Nature’s New Curriculum: Creating Educational Opportunities in Urban and Diverse Communities

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Prepared for the Massachusetts Audubon Society
Acknowledgments

The authors would like to thank Gloria Villegas-Cardoza (Massachusetts Audubon Society), Rusty Russell (Tufts University) and Amelia Schmale (Tufts University) for their guidance and support throughout this project. In addition, the team thanks Barbara Parmenter (Tufts University), Michele Bolduc (Tufts University), Jason Margolis (Washington State University), Julian Agyeman (Tufts University) and Regina Raboin (Tufts University) for their contributions to this report and the research process. Finally, the authors would like to thank all interviewees - including members and/or employees of the Boston Nature Center, Framingham Public Library, Danforth Museum, Framingham START Partnership, New England Wildflower Society, Metrowest Boys and Girls Club Hollis Street Clubhouse, Community Service Center, Adelante Youth Center, Merrimack Valley YMCA and residents of Lawrence and Framingham - for their generous and thoughtful contributions to this project.
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Abstract

This report was composed for the Massachusetts Audubon Society in support of their effort to evolve with the changing demographics of the state and increase accessibility and relevance through cultural competency. Through a literature review, on-the-ground research and a critical review of the Educational Master Plan, the research team recommended that Society-wide, the organization: employ a diverse and multilingual workforce, build partnerships, invest in networking and word-of-mouth marketing, expand youth-specific programming, be flexible in the use of sanctuary space, creatively invest in local natural resources, integrate cultural competency into the Education Master Plan, coordinate urban initiatives through a culturally competent staff member and make cultural competency a guiding principle in the 2010-2020 Strategic Plan. Ideas for tools and strategies outlined in this report are designed to help Mass Audubon expand the environmental constituency, cultivate stewardship statewide and best serve communities to whom traditional programming and/or sanctuary space is neither relevant nor accessible.
Overview

The Massachusetts Audubon Society, an organization rich with history and substantial capacity, has made a significant impact in ecosystems and communities across the Bay State over the past one hundred years. The organization’s respected research, advocacy work and network of nature centers and wildlife sanctuaries have made nature accessible to policy makers and the public alike, to an extent that no other regional organization has matched. Despite these strengths however, the Massachusetts Audubon Society (Mass Audubon) currently faces a prodigious challenge, the outcome of which may determine their ability to remain relevant in the state over the next one hundred years.

The face of Massachusetts’ population is rapidly changing as a result of increased immigration and urbanization. Between 2000 and 2006, Massachusetts’ foreign-born population increased by over 165,000 or 21.4 percent, bringing the total number of foreign-born residents in the state to over 938,000 (FAIR, 2008). Forty-acres of open space are lost every day to development (Massachusetts Audubon Society, 2003 at p1). However, Mass Audubon, like so many other conservation organizations across the country, has traditionally focused their programming and outreach to the more affluent, suburban communities that host their preserves. In order to serve these new communities, it will therefore require a significant shift in perspective, one that is particularly necessary if the organization wishes to continue effectively advancing its agenda and increasing its membership base over the next one hundred years.

Mass Audubon recognizes that programming in urban areas requires additional ingenuity on their part. Location presents a challenge as the open space and preserved areas where Mass Audubon traditionally sites its programming are often not available in urban settings. Moreover, Mass Audubon recognizes the need to incorporate cultural competency – defined by Tso and Hill as “an ongoing process of developing awareness, behavior, structures and practices that allow an organization to reach or engage diverse groups and communities” - to make their work more relevant and accessible (Tso and Hill, 2006). In the context of environmental education, this means that multi-cultural communities have different reference points or experiences with nature than non-Anglo Americans.
Specific Goals and Research Process

With diverse educational and professional backgrounds (see Appendix H), a group of Urban and Environmental Policy and Planning graduate students from Tufts University embarked upon a semester-long practicum by establishing four main goals:

- To gain a better understanding of the field of cultural competency through an in-depth literature review and an evaluation of organizations that have successfully integrated the approach into their work;
- To create a replicable and participatory outreach process that provides greater insight into the needs, interests and realities of urban and diverse communities;
- To undertake on-the-ground research in three Mass Audubon priority communities in order to pilot and refine the replicable, participatory outreach process and to accompany findings of the academic literature review; and
- To critically review the organization’s Educational Master Plan (EMP) and recommend measures for institutionalizing cultural competency and the findings of on-the-ground research.

