoby, Nicole).

After the passing of Proposition 187 in 1994, environmental justice activists found themselves fighting environmental activists over immigration issues. In 1998, population control advocates forced a vote among the half-million members of the Sierra Club on whether the Club should support restrictions on immigration. Environmental justice activists referred to it as the push as "the Greening of Hate." This attempt to scapegoat immigrants in the name of environmental protection was opposed in the end by Sierra Club paid staff, the Board of Directors, and many grassroots activists in the Club, who credited the Political Ecology Group (PEG) and its ongoing Immigration and the Environment Campaign for having provided both the political context and the direction for their success. Since 1968 Paul Erlich's *The Population Bomb* ideas about the connection between population numbers and environmental degradation have slowly, but steadily, increased in popularity. During the early 90s a growing number of racist organizations, many with environmental sounding names and white supremacist connections, were "sounding the alarm about population growth-in particular the number of immigrants-as the chief threat to the environment." (Melanie Okamoto). One such group, the Federation for American Immigration Reform (FAIR), was a leader in the campaign for Proposition 187. Their founding president, John Tanton, led the anti-bilingual group, US English, and specifically targeted the Sierra Club for the anti-immigrant message. As he put it, "*The Sierra Club may not want to touch the immigration issue, but the immigration issue is going to touch the Sierra Club.*" Another group, the Carrying Capacity Network (CCN) sponsored the grossly inaccurate and now discredited Huddle study on the costs of immigration which was used to rationalize California's Proposition 187. A third group, Population-Environment

Balance (PEB), sent out a mass mailing in January of 1998 urging readers to lobby the Sierra Club, and even providing instructions on how to join the Club in order to pack the vote for the anti-immigrant position. Prior to the election a new group formed within the Sierra Club calling themselves Sierrans for US Population Stabilization (SUSPS) sent out a mass mailing supporting the anti-immigrant initiative to the entire Sierra Club membership. The efforts of the started to have some influence within the environmental movement. Yet most mainstream environmental organizations did not buy the anti-immigrant argument. "*Out of hundreds of environmental organizations lobbied by these groups,*" says Brad Erickson, coordinator of the Political Ecology Group, "*only the Wilderness Society has officially signed on to the anti-immigrant position.*" In any case, after heavy environmental justice reaction, the Club eventually voted down the anti-immigrant referendum by a 60%-40% margin. So the Club members voted against taking a position that immigration is a threat to the environment, or, as Brad Erickson and China Brotsky put it, "*Scapegoating immigrants is wrong. Blaming immigrants for our problems is mean-spirited*", but not before some progressive members of the board and staff resigned in disgust.

More recently, in April 2004 a similar attempt to dominate the Sierra Club took place. For the second time in less than a decade anti-immigration advocates launched a campaign to take over the nation's oldest environmental organization by asking for the election as members of the Board of anti-immigrant candidates. Since as it is typical of organizational governance elections, most eligible voters don't bother to cast a ballot, the situation before the election became very tense. Three of the candidates were being supported by a group called SUSPS (which has variously stood for Support U.S. Population Stabilization and Sierrans for U.S. Population Stabilization). On the other side a self-called "volunteer network of concerned Sierra Club members", the Groundswell Sierra, fought back. Even Robert Redford made a public appeal to reject the takeover, a rejection that was ultimately successful in April 21st 2004.

This case represents the liberal side to the legality of migrant workers. On the opposite side, there is a huge push to end the immigration movement. Author Fred Elbel believes the United States needs to put an end to the overpopulation of the country by stopping immigration. This is a huge debate among scholars right now. There is also the question of if we stopped immigration, which would do the jobs that many of the

migrant workers are doing? In many cases, these are jobs that the average American would never even think about doing, but America still wants to be viewed as a major agricultural country.

Many politicians are in favor of immigration and the rights of illegal aliens. Once an illegal worker enters the United States, he/she can then apply for a working visa and later citizenship. To politicians, the ethnic vote could win them the next election. So in the case of many politicians and liberal leaders, environmental justice does apply to all people in the United States, whether legal or illegal.

For decades, the US agriculture industry has used its economic and political power to keep farm workers isolated, unorganized and impoverished. Industry associations have convinced lawmakers to exclude farm workers from federal and state labor legislation, and has pressured for weak or nonexistent enforcement of the limited legal rights afforded farm workers (Global Exchange Report on Immigrant Farm Workers Rights).

So why is there still little talk about environmental justice for rural farms and farm workers? This is what all grassroots environmental justice organizations in the Central Coast of California are trying to get across to the California policy makers. Still, in most cases, environmental justice focuses solely on hazardous waste sites, incinerators, clean water, clean air, and marine protection. Most scholars will argue that the reason why agriculture related issues are not heavily talked about when discussing environmental justice is due to the geographic isolation of most farming communities. Currently, most environmental justice cases are focusing in or just outside large cities. Most farms are located far from the city and the negative effects are overlooked too often. Slowly, environmental justice is spreading to more rural communities

A different debate is whether the increase of Hispanics per se will change what some world renown intellectuals have categorized as the virtues of anglo-saxon culture (Huntington). This position, a follow-up and sort of low key clash of civilizations has been criticized as disguised racism. Do you think that the population dynamics statistics and the way in which Hispanic minority culture is gaining terrain in the US is a sort of trail towards the confrontation of Hispanics with the rest of the dominant US culture that should be prevented by some sort of public policy?

Another issue that is being focused on more in regards to environmental justice is the **housing conditions** of migrant farmers. Over three-fifths of farm worker households live in poverty, earning less than \$10,000 annually. This is an increase from 1990 when only half were living in poverty. These poor housing conditions are directly related to many negative health issues. Human exposure to toxins and poor air quality is an environmental problem and a pressing environmental justice issue. Almost all scholars that are part of the environmental justice movement agree that poor housing conditions are associated with low-income minority communities and is a top concern among environmental justice. Sean Riley feels that effective programs to identify and address hazards in housing can directly promote environmental justice.



Figure 3 Both photos show the poor housing conditions for many farmworkers

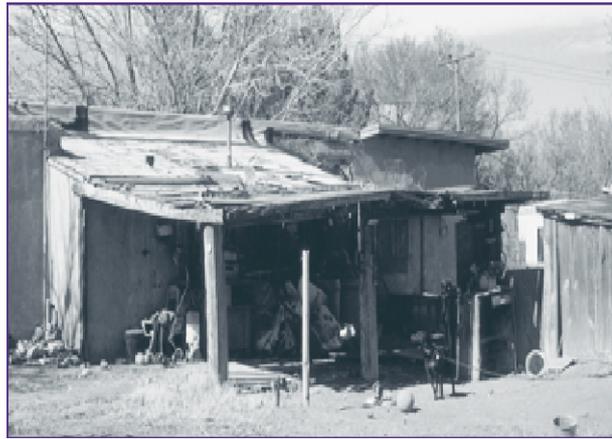


There are many other direct and indirect outcomes to substandard and poor housing conditions. For children, they are more susceptible to disease and illness. Poor living conditions also can lead to poor education and lack of motivation. Protecting farm workers from these conditions can improve community pride, healthier people, better schools, and a safer environment.

Eric Schlosser spent a full season doing research in the Monterey County before publishing his book. He focuses on the environmental injustice related to the housing of the farm workers. One of the main problems he found was that the Monterey County has some of the highest housing costs in the United States. He states, "*Watsonville (home of the Elkhorn Slough watershed) and Salinas have more than doubled in land devoted to strawberries and the tonnage has nearly quadrupled. But the huge influx of migrant workers required to pick these berries has been forced to compete for a supply of low-income housing that's been inadequate for decades.*" There are a few labor camps still around, but they are very run down and in most cases only for males. Schlosser also remarks about the labor camp barracks: "*For \$80 a week, a price far too high for most migrants, you get a bed and two meals a day. I have seen nicer horse barns.*" This is clearly a case of environmental injustice.

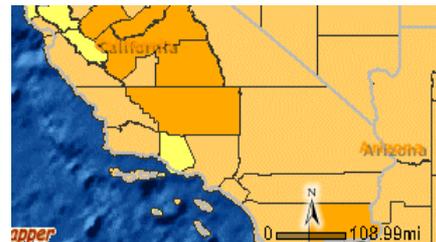
Latino farmers in and around Elkhorn Slough will pay \$100-\$200 a month to sleep in a garage with anywhere from four to ten people. A recent survey of a nearby town, Soledad, found 1,500 people living in garages (roughly 1/8th of the towns population). New migrants workers who don't know the ropes yet, will pay to sleep in parked cars, live in the woods, or even live in nearby caves.

The living conditions of these farmers do not differ much from those of the traditional settlements in the US side along the US-Mexico border. The conditions and problems of the "colonias" of Texas (Williams) or of Southern California (Labrash) is a well studied phenomenon. Is it the temporal and seasonal nature of the individual use of premises in those settlements (either because the farmers are seasonal workers who return to Mexico or because, if they stay, they perceive those conditions merely as a transition phase toward the better paid jobs in cities) so essential to the problem that no remedies can be provided? What policies could be adopted based on this fact?



Jessica Labrash: Colonia:

- “A residential development characterized by substandard living conditions”
- Unincorporated communities along the US/Mexico border (www.ruralhome.org)



Location of California’s “Colonias” (Labrash):

Three Border counties: San Diego, Imperial, Riverside

Central Valley counties: Fresno, Tulare, Kern

Coastal counties: Monterey

Due to the fact that Mexican immigrants have been coming to California in large numbers since the 1970’s, many are now at a point in their life where they want to make the shift from farm worker/laborer to farm owner. But since many farm workers know that it is almost impossible to buy a good piece of land and be part of the farming community (which is run by predominantly Anglo farm owners), they become scared and continue to work as a laborer.

Should all of these settlements be part of a broader interstate federal program or is environmental justice better achieved through action at the state or local level?

Access to credit is also related with environmental justice. Many Latino farm communities have much less access to credit than the rest of the population. Almost all farmers, regardless of race and color, are in dire financial straits. Once a farmer goes in debt, he/she need to take out a loan the following year to pay that debt and the new expenses for the next season. In most cases it is a continuous and endless vicious cycle. The illegal, or rather the informal, nature of these settlements, outside of the rationalization of zoning laws prevents their use as collaterals for credits. The USDA home loans, which provided affordable loans to applicants from the lowest income brackets, created to meet the special needs of the rural communities, have been substituted in 2002 for sweat equity self-help programs of the federal Department of Housing and Urban Development (HUD), a measure that has been criticized as counterproductive by the Housing Assistance Council (Labrash) because the real state market simply does not provide enough rural renting housing (HAC 1998). Are there any micro-credit policies that could solution these problems? Can Community Building Development Block Grants given to non profit organizations for the purpose of enhancing housing availability, opportunity and infrastructure in colonias function? Would action at the state level (the Joe Serna Jr, Farmworker Housing Grant Program and CalHome program Self-Help Housing Technical Assistance allocation, a sweat equity programs, or the Code Enforcement Grant Program (CEGP) that covers capital costs incurred in implementing community-oriented code enforcement for the preservation of existing housing...) be more effective?

For loans, a person needs to have a long history of good credit and references. In many cases, Latino farm workers have never had a credit card or paid bills that would allow them to receive good credit. They are being deprived of access to credit because of their cultural background and history.

Is the issue of **language** related with environmental justice? Dr. Mountjoy would say yes, and give direct examples to the low number of permits issued to Latino farmers for erosion control of the land in the Elkhorn Slough watershed. Others like the USDA and state agencies believe language has nothing to do with environmental justice. This is an

ongoing debate among the grassroots environmental justice movement. Daniel Mountjoy's study of the Elkhorn Slough watershed focused on the lack of technical assistance given to Spanish speaking workers and how it directly affected to quality of their land and produce. As stated in the main paper, in California, permits are needed before a farmer can perform any type of soil and erosion restoration. Due to the language barrier, and the lack of Spanish speaking workshops, no permits were issued to Spanish speaking farmers during Dr. Mountjoy's research.

This debate is heated and continuing as we speak in California. Many environmental NGO's are trying to get funding from state agencies to perform more workshops and training in Spanish to accommodate the large Spanish speaking population of farmers, but many agencies believe this is not an issue that needs to be funded. After Dr Mountjoy's critical analysis of the USDA policies and the publication of his thesis in a journal, he was quickly offered a job as an Area Resource Conservationist, where he focused on socioeconomic issues and the huge gap between Latinos and governmental programs. This was the first time the USDA acknowledged this environmental justice issue and hired someone to concentrate on the problem. Daniel has been an inspiration for many NGOs focusing on environmental justice, and now works to fund projects to help Latino farmers in the Elkhorn Slough watershed.

Some authors have expressly acknowledged language barriers in participation as a typical environmental justice issue. In *El Pueblo para Agua y Aire Limpio v. Chemical Waste Management* (No. C 91 2083 SBA, N.D. Cal. first amended complaint filed September 13, 1991) the plaintiff association, made up of migrant and seasonal workers who did not speak English as their first language, or only spoke Spanish, sued to prevent a proposed toxic waste incinerator from being added to an existing toxic waste disposal facility. The plaintiffs alleged that the county's failure to provide a requested interpreter during public meetings regarding the proposed facility, and the issuing of a final Environmental Impact Review in English only, violated the plaintiff's members rights to due process and equal protection. The court admitted the validity of the claim. Do language rights allow for this connectivity with process-oriented environmental justice claims?

Concerning **farming practices** ten conservation practices have been pre-approved by the regulatory agencies for inclusion in the Elkhorn Slough PIR. They were identified and included because they address both on-farm and environmental needs, have demonstrated effectiveness in reducing erosion and improving habitat, and result in net environmental benefit.

STABILIZATION	be controlled with upstream practices.
UNDERGROUND OUTLETS	A conduit installed beneath the surface of the ground to collect surface water and convey it to a suitable outlet.
WATER AND SEDIMENT CONTROL BASIN	An earthen embankment or a combination ridge and channel generally constructed across the slope and minor watercourses to form a sediment trap and water detention basin. This practice traps and removes sediment and sediment-attached substances from runoff.

CRITICAL AREA PLANTING	Planting vegetation such as trees, shrubs, vines, grasses, or legumes, on highly erodible or critically eroding areas (not including tree planting mainly for wood products), this practice is used to stabilize the soil, reduce damage from sediment and runoff to downstream areas, and improve wildlife habitat and visual resources.
DIVERSION	An earth channel constructed across the slope with a supporting ridge on the lower side. This practice will assist in the stabilization of a watershed, resulting in the reduction of sheet and rill erosion by reducing the length of slope. Sediment may also be reduced by the elimination of gullies. This may reduce the amount of sediment and related pollutants delivered to the surface waters.
FILTER STRIP	A strip or area of vegetation for removing sediment, organic matter, and other pollutants from runoff and wastewater. This practice is used on cropland at the lower edges of fields adjacent to streams, ponds, and lakes to remove sediment and other pollutants from runoff.
GRADE STABILIZATION STRUCTURE	A structure built into the creek bed or channel bottom to control the grade and prevent head cutting in natural or artificial channels. This practice refers to rock, concrete, or timber structures that do not control the rate of flow or water level in channels. This practice will not be used in fish-bearing streams.
GRASSED WATERWAY	A natural or constructed channel that is shaped or graded to required dimensions and velocities, and established to suitable vegetation for the stable conveyance of runoff. This practice may reduce the erosion in a concentrated flow area, such as a gully or in gullies and may result in the reduction of sediment and substances delivered to receiving waters.
SEDIMENT BASINS	Basins constructed to collect and store debris or sediment. Sediment basins will trap sediment, sediment associated materials, and other debris and prevent undesirable deposition on bottomlands and in waterways and streams. Basins are generally located at the base of agricultural lands adjacent to natural drainage or riparian areas.
STREAM BANK PROTECTION	Using vegetation or structures to stabilize and protect banks of streams, lakes, estuaries, or excavated channels against scour and erosion. The banks of streams and waterbodies are protected to reduce sediment loads causing downstream damage and pollution and to improve the stream for fish and wildlife habitat as well as protect adjacent land from erosion damage.
STREAM CHANNEL	This practice involves stabilizing the channel of a stream with suitable structures. And applies to stream channels undergoing damaging aggradation or degradation that cannot



One important way to reduce soil erosion is by aligning crop furrows across the slope rather than up and down it, as you see here on Triple M Ranch, ALBA's main training center.

Do you think that these practices, devised to facilitate access to the single permit program really address the environmental justice issues of the Elkhorn Slough watershed? Are there other ways to address environmental justice issues associating them with more social oriented type of farming practices?