Building on past research, this report aims to provide Mass Audubon with a unique, updated perspective on cultural competency in the state. To the extent possible in a limited timeframe, the team sought to focus on the needs of non-users (individuals who are not members of the Society and do not participate in their programming) and thus incorporate voices not typically heard by Mass Audubon. Further, the team hopes to increase the accessibility of its findings by presenting Mass Audubon with both this final report and an accompanying “toolkit” that summarizes the academic discussions on and practical applications of cultural competency.

Findings and Recommendations

A series of recommendations emerged from this research that Mass Audubon should consider implementing in order to make their vision of culturally competent education and outreach programming a reality. Organizationally, it will require additional capacity for which new areas of funding will need to be tapped. Effective communication of the organization’s dedication to this enhanced work will play a key role in helping them to secure the additional financial resources needed. While these steps cannot be accomplished overnight, more immediate progress can be made by seizing on the areas of opportunity outlined in the best practices section, each community case study and the EMP Review. With these tools and an open mind, Mass Audubon will be able to share its passion for protecting the nature of Massachusetts in a meaningful and productive way.
Chapter One — Introduction

The Massachusetts Audubon Society (Mass Audubon) was established in 1896 when the founders set out to stop the slaughter of birds for use in women’s fashion, specifically hats. From their modest beginnings over 100 years ago, Mass Audubon’s mission has expanded to provide educational programs, conserve land and advocate for environmental policies at all levels of government. Today, the organization has more than 100,000 members and 33,000 acres of conservation lands.

While their mission has expanded in the past 100 years, more work must be done for Mass Audubon to have a community-relevant presence at each sanctuary and establish an engaging presence in communities without sanctuaries. Thus far, Mass Audubon has taken important initial steps, including the commissioning of Julian Agyeman’s assessment of diversity at Mass Audubon, “Mainstreaming Diversity – From Paradigm to Practice” and the cultivation of community-appropriate programming at their Mattapan location, the Boston Nature Center.

Research has shown that public places can develop socially constructed definitions about the types of activities that are appropriate for particular locales and the types of people who are welcome there (Martin, 2004). One study found that foreign-born Latinos were significantly less likely than western Europeans to join an environmental or conservation group (Johnson et al, 2004). Reflecting on these statements, Mass Audubon is considering instituting cultural competency in their mission as the next logical step in their organization’s evolution. Due to their power and status as the largest conservation organization in New England (and the name recognition alone) Mass Audubon has the moral imperative to change the direction being taken by most conservation organizations.

Mass Audubon tasked a Tufts University Urban and Environmental Planning and Policy Field Projects group with updating their education and outreach programs to be more relevant to both the state’s new and diverse communities. The group’s goals are to help create a foundation for Mass Audubon’s efforts to gain a better understanding of the field of cultural competency, to create a replicable participatory process for exploring the needs and interests of diverse communities and to recommend measures to institutionalize cultural competency within the Educational Master Plan (EMP). This work will enable Mass Audubon to become more relevant to new and diverse and help its membership base to grow.

The methodology and research approach was developed through conversations with the client, Gloria Villegas-Cardoza, the Director of Education for Mass Audubon and Julian Agyeman, Department Chair of UEP, who completed
the aforementioned diversity study for Mass Audubon in 2006. Ms. Villegas-Cardoza is the former Education Director for the Boston Nature Center. She brought a culturally competent education plan to the Center and is therefore in a key position to encourage these initiatives throughout the organization. Through these discussions and with a recognition of the significant time constraints surrounding this research, the group established the following report structure.

The first component of the report is a literature review of current academic research on building cultural competency in environmental education organizations, as well as potential participation barriers to immigrant communities.

The outreach process aimed to increase understanding of the needs, concerns and priorities of Mass Audubon sanctuaries’ non-users from one sizeable, non-Anglo American cultural group in three specific communities – Lawrence, Framingham and Holyoke. In addition, best practices from community organizations working with the cultural group of focus within the city or town will be collected with the potential for partnerships highlighted where applicable.

Following this section is a review of best practices from other environmental education organizations. These best practices involve ways in which the organizations have been able to overcome barriers and become relevant to immigrant communities.

The last task in the report is a critical review of Mass Audubon’s EMP. The purpose of an EMP will be discussed, followed by background on the Mass Audubon EMP and why it needs to be updated. The critical review includes recommendations on how to most effectively update the document.