There is a growing tendency to believe that once a farmer switches their practices to organic or sustainable, the issues of environmental injustice disappear. However, once a farm worker switches to organic farming (no fertilizer/no pesticides), he/she can still be affected by the injustice due to lack of technical assistance and poor soil quality. The fact that Latino farmers are continuously being forced to farm on poor land no matter if he/she uses pesticides shows that maybe this issue is more important and needs to be looked at more. For instance, in California, where a large number of farmers are turning to organic farming because of the economic benefits, the environmental justice issues regarding pesticide exposure should not be important. Still, the number of environmental justice cases among Latino farm workers is still high and ever present even once they have shifted to organic farming.

This even becomes more of a philosophical case when we begin talking about the environmental justice concerns among organic farmers, because, in principle, organic/sustainable farming is suppose to show no injustice and is suppose to be better for everyone. A farm is sustainable when it is economically viable, socially responsible, and ecologically manageable. All three of these aspects need to be met.

This raises up a more important question, Just because a farm is organic, is it also sustainable? Many scholars say that an organic farm must be sustainable to be considered really organic farming. Can one say that a farm is sustainable, if the farm workers are still treated poorly and/or left to farm on poor quality soil? As we all know, one of the three pillars of sustainability is social responsibility. These are some of the questions that have been debated all over the world lately, now that organic and sustainable farming is become more popular and mainstream. In many cases, organic farming is looked at as a solution to environmental health and environmental justice issues.

Appendix 2

Proposition 187 Text of Proposed Law

1994 - California

This initiative measure is submitted to the people in accordance with the provisions of Article II, Section 8 of the Constitution.

This initiative measure adds sections to various codes; therefore, new provisions proposed to be added are printed in {+ italic type +} to indicate that they are new.

PROPOSED LAW

SECTION 1. Findings and Declaration.

The People of California find and declare as follows:

That they have suffered and are suffering economic hardship caused by the presence of illegal aliens in this state.

That they have suffered and are suffering personal injury and damage caused by the criminal conduct of illegal aliens in this state.

That they have a right to the protection of their government from any person or persons entering this country unlawfully.

Therefore, the People of California declare their intention to provide for cooperation between their agencies of state and local government with the federal government, and to establish a system of required notification by and between such agencies to prevent illegal aliens in the United States from receiving benefits or public services in the State of California.

SECTION 2. Manufacture, Distribution or Sale of False Citizenship or Resident Alien Documents: Crime and Punishment.

Section 113 is added to the Penal Code, to read:

{+ 113. Any person who manufactures, distributes or sells false documents to conceal the true citizenship or resident alien status of another person is guilty of a felony, and shall be punished by imprisonment in the state prison for five years or by a fine of seventy-five thousand dollars (\$75,000). +}

SECTION 3. Use of False Citizenship or Resident Alien Documents: Crime and Punishment.

Section 114 is added to the Penal Code, to read:

{+ 114. Any person who uses false documents to conceal his or her true citizenship or resident alien status is guilty of a felony, and shall be punished by imprisonment in the state prison for five years or by a fine of twenty-five thousand dollars (\$25,000). +}

SECTION 4. Law Enforcement Cooperation with INS.

Section 834b is added to the Penal Code, to read:

{+ 834b. (a) Every law enforcement agency in California shall fully cooperate with the United States Immigration and Naturalization Service regarding any person who is arrested if he or she is suspected of being present in the United States in violation of federal immigration laws. +}

{+ (b) With respect to any such person who is arrested, and suspected of being present in the United States in violation of federal immigration laws, every law enforcement agency shall do the following: +}

{+ (1) Attempt to verify the legal status of such person as a citizen of the United States, an alien lawfully admitted as a permanent resident, an alien lawfully admitted for a temporary period of time or as an alien who is present in the United States in violation of immigration laws. The verification process may include, but shall not be limited to, questioning the person regarding his or her date and place of birth, and entry into the United States, and demanding documentation to indicate his or her legal status. +}

{+ (2) Notify the person of his or her apparent status as an alien who is present in the United States in violation of federal immigration laws and inform him or her that, apart from any criminal justice proceedings, he or she must either obtain legal status or leave the United States. +}

{+ (3) Notify the Attorney General of California and the United States Immigration and Naturalization Service of the apparent illegal status and provide any additional information that may be requested by any other public entity. +}

{+ (c) Any legislative, administrative, or other action by a city, county, or other legally authorized local governmental entity with jurisdictional boundaries, or by a law enforcement agency, to prevent or limit the cooperation required by subdivision (a) is expressly prohibited. +}

SECTION 5. Exclusion of Illegal Aliens from Public Social Services.

Section 10001.5 is added to the Welfare and Institutions Code, to read:

{+ 10001.5. (a) In order to carry out the intention of the People of California that only citizens of the United States and aliens lawfully

admitted to the United States may receive the benefits of public social services and to ensure that all persons employed in the providing of those services shall diligently protect public funds from misuse, the provisions of this section are adopted. +}

{+ (b) A person shall not receive any public social services to which he or she may be otherwise entitled until the legal status of that person has been verified as one of the following: +}

{+ (1) A citizen of the United States. +}

{+ (2) An alien lawfully admitted as a permanent resident. +}

{+ (3) An alien lawfully admitted for a temporary period of time. +}

{+ (c) If any public entity in this state to whom a person has applied for public social services determines or reasonably suspects, based upon the information provided to it, that the person is an alien in the United States in violation of federal law, the following procedures shall be followed by the public entity: +}

{+ (1) The entity shall not provide the person with benefits or services. +}

{+ (2) The entity shall, in writing, notify the person of his or her apparent illegal immigration status, and that the person must either obtain legal status or leave the United States. +}

{+ (3) The entity shall also notify the State Director of Social Services, the Attorney General of California, and the United States Immigration and Naturalization Service of the apparent illegal status, and shall provide any additional information that may be requested by any other public entity. +}

SECTION 6. Exclusion of Illegal Aliens from Publicly Funded Health Care.

Chapter 1.3 (commencing with Section 130) is added to Part 1 of Division 1 of the Health and Safety Code, to read:

{+ Chapter 1.3. Publicly-Funded Health Care Services +}

{+ 130. (a) In order to carry out the intention of the People of California that, excepting emergency medical care as required by federal law, only citizens of the United States and aliens lawfully admitted to the United States may receive the benefits of publicly-funded health care, and to ensure that all persons employed in the providing of those services shall diligently protect public funds from misuse, the provisions of this section are adopted. +}

{+ (b) A person shall not receive any health care services from a publicly-funded health care facility, to which he or she is otherwise entitled until the legal status of that person has been verified as one of the following: +}

{+ (1) A citizen of the United States. +}

{+ (2) An alien lawfully admitted as a permanent resident. +}

{+ (3) An alien lawfully admitted for a temporary period of time. +}

{+ (c) If any publicly-funded health care facility in this state from whom a person seeks health care services, other than emergency medical care as required by federal law, determines or reasonably suspects, based upon the information provided to it, that the person is an alien in the United States in violation of federal law, the following procedures shall be followed by the facility: +}

{+ (1) The facility shall not provide the person with services. +}

{+ (2) The facility shall, in writing, notify the person of his or her apparent illegal immigration status, and that the person must either obtain legal status or leave the United States. +}

{+ (3) The facility shall also notify the State Director of Health Services, the Attorney General of California, and the United States Immigration and Naturalization Service of the apparent illegal status, and shall provide any additional information that may be requested by any other public entity. +}

{+ (d) For purposes of this section "publicly-funded health care facility" shall be defined as specified in Sections 1200 and 1250 of this code as of January 1, 1993. +}

SECTION 7. Exclusion of Illegal Aliens from Public Elementary and Secondary Schools.