The report will end with a general recommendation and next step section, including recommendations and next steps from the literature review, specific strategies for increasing relevance in Lawrence, Framingham and Holyoke, reflections on the outreach process and next steps from the EMP review.

It is important to clarify some of the terms used in this report. The literature review was conducted using keyword search terms such as “diverse,” “new” and “ethnic minorities,” as academic articles on cultural competency in the environmental context are using these terms as strategies to categorize those studied and article keywords. Broad, race-related terms such as “whites” or “ethnic minorities,” although they appear in academic literature, carry potential limitations. These terms allow for generalizations by not clearly acknowledging the differences within these broad categories. In contrast, the term “cultural group” refers more specifically to individuals with a learned and shared system of beliefs (Schulz et al, 2000). Even within cultural groups, factors such as economic situation can further shape individuals’ perceptions and experiences. In designing the outreach process, the team sought to focus research more narrowly through culture, rather than broad, race-based categorizations. On-the-ground realities created limitations to this process, as evident in the Lawrence case study.
Additional terms appearing throughout this report include “new,” “urban” and “diverse” communities. In this report, new refers to people that have recently immigrated to this country, having been born somewhere else. Urban communities are those living in urbanized areas of the state, what most people would think of when they hear the word city. Lastly, diverse communities are those that have a mix of races, cultures and economic classes.
Chapter Two — Literature Review

The goal of the literature review is to summarize the academic research completed on the subject of cultural competency and environmental education, as well as how various cultures interpret the word nature and how they interact with it. Culture, in this chapter, refers to a learned system of beliefs about the manner in which people interact with their social and physical environment, shared among an identifiable segment of a population and transmitted from one generation to the next (Schultz et al., 2000). The findings from the literature review have been broken down into disparate categories that emerged during the research. While reading this chapter, it is important to keep in mind that the findings are based on each study’s participants and may be skewed by the authors’ own cultural biases. To make the literature review more useful for Mass Audubon, ideas on how the organization can utilize the findings in their own work will be included in Chapter Six.

This section also includes a list of the best practices of other environmental education organizations, with like missions, that have faced similar challenges to Mass Audubon and programs these organizations used to engage a diverse audience. A list of each organization’s funders, where they were publicly available, is included in Appendix B. This list may help Mass Audubon fund initiatives in urban and diverse communities.

Literature Review Findings

Differences in Interest in Environmental and Recreational Activities of Ethnic Communities

Environmental literacy is the understanding of the interactions between natural systems and human social systems (Mancl et al., 2003). Mancl, Carr and Morrone undertook a study in Ohio to determine the profile of an adult with low environmental literacy versus those with a high environmental literacy. The study found that adults with low environmental literacy are less educated, earn below the median income level and are more likely to be female, older, a minority and unemployed. Small towns have more adults with low environmental literacy. Suburban areas have the largest share of adults with a high environmental literacy.

Interestingly, though, those with low environmental literacy still have environmentally friendly behavior — they recycle at the same rates, buy just as many environmentally friendly products as those with high literacy and equally support environmental candidates. The biggest difference between the two groups is that those with low environmental literacy tend to use public transportation more for economic reasons.

People with low environmental literacy are more likely to believe that humans were created to rule the earth and can fix environmental degradation with technology. They are also less engaged in outdoor activities or belong to, receive information from or participate in environmental groups. This group is not aware of...
environmental threats and does not pay attention to environmental issues. However, this group does look to the television to provide them with information and trusts the environmental information that the news media provides.

Quimby, Seyala and Wolfson researched why there are lower numbers of women and minorities in science, technology, engineering and math-related (STEM) educational and vocational areas. Contextual factors, such as role model influence, social support and career barriers (i.e., perceived racial or gender discrimination), may influence interest in STEM careers (Quimby et al, 2007). The researchers found that perceived outcomes and rewards of a career in environmental science, social support for pursuing an environmental career and attitudes toward environmental problems influenced interest in environmental science for ethnic minority students. In addition, ethnic minority students perceived more barriers to pursuing environmental careers and had less interest in environmental problems than Anglo-American students.