Section 48215 is added to the Education Code, to read:

{+ 48215. (a) No public elementary or secondary school shall admit, or permit the attendance of, any child who is not a citizen of the United States, an alien lawfully admitted as a permanent resident, or a person who is otherwise authorized under federal law to be present in the United States. +}

{+ (b) Commencing January 1, 1995, each school district shall verify the legal status of each child enrolling in the school district for the first time in order to ensure the enrollment or attendance only of citizens, aliens lawfully admitted as permanent residents, or persons who are otherwise authorized to be present in the United States. +}

{+ (c) By January 1, 1996, each school district shall have verified the legal status of each child already enrolled and in attendance in the school district in order to ensure the enrollment or attendance only of citizens, aliens lawfully admitted as permanent residents, or persons who are otherwise authorized under federal law to be present in the United States. +}

{+ (d) By January 1, 1996, each school district shall also have verified the legal status of each parent or guardian of each child referred to in subdivisions (b) and (c), to determine whether such parent or guardian is one of the following: +}

{+ (1) A citizen of the United States. +}

{+ (2) An alien lawfully admitted as a permanent resident. +}

{+ (3) An alien admitted lawfully for a temporary period of time. +}

{+ (e) Each school district shall provide information to the State Superintendent of Public Instruction, the Attorney General of California, and the United States Immigration and Naturalization Service regarding any enrollee or pupil, or parent or guardian, attending a public elementary or secondary school in the school district determined or reasonably suspected to be in violation of federal immigration laws within forty-five days after becoming aware of an apparent violation. The notice shall also be provided to the parent or legal guardian of the enrollee or pupil, and shall state that an existing pupil may not continue to attend the school after ninety calendar days from the date of the notice, unless legal status is established. +}

{+ (f) For each child who cannot establish legal status in the United States, each school district shall continue to provide education for a period of ninety days from the date of the notice. Such ninety day period shall be utilized to accomplish an orderly transition to a school in the child's country of origin. Each school district shall fully cooperate in this transition effort to ensure that the educational needs of the child are best served for that period of time. +}

SECTION 8. Exclusion of Illegal Aliens from Public Postsecondary Educational Institutions.

Section 66010.8 is added to the Education Code, to read:

{+ 66010.8. (a) No public institution of postsecondary education shall admit, enroll, or permit the attendance of any person who is not a citizen of the United States, an alien lawfully admitted as a permanent resident in the United States, or a person who is otherwise authorized under federal law to be present in the United States. +}

{+ (b) Commencing with the first term or semester that begins after January 1, 1995, and at the commencement of each term or semester thereafter, each public postsecondary educational institution shall verify the status of each person enrolled or in attendance at that institution in order to ensure the enrollment or attendance only of United States citizens, aliens lawfully admitted as permanent residents in the United States, and persons who are otherwise authorized under federal law to be present in the United States. +}

{+ (c) No later than 45 days after the admissions officer of a public postsecondary educational institution becomes aware of the application, enrollment, or attendance of a person determined to be, or who is under reasonable suspicion of being, in the United States in violation of federal immigration laws, that officer shall provide that information to the State Superintendent of Public Instruction, the Attorney General of California, and the United States Immigration and Naturalization Service. The information shall also be provided to the applicant, enrollee, or person admitted. +}

SECTION 9. Attorney General Cooperation with the INS.

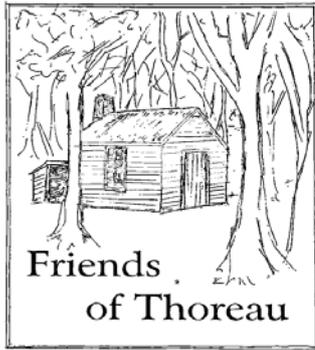
Section 53069.65 is added to the Government Code, to read:

{+ 53069.65. Whenever the state or a city, or a county, or any other legally authorized local governmental entity with jurisdictional boundaries reports the presence of a person who is suspected of being present in the United States in violation of federal immigration laws to the Attorney General of California, that report shall be transmitted to the United States Immigration and Naturalization Service. The Attorney General shall be responsible for maintaining on-going and accurate records of such reports, and shall provide any additional information that may be requested by any other government entity. +}

SECTION 10. Amendment and Severability.

The statutory provisions contained in this measure may not be amended by the Legislature except to further its purposes by statute passed in each house by rollcall vote entered in the journal, two-thirds of the membership concurring, or by a statute that becomes effective only when approved by the voters.

In the event that any portion of this act or the application thereof to any person or circumstance is held invalid, that invalidity shall not affect any other provision or application of the act, which can be given effect without the invalid provision or application, and to that end the provisions of this act are severable.



Farming in the Elkhorn Slough Watershed, Environmental Justice & the Hispanic Community

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[Main Page](#)

[Scholars Debate](#)

[Links to Online Resources](#)

[Illustration Credits](#)

[Works Cited and Additional](#)

Guiding Students' Discussion

After reading the opening text about the environmental justice concerns in the Elkhorn Slough watershed, in the Central Coast of California, the students should get a more enriched understanding of the true magnitude that Latinos farmers are currently facing on a day to day basis and the current environmental justice inequalities that Hispanic farmers face, and to look at ways to make changes politically and socially.

Before we begin to fully understand environmental justice on a political level, we first need to look at how environmental justice became a political issue on the national level. President Clinton issued the Executive Order 12898 after response of many advocacy

and grassroots groups demanding a federal response to all the environmental injustice happening in the United States. This Executive Order required all federal agencies to make environmental justice part of their mission. Appendix 1 of the main document shows the complete version of the Executive Order.

Students should review the Executive Order and then answer the following questions:

- What role has the US government played in this environmental justice problem?
- What is the federal authority in charge of promoting environmental justice in the United States?
- Furthermore, what is the purpose of Executive Order 12898 and whom does it affect?

EPA's action is organized mainly around five lines:

1. The provision of independent advice, consultation, and recommendations to the Administrator of EPA on matters related to environmental justice by the National Environmental Justice Advisory Council (NEJAC);
2. The submission of an Environmental Justice Action Plan detailing the efforts to integrate environmental justice into their policies, programs, and activities, with an annual follow up progress report, a Plan which, starting in 2003, has to be designed and implemented at the regional level by each of the EPA's Regional Offices;
3. The coordination of federal initiatives and resources to help environmentally and economically distressed communities, which is achieved through a federal Interagency Working Group on Environmental Justice established by Executive Order 12898 itself (12 federal agencies participate);
4. Grants programs designed to address environmental justice concerns and issues and implemented through EPA's Office of Environmental Justice.
5. Sponsoring by the EPA's Office of Environmental Justice of a Community Intern Program through a cooperative agreement with the Environmental Careers Organization.



EPA,s approach to environmental justice

Let us look now into one of the programs that the EPA has put in place. It is the small grants program. The web pages of the EPA contain the list of awards between 1994 and 2003. The student should navigate through them and identify which of them target Hispanic populations and in what setting.

Next, let us look at a quote from Dr. Daniel Mountjoy’s 1996 paper on ethnic diversity in the Elkhorn Slough watershed and try to learn about the different modes of policy-making. It reads,

“The social and cultural origins of resource management variability are well illustrated in the shared behavior of ethnic group members. Within the field of cultural ecology, ethnic management systems are viewed as adaptive strategies made by groups of rational decision makers in response to their shared local conditions. Attempts at modifying one “constraining” variable, such as credit or information, rarely result in a sustained modification of the overall farm management system. Rather than trying to modify these historically developed and culturally reinforced systems, policy makers should learn to work more effectively with sub sectors of the farm population to promote

improved soil management systems appropriate to the interrelated socioeconomic and cultural conditions.”

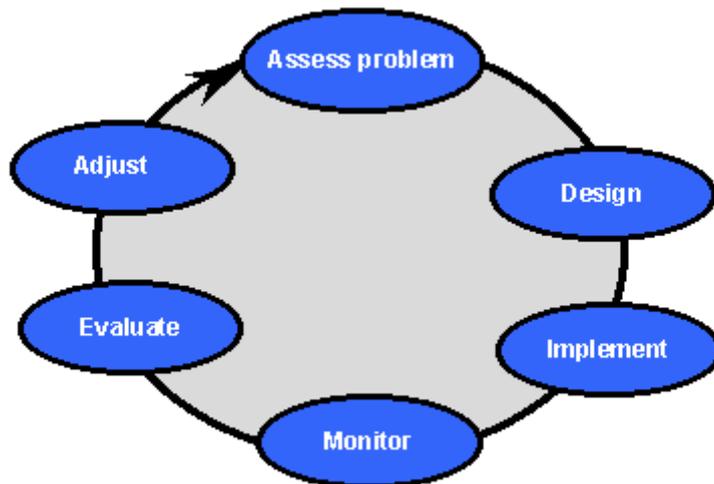


Figure 4 Shows the adaptive management concept that benefits all farmers

Further discussion about how policy makers can work more effectively with the sub sectors (Hispanic) to promote soil conservation should generate excellent examples on ways to raise the number of permits given to Latinos in the Elkhorn Slough. As we know, when Daniel Mountjoy’s study was conducted, no federal and state permits were issued to Latinos. Clearly this is a case of environmental injustice. Environmental injustice is the idea that environmental laws, regulations, and policies have not been applied fairly across all segments of the population.

These questions set forth should help students discuss why it is important to take an activist role in preventing environmental injustice, and what the most effective political strategy is to put into place future policies. Lead the students in evaluating the benefits of a top-down or bottom up approach to policy making. Is a bottom-up approach always the best option for grassroots organizations?

Top-down policy making starts with the interests and preferences of the elites. In many cases, top-down policy implies the absence of social change. The chain of command for top-down policy making starts with the national elite, then goes to the interest groups

process, the policy formation process, the candidate selection process, and the opinion making process. From there, the cycle moves to the government, where a policy may go through the congress, President, Administration, and the Judiciary. Finally, there is a policy outcome.

In a bottom-up policy process, the idea and need begins with the citizens and the voters. From there it moves to interest groups, political parties, candidate elections, and the mass media. Next, it goes to the government for implementation and evaluation, formulation, agenda setting, and problem identification. Finally, we see the policy outcome. A bottom-up model assumes that any problem can be identified by individuals or groups and brought into the public process for debate. Citizens can define their own interests, organize themselves, and persuade others to support their cause, gain access to government officials, influence decision-making, and watch over the implementation of government policies and program (Dye).

Even though many Americans are skeptical of the bottom-up process, it is one of the most effective way for grassroots organizations and interest groups to change public policy. Nevertheless, it takes a lot of civil society coordination and the leadership to make it work. In California, a small number of political alliances are forming to make changes associated with the environment and environmental justice concerns. The largest umbrella organization focusing on Latino rights and environmental justice through legislative action is The Planning and Conservation League (PCL). It is located in Sacramento, and works with over 120 environmental NGOs. It is California's only state wide environmental coalition.

In the case of the Elkhorn Slough watershed, and its numerous environmental justice cases, the best way to change environmental policy is to become allies with as many organizations as possible with the same mission. Getting the support of the PCL means they will continuously lobby and talk with state officials to make the appropriate policy changes. The PCL has an incredible reputation of supporting environmental justice cases and working effectively to make policy changes on the state level.

Students should be guided in coming up with examples on how to lobby state legislation to make changes in environmental justice policy. The examples should focus on the

five main environmental justice concerns in the Elkhorn Slough watershed (permits, marketing, land quality, nitrate leaching, and living conditions). Also discuss which problems would be easiest to focus on when making policy changes.

Lead the students in discussing other aspects of environmental justice affecting Hispanic population. Look into brown field sites and high ozone areas. This will give a well-rounded view and understanding to all of the disparities that Hispanic Communities are facing in the United States. Look at the numbers below and discuss what that means for environmental justice.

The following percentages, provided by Roberto Suro, of total U.S. white, black, and Hispanic populations are living in areas polluted by:

Dust, soot and other particles

White 15%

Black 17%

Hispanic 34%

Carbon Monoxide

White 34%

Black 46%

Hispanic 57%

Ozone

White 53%

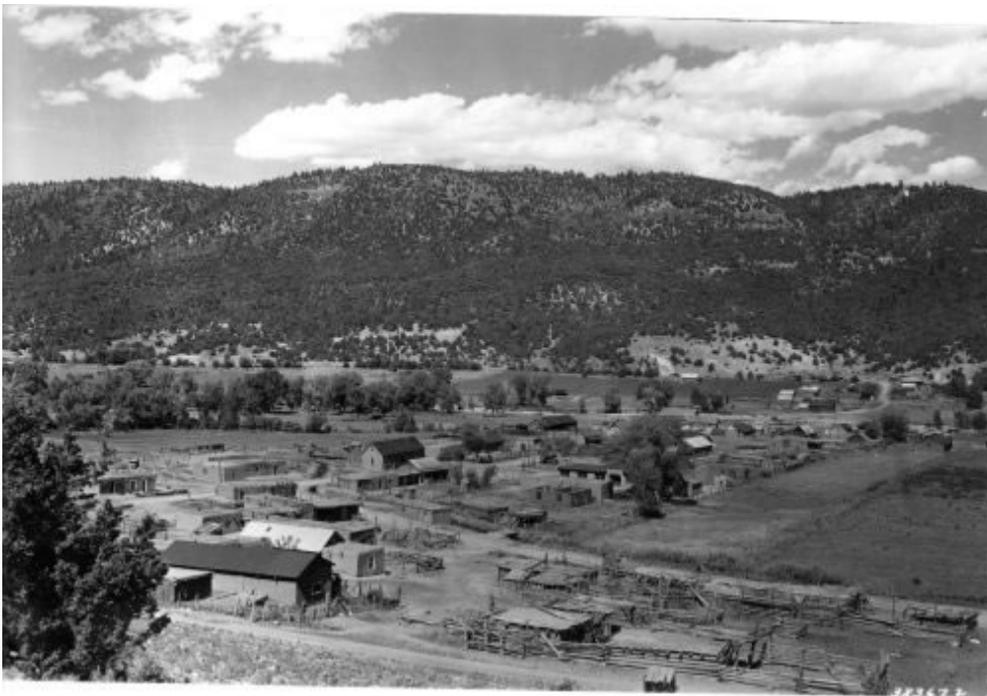
Black 62%

Hispanic 71%

Where do these figures lead to? Make the students surf the web trying to identify other environmental justice issue areas where Hispanic minorities might be affected. If they have difficulties in identifying them, supply them with a study of how geographical information system (GIS) techniques might be helpful in identifying disproportionate impact in Hispanic minorities (Logan airport area, attached as appendix 3). If it proves that the population mostly affected by the noise are Hispanics...can an environmental

justice issue be brought to the arena of political and administrative action? Is noise an environmental issue important enough to trigger environmental justice concerns?

Finally, lead the students to even broader aspects of environmental justice in the same Hispanic cultural background of the case study. Some cases of natural resources management (forestry, for example) have been included recently in the agenda of environmental justice (Mutz, Gary, & Kenney). A very well documented case is the community forestry management of Vallecitos in New Mexico. The National Forestry service could not find, after years of application (and failure) of the best possible practices of forestry management, a scheme that could satisfy the legitimate claims of the local communities (mostly of pre-Union, pre 1848, Mexican origin). Only when co-management was attempted things started to go better (Carey, Wilmsen). Can environmental justice make the leap from environmental justice (siting of noxious facilities, pollution by pesticides...) to natural resources management? Doesn't the concept and strength of environmental justice run the risk of becoming useless because of overinclusiveness of any issue having some minimum social impact in a local community?



1939—The Hispanic town of Vallecitos, New Mexico. Like many small communities on the watersheds of the National Forests, Vallecitos was dependent on the forest for irrigation water, fuel supply and posts. Photo by W.H.Shaffer FS #383672

Some authors have defended the idea that it should be “internationalized”, that the notion is valid in many areas where poor communities affected by degraded environmental conditions are located (Faircloth). Do you think that environmental justice is “exportable” to Europe or to Latin America? Is it based mostly in civil rights/common law traditions familiar to anglosaxon cultures but alien to continental law systems such as continental European or Latin American?

Appendix 3

Javier Aguilar and Joanne Haracz

Environmental Justice: Visualization and Analyses with GIS to Facilitate Informed Decisions

DMJM+HARRIS is a national engineering firm that also provides planning and environmental services to a diverse array of public and private clients. Geographic Information Systems (GIS) is used as a planning tool to obtain existing conditions and impact analyses used in environmental assessments, impact statements, transportation studies, community development evaluations, and various other documents, as well as a helpful tool for resource surveys and inventories. Although environmental assessments are comprised of many components, this paper focuses on environment justice. In the following, environmental justice is defined, general uses of GIS in planning are illustrated, and the implementation of GIS in Environment Justice analysis is detailed.

Environmental Justice

Analyses of project impacts on minority and low-income communities are generally conducted to adhere to federal Executive Order (EO) 12898, Federal Action to Address Environmental Justice in Minority Population, the National Environmental Policy Act (NEPA), and the Department of Transportation Order to Address Environmental Justice Minority Population and Low-Income Populations (Final US DOT Order). These federal orders amplify on Title VI of the Civil Rights Act of 1964, by providing protections on the basis of income as well as race.

The Clinton Administration's EO 12899, issued in 1994 requires "Each Federal agency [to] 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 population and low-income population..." The Department of Transportation (DOT) published the Final US Order in 1997, setting forth a process by which DOT and its operating administration will integrate the goals of EO 12898 with its existing regulation and guidance. The Final US DOT Order defines key terms, and provides guidance for identifying and addressing disproportionately high adverse impacts to low-income and minority populations. Additional directive for implementing EO 12898 within the context of the NEPA process are provided by the Council on Environmental Quality (CEQ) in Environmental Justice Guidance under the National Environmental Policy Act.