Newell and Green researched racial differences in environmental concern. They hypothesized that minorities are less concerned about the environment than Anglo-Americans due to divisions between minorities and the majority Anglo-American society. Another belief was that ethnic minority communities lack motivation for positive environmental actions because they are more concerned about issues such as drugs, crime and unemployment (Newell and Green, 1997). In fact, Newell and Green found that there is no correlation between income and environmental concern. Instead, it was found that those with higher education levels do show higher levels of environmental concern. As education levels increase, differences between ethnic minorities and Anglo-Americans and their environmental concern decrease (Newell and Green, 1997).

Ethnic minorities may prefer outdoor activities that Anglo-American populations do not. When researching minorities’ urban park preferences, Ho and others found that African Americans and Latinos gave the highest ratings to the presence of recreational facilities. The same groups also felt that traditional park landscapes were important. Many Latino communities are patriarchal, so the differences in gender roles led to different recreational expectations between groups. Visiting parks alone is not common for any non-Anglo-American. Latinos are more apt to visit with family or friends. They preferred parks with less management and law enforcement presence and more remote, less developed recreational settings. The majority of Latinos preferred engaging in stationary activities, such as picnicking and socializing (Ho et al, 2005).
Recreation Participation and Assimilation

Stodolska and Alexandris studied the role of recreation in assimilation to Korean and Polish immigrants. Although this study focuses on cultural groups other than the major cultures of focus in the on-the-ground research conducted for Mass Audubon, the findings convey the difficulties immigrants have after arriving in this country. When coming to America, Koreans may be unable to participate in recreation because of a language barrier, self-employment in ethnic enclaves and racism of the host society. Also, first-generation Korean immigrants are highly home and church-oriented. Polish immigrants are also home and church-oriented (Stodolska and Alexandris, 2004).

New immigrants reported a distinctly different recreational pattern after coming to America than they experienced in their native countries. Ethnicity, social class, gender and length of time in the United States affected recreational participation. Soon after moving to this country, immigrants demonstrated a low level of voluntary physical activity. This was especially true for female immigrants.

Middle class immigrants who participated in recreational activities in their home countries became involved in recreational activities after the initial assimilation period. Many immigrants reported a higher rate of participation due to more opportunities for recreational sport participation in the United States than in their home countries. New immigrants may have embraced new active lifestyles because that was what was trendy and popular among the social class that they were trying to emulate (Stodolska and Alexandris, 2004).

Working class immigrants report different patterns. These individuals tend to live in inner-city ethnic neighborhoods, work in the lowest paying jobs and lack the opportunity to move up economically. Since many of these immigrants are focused on basic survival needs, they do not have any leisure time (Stodolska and Alexandris, 2004). Immigrants in working class enclaves reported a lesser availability of recreational facilities than their middle class counterparts.

Participating in recreational sports facilitated acculturation to life in America and helped immigrants to establish friendships with mainstream Americans, maintain business-related contacts and solidify their position within the local community (Stodolska and Alexandris, 2004). The participation also lessened the reclusive nature of immigrant neighborhoods. Participation in youth recreational activities also helped with acculturation. Unfortunately, working class immigrants lack the opportunity to participate in their children’s sporting lives due to job responsibilities, as well as the language barrier.

Recreational sport participation within an ethnic group helps both working class and middle class immigrants solidify ties within their ethnic community and retain their ethnic identity. Networks within immigrant communities are developed and new immigrants find help with locating housing and jobs (Stodolska and Alexandris, 2004).

Stodolska attributes problems with overcoming assimilation issues to post-arrival stress,
depression, anxiety, alienation and a sense of loss upon entering the United States. She also emphasizes the need to respond to these problems in a dynamic way as they evolve the longer the immigrants have been living here. These problems can all be categorized as a leisure constraint, which is defined as factors that are perceived or experienced by individuals to limit the formation of leisure preferences and to inhibit or prohibit participation and enjoyment in nature (Stodolska, 1998).

Hispanic populations have different leisure constraints than other ethnic minorities. The younger average age of marriage and higher fertility rates may make for different constraints on leisure time for Latinos in general and Hispanic women in particular (Stodolska, 1998). These women have problems finding child care, further limiting their access to recreation.

Four barriers have been identified that prevent Latinos from assimilating to the American culture and participate in recreational activities (Stodolska, 1998): (1) immigration related constraints, such as not being comfortable with Americans and an inability to speak English; (2) universal constraints, such as lack of money and time and being too tired after work for recreation; (3) work related circumstances, including a lack of set work hours and an inability to take time off to participate in recreational activities; and (4) social isolation that prevents immigrants from feeling like they can join organized recreational groups.