These federal orders require considering social, economic, and environmental factors in the evaluation of proposed project actions. Therefore, direct and indirect impacts on minority and low-income populations are to be evaluated with the proposed action

alternatives. These communities should have meaningful opportunities to engage in the development project's public process. In order to better understand the potential community impacts of a proposed action, impacts, appropriate socioeconomic data should be gathered. If the proposed action should have any adverse impacts, they should be minimized or mitigated. In addition, these protected communities should be addressed in terms of benefits received and impacts imposed in an equal basis to the boarder non-minority and non-low-income communities.

Defining Environmental Justices Communities & High and Disproportionate Adverse Impacts

I. Minority Persons

A minority person is defined as an individual of Black (not of Hispanic origin), Hispanic, Asian, Native American and Other origins. According to the Final US DOT Order, a minority population means any readily identifiable groups of minority persons that live in geographic proximity. CEQ guidelines state that minority population should be identified where either (a) the minority population of the affected area exceeds fifty percent, (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. Information on race and ethnicity could be analyzed down to the Census Block level utilizing the U.S. Census Population and Housing data. Census Block level data are the most detailed level of population data made available by the US Bureau of Census. In recent months, the US Census Bureau has released Census 2000 data on race and ethnicity to the down block level .

II. Low-Income Persons

The Final US DOT Order defines low-income persons as those whose "median household" income is below the United States Department of Health and Humans Services poverty guidelines." CEQ Guidelines uses the Bureau of the Census definition that identifies low-income populations with the annual statistical poverty thresholds. This federal definition of poverty level varies by the number of related children under 18 years and family size. Average poverty thresholds in 1990 ranged from \$6,652 for one person, to \$26,280 for households with nine or more family members. Environmental justice analyses utilize U.S Census Population and Housing data. Although some Census 2000 data have been released, income data will not be available until 2002. Hence, 1990 Census income data or estimated derived from them are the data sets currently used for low-income population analysis.

III. High and Disproportionate Adverse Impacts

Adverse impacts to minority and/or low-income persons are considered "high and disproportionate" if: (a) the adverse impact is predominantly borne by a minority population and/or a low-income population is more severe or greater in magnitude than the adverse impact that will be imposed by the non-minority population and/or non-low-income persons. The Final US DOT Order directs government agencies to determine disproportionate impact, taking into account mitigation, enhancement measures and all off-setting benefits to the affected populations, as well as the design, comparative

impacts and the relevant number of similar existing system element in non-minority and non-low income areas.

Geographic Information Systems in Planning

GIS assists the analyses and visualization of a project development and its potential influences on its surrounding communities and their environments. The tool's mapping, data storage, querying, and quantitative analysis capabilities are based on linking a wide spectrum of data through a collection of layers that are geographically based. These data are a representation of things or events that exist and occur on or within the earth .

GIS provides a multi-facet approach to viewing data and solving complicated problems with comprehensive information from several sources. Insights produced from this information are helpful in all stages of a project: planning, alternative analyses, engineering, impacts assessment, mitigation, and facility management. These comprehensive insights facilitate collaboration among technical experts with diverse backgrounds (engineers, planners, architects and others) on a common complex problem, such as keeping a balance of aesthetics and functional requirements on design projects. Essentially, GIS takes data from different formats and sources to make comprehensive information about a location, so that informed decisions could be made or considered. It is a tool that enables project action professionals and laypersons including project area residents and decision makers to visualize existing conditions, analyze trends, and model alternatives and their impacts on the environment, economy, and surrounding population. With regards to the Environmental Justice, GIS provides an effective mechanism to map low-income and minority populations areas and assess project action impacts (beneficial and adverse), as well as compare these impacts to non-low-income and non-minority population areas.

Environmental Justice Analysis Using GIS

US Census Bureau socioeconomic data is utilized to conduct environmental justice evaluations at Census Block level, the most detailed geographic level of census data. To define minority population, the census category P 12, Hispanic Origin By Race, differentiates Hispanics from Whites, Blacks, Asians, Native Americans, and Others (for the 1990 Census). Aggregating Black, Hispanic, Asian, Native American, and Other categories creates the minority attribute. To define low-income, the census category P 127, Poverty Status in 1989 by Age of Householder gives households below poverty by summing subcategories 16 to 30. (for the 1990 Census). To determine if an area is a predominately minority and/or low-income, 50 percent needs to be minority and/or low-income or a percentage that is meaningfully greater than the minority and/or

low-income population percentage in the general population or other appropriate unit of geographic analysis, such as the city or county of the area being analyzed.

Census tabular information could be extracted from Census CDs or downloaded from the Census Bureau website. Census geographic boundaries, such as block and block group geographic files could be obtained from the GIS Data Depot, US Census Bureau or ESRI websites. A unique records field that is common to both data sets join the attribute tabular data to the census geographic data. In the geographic file, this field is usually called link or identification field. In the tabular data set, it is created by concatenating state FIP codes, to county, tract and block (or block groups) codes, respectively. This concatenated field should be created with a string data type to join the census tabular data to the census geographic file.

Although Census 2000 data are currently available, only minority population analyses could be conducted, since income data will not be released until 2002 . These data can be downloaded from the Census Bureau ftp site, which are readily available by state. Each data set contains data from the state level to the Census Block level. To define minority population use the PL2 category, Hispanic or Latino by Race from the PL 94-171 data set, which distinguishes Hispanics from Whites, Blacks, Asians, Native American, Other and Persons of Two or More Races. To create the minority population variable, the categories for Latino/Hispanic, Black,/African American , Native American, Asians, Native Hawaiians and Pacific Islanders, Other and Persons of Two or More Races are aggregated. The following section illustrates how Census 2000 data are used to conduct an analysis of the communities affected by aircraft noise from Logan International Airport, located in Boston, Massachusetts.

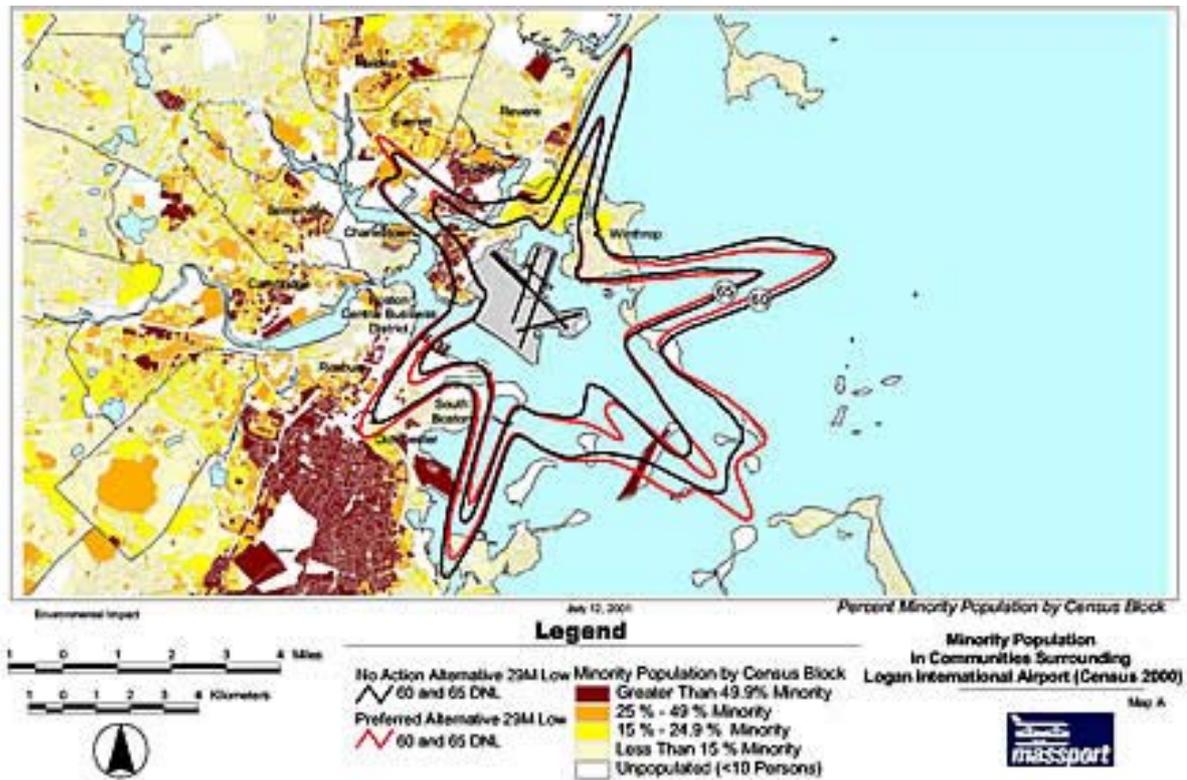
GIS Application in Environmental Justice

At the request of the Massachusetts Port Authority, US Census 2000 data were used for an Environmental Justice analysis of two airport alternatives, the 29 Million Low Fleet scenario for Alternative 1A (Preferred Alternative which includes a new uni-directional 5,000 foot runway) and Alternative 4 (No-Action Alternative) of the Logan Airside Improvements Planning Project. INM Noise Modeling analysis was conducted for the Preferred Alternative and No-Action Alternative to produce 65 and 60 dB DNL contours associated with each alternative . The noise contours were used with Census Block data to perform demographic analysis. GIS techniques were used to summarize and visualize demographic characteristics of the communities affected by aircraft noise, and estimate 2000 total and minority populations within the 65 and 60 dB DBL noise contours for the 29 Million Low Fleet the Preferred and No-Action Alternatives. The Environmental Justice analysis findings for the 29 Million Low Fleet scenarios for Alternative 1A (Preferred Alternative) and Alternative 4 (No-Action Alternative) utilize the 1990 and 2000 Census of Population demographics in the comparison of the scenarios.

Communities Adjacent to Logan International Airport

With regards to Logan International airport's surrounding cities, Boston, Chelsea, Revere and Winthrop, the total 2000 population affected by the 65dB DNL noise contour was 689,807, which represents approximately a 4 % increase over the 1990 population of 663,906. The minority population has also increased for these cities. In 1990, the minority population accounted for 38% of the total population (in the four cities) and 309,622 persons in 2000, representing 48% of total population.

Between 1990 and 2000, overall population also has grown for the communities within 60 dB DNL (Boston, Chelsea, Revere, Winthrop, and Everett), from 699,607 in 1990 to 727,844 in 2000, a 4% increase. In the same period, these communities' minority populations increased from 254,479 persons, 36 % of population in 1990 to 339,722, and 48% in 2000. East Boston is the community with the largest minority population, representing 50% of total persons in 2000. Hispanic/Latinos represent the largest minority group in East Boston, 39% of total persons. Map A illustrates the concentration of minority persons throughout the Boston-area. East Boston and Chelsea have the largest concentration of minority persons affected by aircraft noise.



Project Specific

The overall population within the 65 and 60 dB DNL noise contours for the No-Action Alternative (Alt 4) and Preferred Alternative increased from the 1990 census. These population increases were a reflection to the population increases in surrounding

communities (see Table 1 and 2). The 2000 census minority population affected by the 65 dB DNL noise contours for the No-Action and Preferred Alternative also increased, but these percentages were less than the 2000 benchmark minority population of Boston, Chelsea, Revere and Winthrop. Minority population affected by the 60 dB DNL for the 2000 census population also increased in population but were less compared to the 2000 benchmark minority population percentage of Boston, Chelsea, Revere, Winthrop and Everett (percentage). Therefore, there are no disproportionate impacts to the minority population for either No-Action or Preferred Alternatives. With regard to comparing the Preferred and No-Action Alternatives, total 2000 minority population within the 65 dB DNL the analyses show no relative difference in Alternative impacts between 1990 and 2000.

CONCLUSION

Environmental Justice analyses are required by federal orders to minimize adverse project impacts on potentially more vulnerable populations, as well as to foster equal benefits. Federal guidelines provide minimum requirements for Environmental Justice analysis. Local and regional jurisdictions define Environmental Justice criteria to address regional nuances and meet local needs. For example, the Boston Metropolitan Planning Organization convened an Ad Hoc Environmental Committee to define Environmental Justice, as well as set criteria and measures to address mobility issues of Environmental Justice community. Mobility criteria examine transit and highway mobility. Quality of life issues are considered that included noise pollution, air quality, and aesthetics. GIS provides planners with a powerful tool to obtain comprehensive information to analyze and visualize impacts and benefits between populations. These insights produce a better understanding of complex problems so that informed decisions are made. In the Environmental Justice analysis of Logan International Airport noise contours, GIS are used to analyze Census data and produce maps and tables that show no relative differences between the No-Action and Preferred Action Alternative impacts between 1990 and 2000. These analyses also illustrate the demographic change and population increases in communities between 1990 and 2000, which could be a starting point to access a community's evolving needs.

REFERENCES OR ACKNOWLEDGMENTS

Chou, Yue-Hong, Exploring Spatial Analysis in Geographic Information Systems, Onword Press, 1997.

Davis, Bruce, GIS A Visual Approach, Onword Press, 1996.

Mitchell, Andy, The ESRI Guide to GIS Analysis: Volume 1, Geographic Patterns & Relationships, Environmental Systems Research Institute, Inc, 1999.

Council on Environmental Quality Environmental Justice. Guidance Under the National Environmental Policy Act 1997.

U.S. DOT April 15, 1997 Final Order 5610.2, Federal Register Volume 62, no. 72.

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Farming in the Elkhorn Slough Watershed, Environmental Justice & the Hispanic Community

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[Main Page](#)
[Student Discussion](#)
[Scholars Debate](#)
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[Works Cited and Additional](#)

LINKS TO ONLINE RESOURCES

Sustainable Conservation

<http://www.suscon.org/pir/watersheds/elkhorn.asp>

Environmental Protection Agency

<http://www.epa.gov/compliance/environmentaljustice>

Elkhorn Slough Foundation

<http://www.elkhornslough.org>

Visit to the Elkhorn Slough Reserve

<http://www.pelicannetwork.net/elkhorn.slough.htm>

The Center for Justice, Tolerance, and Community

<http://cjtc.ucsc.edu/>

Cultural Studies Department at UCSC

<http://humwww.ucsc.edu/CultStudies/>

The National Estuarine Research Reserve System

<http://nerrs.noaa.gov/ElkhornSlough/History.html>

Barrios Unidos

<http://bu.giip.org/>

Mexico Solidarity Network

<http://www.mexicosolidarity.org/>

Planning & Conservation League

<http://www.pcl.org/>

2002 Cancer Registry study on cancer in Hispanic farm workers

<http://www.ufw.org/paper.htm>.

2000 Report of the EPA on McFarland Cancer Rates and its Causes

[http://yosemite.epa.gov/r9/sfund/fsheet.nsf/0/c5996e4f188251328825694d0058d622/\\$FILE/mcfarland_7_00.pdf](http://yosemite.epa.gov/r9/sfund/fsheet.nsf/0/c5996e4f188251328825694d0058d622/$FILE/mcfarland_7_00.pdf)

Mcfarland cancer clusters

<http://www.ccae.org/projects/cancelcluster.htm>

Pictures of McFarland Saffected Individuals)

<http://www.photowords.com/Toxic%20Nation,%20Kiley%20Price.htm>

Cancer Registry of California. Study on Latinos and Cancer (August 2002)

http://www.organicconsumers.org/Campaign/0828702_cancer.cfm

EPA's small grants program

http://www.epa.gov/compliance/environmentaljustice/grants/ej_smgrants.html

Partners in Restoration Elkhorn Slough program

<http://www.suscon.org/pir/watersheds/elkhorn.asp>

Other PIR programs in California

http://www.edf.org/documents/2953_CCInewsletterAugust2003.pdf

<http://strauscom.com/awqa/pkrepo03.htm>

ALBA

<http://www.albafarmers.org/Homepage.html>

Article on ALBA

http://www.caff.org/publications/f2f/03/F2F_2003_11.pdf

Organic Farming Training

http://www.eco-farm.org/sa/sa_strawberry.html

Water quality program

<http://www.carcd.org/wisp/monterey>

Site description of Elkhorn Slough Reserve

<http://inlet.geol.sc.edu/ELK/sitedescription.html#top>

WQPP

<http://www.mbnms.nos.noaa.gov/educate/newsletters/spring97/linknw2.html>

Pacific flyway

<http://www.birdnature.com/pacific.html>

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[Scholars Debate](#)
[Links to Online Resources](#)
[Works Cited and Additional](#)