Multicultural Awareness

Individuals’ knowledge is passed on through cultural processes. The goals of environmental educators include developing awareness, knowledge and commitment in their students that result in informed decisions, responsible behavior and constructive actions concerning wildlife and the environment. Educators that recognize the role of cultural contexts in shaping individual and group knowledge will be best able to successfully work with different ethnic groups (Saul, 2000).

Most environmental education curricula are not applicable to urban audiences. A model that does not incorporate the cultural conditioning of the participants will not be successful. When culture is taken into consideration when planning an activity, more diverse audiences will be able to relate to the lesson (Saul, 2000).

As Cole writes in her paper, for students to understand environmental processes and systems, differences in human histories that contextualize and shape them had to be taken into account. These differences should inform the methodologies and ways of understanding how people experience and understand their environment. Most notions of environment and nature are culturally specific to middle- and upper-class Anglo-American culture (Cole, 2007).

The environmental justice movement has sought to overcome these preconceived notions of nature by having environmental educators consider how culture, race and class create meaning to different ethnic minorities. This movement has led to lessons that focus specifically on teaching audiences that there are many ways of looking at the relationship between our species and nature (Cole, 2007). Educators
should look to see how the dominant Anglo-American tradition influences education methods and practices.

Cultures identify with nature differently. Latino and western European views on the environment differ due to the disparities in cultures. Regardless of class, Latino environmentalism focuses on communal solutions versus Anglos’ reliance on technical solutions. Latinos view humans as an integral part of nature as opposed to its protectors or consumers (Schultz et al, 2000). In general, Latino respondents answered poll questions favorably towards the environment.

Latino cultures place high value on group-oriented activities and human interaction. Social interaction is stressed during leisure time and considered an important recreational activity. In these cultures, less concern is given to the productive use of time and people tend to be more flexible and spontaneous when it comes to socializing (Juniu, 2000). Immigrants have had to integrate these behaviors into American culture, which can be difficult. With increased work responsibilities and longer hours, spontaneous recreation is difficult to experience. Showing up unexpectedly at a relative or friend’s house to see if they would like to play a game of soccer, for example, can be nearly impossible.

Barriers to Participation

Many studies completed over the years have found that race and class together determine the extent to which particular groups experience marginalization. Also, demographic characteristics, socioeconomic status and region of origin relate to rates of participation in leisure activities. For example, African Americans are more apt to view unaltered open spaces as places for subsistence activities than Anglo-Americans. Women and older people are also less likely to visit unaltered open spaces. All of these factors can determine where someone will want to recreate and what they view as obstacles to participating in particular outdoor recreational activities.

A study undertaken by Wolch and Zhang focused on barriers to beach recreation for ethnic minorities. They found that recent immigrants were less likely to go to the beach than either long-term immigrants or the native-born. Latinos reported pollution, crowding, parking and time constraints as barriers to beach use. Those living further from the coast tend to be people of color, poor and living in areas that lack parks, open space and public transportation. While at the beach, Latinos reported enjoying volleyball, Frisbee, flying kites or building sand castles. They were less likely to watch for wildlife than native-born Americans. Regular beach goers more strongly support the well-being and rights of animals (Wolch and Zhang, 2004).

Hong and Anderson interviewed the Latino community of West St. Paul, Minnesota to determine what was preventing them from visiting the Dodge Nature Center (DNC). They found four major barriers influencing the participation of Latino people at the DNC: (1) lack of familiarity by Latino people of the DNC, (2) general atmosphere at DNC, (3) language in which the DNC programs are delivered and (d) cost of the
DNC programs (Hong and Anderson, 2006). More specifically, respondents explained that the DNC is not welcoming to Latinos because of the lack of outreach and staff diversity. Since the staff does not speak Spanish, many Latinos felt uncomfortable going to the Center.

Best Practices of Environmental Education Organizations

The best practices listed below were found through the literature review, as well as a web search. This list should by no means be considered exhaustive as more and more environmental programs are started every day throughout the country. Each organization’s best practices are identified, as well as how the organization’s mission connects to that of Mass Audubon. Sample programs from each organization are listed, and Mass Audubon may consider incorporating elements of these into their own education programming. Some programs should be easy to start, while others may take a dedicated funding source or staff person. These more difficult programs are listed in Appendix B. Funders for organizations, where the information was available, can be found in Appendix C.

Literacy for Environmental Justice
www.lejyouth.org
San Francisco, California

Organizational Summary: Literacy for Environmental Justice (LEJ) is a youth empowerment and environmental health and justice non-profit organization based in the community of Bayview Hunters Point, San Francisco, California. Each year, LEJ provides educational programming to approximately 2,500 public school students, employs up to 50 youth interns from southeast San Francisco and hosts community meetings, trainings and large-scale public events serving thousands of individuals from across the Bay Area.

Best Practices: LEJ provides paid youth internships in subjects that are relevant to urban youth. Their staff is diverse in ethnicities, age, class, religion and sexual orientation, in an attempt to make all visitors feel comfortable.

Connection to Mass Audubon’s Mission: Both organizations have school education programs and offer youth internships.

Sample Programs
The Youth Leadership and Employment Programs emphasize the importance of advocacy through preparation, data collection and leadership. To this end, youth are involved in collecting community information, performing data analysis and critical assessment and taking part in action planning. Currently, up to 50 youth are employed annually through three training programs addressing environmental health issues such as food access, open space restoration and environmental health. In 2003 and 2004, 97 percent of LEJ graduating high school interns went onto college, while the High School drop-out rate in Bayview Hunters Point is approximately 30 percent.

“Art Against Pollution 2000”: Youth collected used asthma inhalers in five public schools. Art students at International Studies Academy High School used the inhalers to create two life-sized asthma sculptures. These were given to the Mayor and the Department on
the Environment (DOE) at a press event organized by youth at City Hall. 200 youth and teachers attended the press event. Later that year, DOE created a $13 million grant program on air quality for the Bayview and Potrero communities.

“Youth on Fire”: This event attracted more than 700 students and culminated in the first youth led protest at the Hunters Point Power Plant. Five different classrooms took on tasks associated with event organizing including learning how to write public service announcements, organize workshops and provide entertainment and tours of Heron’s Head Park. The event culminated in a youth-led protest against the power plant and a press event.

Bay Fish: An educational program concerning bay fish consumption at Mission and Thurgood Marshall High Schools resulted in a student letter-writing campaign to the Bay Conservation and Development Commission regarding the expansion of the Potrero Power Plant. The students’ campaign swayed the Commission to unanimously reject the proposal. The Commission was the first public agency to reject the Power Plant Plan, setting a precedent for others to follow.

Students at Phoenix High School invited a naval official to a public hearing organized during the school day in their classroom. To prepare, they learned about the history of the Hunters Point Shipyards, a Federal Superfund Site, toxics and advocacy. As a result of the hearing the Navy posted metal signs in four languages along the Shipyards fence warning of the hazards at the site.

Developed multilingual educational materials (fliers, posters, brochures, etc.) and media messages for parents, educators and community members to raise awareness of the effects of Hunters Point Shipyards toxics on children’s health and their ability to learn and focus.

Dodge Nature Center
www.dodgenaturecenter.org
West St. Paul and Mendota Heights, Minnesota
Organizational Summary: Dodge Nature Center (DNC) is located in West St. Paul and Mendota Heights, Minnesota and provides educational programs and experiences to school groups, scout troops, families and individuals. The DNC is a 320-acre site that includes a sustainable farm, apple orchard, apiary, classrooms, woods, prairie and ponds. West St. Paul’s demographics are quite diverse.

Best Practices: The DNC has collaborated with an abutting school to help develop it into a magnet school. They offer scholarships for their programs, camps and events. An endowed scholarship fund for the preschool has been developed such that families do not pay more than 5 percent of their income.

Connection to Mass Audubon’s Mission: Both organizations have school education programs and youth education.

Sample Programs
School Partnership: School District 197 and the Thomas Irvine Dodge Nature Center are partnering in transforming the Garlough Elementary School into the Garlough Environmental Magnet School (GEMS). GEMS serves students in kindergarten through grade four in a rigorous environmental studies program emphasizing
science, technology and math. Garlough is located directly across the street from the DNC. Garlough students also have access to the DNC equipment, such as snowshoes, waders, dip nets, specimen collection materials and water-sampling equipment. Students participate regularly in activities directed by a DNC Naturalist either at Garlough or the Nature Center.