ILLUSTRATION CREDITS

Description	Repository/ID information
Map of Elkhorn Slough strawberry fields	From the Permit coordination Program http://strauscom.com/awqa/pkrepo03.htm
Elkhorn Slough Map	Homepage: www.elkhornslough.org Elkhorn Slough Foundation
Water Saturation of strawberry fields	Picture from Jonathan Berkey
Adaptive Management Cycle	Homepage: http://www.for.gov.bc.ca/hfp/amhome/Amdefs.htm
Farmers meeting and farmers remediating pesticide drift	Brett Melone at Agriculture & Land Based Training Association
Pictures of Elkhorn Slough and sea otter in Elkhorn Slough	Enrique Alonso García
Picture of Vallecitos in 1939	W. H. Shaffer FS #383672
Picture of La Fresa Más Dulce	From The Ecological Farming Association
Picture of erosion control in strawberry fields	From the Elkhorn Slough Foundation http://www.elkhornslough.org/newsletter/news0310.htm

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[Main Page](#)
[Student Discussion](#)
[Scholars Debate](#)
[Links to Online Resources](#)
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WORKS CITED AND ADDITIONAL

Aguilar, Javier & Haracz, Joanne. Environmental Justice: Visualization and Analyses with GIS to Facilitate Informed Decisions

Black, Jan Knippers, Inequity in the Global Village: Recycled Rhetoric and Disposable People. Connecticut: Kumarian Press Inc. 1999

Boyle, Alan & Anderson, Michael, eds. Human Rights Approaches to Environmental Protection. Oxford: Clarendon Press, 1996.

Bryner, Kenney & Mutz, eds. Justice and Natural Resources: Concepts, Strategies, and Applications. Washington: Island Press, 2002.

Bullard, Robert. Dumping in Dixie: Race, Class, and Environmental Quality, 2nd ed. Boulder, CO: Westview Press, 1994.

Bullard, Robert D. Map: People of Color Grassroots Environmental Groups, Unequal Protection: Environmental Justice and Communities of Color. San Francisco: Sierra Club Press. 1994

Bullard, Robert. "Solid Waste Sites and the Black Houston Community." *Sociological Inquiry* 53 (Spring 1983), pp. 273-288.

Bullard, Robert & Chavis, Benjamin, eds.. Confronting Environmental Racism: Voices from the Grassroots. Boston: South End Press, 1993.

Camacho, David, ed. Environmental Injustices, Political Struggles: Race, Class, and the Environment. Durham, NC: Duke University Press, 1998.

Carey, Henry. Forest management and environmental justice in Northern New Mexico. In Mutz, Kathryn, Bryner, Gary, and Kenney, Douglas eds, Justice and Natural Resources, Island Press, 2002, pgs 209 and ff.

Cole, Luke & Foster, Shelia, eds. From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement. New York: New York University Press, 2001.

Cutter, Susan. Living With Risk: The Geography of Technological Hazards. London: Edward Arnold, 4-5, 27-28, 95, 114, 118, 120, 123-124, 127-128, 130, 137-138, 141, 143, 152-153, 174. 1993

Dye, Thomas. Top Down Policymaking. New York: Seven Bridge Press, 2001

EPA, Soil Investigation Update:McFarland, California. Region 9, July 2000. Phase 1 Soil Investigation Sampling Results

Executive Order No. 12,898, "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations," 3 C.F.R. 859 (1995). Reprinted as amended in 42 U.S.C. § 4321 (1994 and Supp. I 1995).

Faber, Daniel, ed. The Struggle for Ecological Democracy: Environmental Justice Movements in the United States. New York: The Guilford Press, 1998.

Faircloth, Travis. Environmental Justice: could it become an int'l policy? (paper prepared for the Human Rights and the Environment Seminar of the Monterey Institute of International Studies, December 2003).

Gauna, Eileen. "Farmworkers as an environmental justice issue: similarities and Differences", Opening Remarks of the Symposium Agriculture and the Environment, Environs Environmental Law and Policy Journal, Spring 2002, gs 67 and ff

Gauna, Eileen. "Environmental Justice. Law, Policy and Regulation" 2002

Gelobter, Michel. "The Distribution of Air Pollution by Income and Race." (Paper presented at the Second Symposium on Social Science in Resource Management, Urbana, Illinois, June 1988).

The Housing Assistance Councils. The Border Colonias Region: Challenges and Innovative Approaches (1998)

Labrash, Jessica. Environmental Justice: California's Colonias (paper prepared for the Human Rights and the Environment Seminar of the Monterey Institute of International Studies, December 2003).

Long, Andrew, "Protection of minority environmental interests in the administrative process: a critical analysis of the EPA's guidance for complaints under Title VI", in *Willamette Law Review*, summer 2003, pgs 1163 ff

Margoluis, Richard, and Nick Salafsky. Measures of Success: Designing, Managing, and Monitoring Conservation and Development Projects. Washington D.C.: Island Press, 1998

Meyer, Eugene L. "Environmental Racism", *Audubon*. (Jan. Feb.): 30-32. 1992

Mountjoy, Daniel. "Ethnic Diversity and the Patterned Adoption of Soil Conservation in the Strawberry Hills of Monterey, California." Society & Natural Resources, 9:339-357, 1996

Nieves, Leslie. "Not in My Backyard? Minority Population Concentrations and Noxious Facility Sites." (Paper presented at the annual meeting of the American Association for the Advancement of Science, Chicago, February 1991).

Peña, Devon. "The Scope of Latino/a Environmental Studies." *Latino Studies*, Vol. 1, 2003.

Pulido, Laura. Environmentalism & Economic Justice: Two Chicano Struggles in the Southwest. Arizona Press, 1996

Rechtschaffen, Clifford, and Eileen Guana, Environmental Justice: Law, Policy, & Regulation. North Carolina: Carolina Academic Press, 2002

Rinquist, Evan. "Environmental Justice: Normative Concerns, Empirical Evidence, and Government Action", in pags 249 and ff of Vig, Norman & Kraft, Michael, Environmental Policy New Directions for the Twenty-First Century (CQ Press, Washington D.C., 2003).

Roberts, Gregory. Environmental Justice and Community empowerment: Learning from the Civil Rights Movement. *American University Law Review*, Volume 48, 1998.

Russell, Dick. "Environmental Racism." *Amicus Journal* 11 (Spring 1989), pp. 22-32.

Salafsky. Measures of Success: Designing, Managing, and Monitoring Conservation and Development Projects. Island Press, 1998.

Satchell, Michael. "Trashing the Reservations?", *U. S. News & World Report*. Vol. 113. No. 1 P.24. 1993

Schlosser, Eric, "In The Strawberry Fields", in Reefer Madness. Boston: Houghton Mifflin Company. 2003

Shepard, Peggy. "Preface: Advancing Environmental Justice through Community-Based Participatory Research" *Environmental Health Perspectives Supplements* Volume 110, Number 2, April 2002

Steinberg, Ted, "Moveable feast", Chapter 11 of Down to the Earth, Nature's Role in American History, Oxford Univ. Press, 2002.

Suarez-Orozco, Marcelo "Mexican Immigration... and the Latinization of the United States", DRCLAS, Harvard University Press, 2001

Suro, Roberto. "Pollution-Weary Minorities Try Civil Rights Tack", The New York Times. 1-11-1993

United Church of Christ Commission for Racial Justice. Toxic Wastes and Race in the United States: A National Study of the Racial and Socioeconomic Characteristics of Communities with Hazardous Waste Sites. New York: United Church of Christ, 1987.

Vig, Norman J. and Kraft, Michael E. Environmental Policy. New Directions for the Twenty-First Century, 5th Ed. Washington: CQ Press, 2003.

Wernette, D.R. & Nieves, L.A. "Breathing Polluted Air: Minorities are Disproportionately Exposed." EPA Journal 18 (March – April 1992), pp. 16-17.

Whitman, Christine. EPA's Commitment to Environmental Justice, August 2001.

Williams, Roderick. "Cardboard to concrete: reconstructing the Texas Colonias threshold", in Hastings Law Journal, March 2002, pgs 705 and ff..

Wilmsen, Carl. "Sustained Yield Recast: The Politics of Sustainability in Vallecitos, New Mexico", in Society and Natural Resources, vol. 14, pgs 193 ff (2001).

Yang, Tseming "The form and substance of environmental justice: the challenge of Title I of the Civil Rights Act of 1964 for environmental regulation", in Boston College Environmental Affairs Law Review, 2003, pgs 143 ff.

Yang, Tseming. "Environmental regulation, tort law and environmental justice: what could have been", in Washburn Law Journal, Spring 2002, pgs 607 and ff.