The Food Project
www.thefoodproject.org
Boston, Lincoln and Lynn, Massachusetts
Organizational Summary: Since 1991, The Food Project has built a national model of engaging young people in personal and social change through sustainable agriculture. Each year, they work with over a hundred teens and thousands of volunteers to farm on 31 acres in rural Lincoln and on several lots in urban Boston. Their hallmark is a focus on identifying and transforming a new generation of leaders by placing teens in positions of responsibility with deeply meaningful work.

Best Practices: By providing jobs on farms, urban youth become connected to the earth while at the same time earning money. Work on the farm is encompassed within the greater goal of developing important life skills.

Connection to Mass Audubon’s Mission: Both organizations focus their learning in the outside world and hope for attendees to gain a greater appreciation of the world around them.

Sample Programs:
The Summer Youth Program takes place over seven and a half weeks. The youth manage a 31-acre rural farm and over two and a half acres of remediated urban land, sell produce through two urban farmers’ markets and a Community Supported Agriculture Program, prepare and serve lunches in local soup kitchens and homeless shelters and help some of Boston’s top chefs prepare community lunches, where neighbors, youth, staff and visitors come together to share the harvest. Youth also participate in four workshops each week, covering issues of diversity awareness, hunger and homelessness, sustainable agriculture and personal reflection. Through shared labor and structured activities, youth develop a respect for themselves and for peers from very different backgrounds, while acquiring a connection to food and the land.

The Academic Year Program employs children ages 14-17 from communities in the Greater Boston area who have completed The Food Project’s Summer Youth Program. Members of the DIRT Crew (Dynamic, Intelligent, Responsible Teenagers) dedicate Saturdays and after-school hours to lead over 2,000 volunteers on both the rural and urban farm sites; work in shelters and attend conferences to speak about their experiences working for The Food Project. The Academic Year Program focuses on developing leadership and public speaking skills as well as enhancing communication skills and deepening agricultural knowledge in the young people with whom the organization works.

The Fellowship Program was designed to provide an opportunity for an alumnus to have a continuing and more substantial involvement in the organization. Currently, a Food Project Fellowship is a full-time, one-year staff apprenticeship position. With close supervision, Fellows
take on staff responsibilities in one or more areas of the organization. During their year, they design and conduct a research project.

EarthCorps
www.earthcorps.org
Seattle, Washington
Organizational Summary: EarthCorps' mission is to build global community through local environmental service. EarthCorps supports international partner organizations on projects around the world. The organization is committed to working with youth and young adults to develop human potential across racial, ethnic, economic and gender lines. Through community outreach, they support the empowerment of disenfranchised communities.

Best Practices: Children brought together from all over the world restore ecological sites in Seattle and surrounding areas. EarthCorps uses a community-based approach in their restoration work and including people of all different racial backgrounds in their process.

Connection to Mass Audubon’s Mission: Restoration projects and environmental education are common missions.

Sample Programs
School programs that combine regular classroom and field projects. In an on-going partnership with south Seattle's Dearborn Park Elementary, EarthCorps combines environmental education activities with forest restoration tied to school curriculum.

Parks Corps: EarthCorps leads four-week summer and after-school programs for young people ages 15-18. Programs are based in southeast and southwest Seattle communities and provide participants with a stipend as they develop work-life skills and restore neighborhood parks.

Eagle Eye Institute
www.eagleeyeinstitute.org
Somerville, Massachusetts
Organizational Summary: Based in Somerville, Massachusetts, Eagle Eye Institute strives to make the natural environment more accessible to urban residents with a focus on urban youth. Since its inception in 1991, Eagle Eye's programs have introduced more than 4,500 multi-ethnic youth from community organizations in Greater Boston, the Northeast region and other parts of the country, to natural environments.

Best Practices: Environmental education is taught through hands-on exploration. Eagle Eye also acts as a career bridge to the natural resource fields for urban youth.

Connection to Mass Audubon’s Mission: Environmental and ecological education is performed by both organizations.

Sample Programs
Learn About Forests is Eagle Eye Institute’s signature one-day program that has been offered since 1992. This program brings together 10 to 15 urban youth to a forest environment and introduces them to the care of trees and forests. Additionally, it builds bridges to careers in forestry and ecology for urban residents, especially people of color, who otherwise might not consider a career in the natural resource field.

The Green Industry Career Pathway Program is a transformational program for YouthBuild students that bridges interested participants to careers in arboriculture and the
green industry. The Green Industry Career Pathway Program is a collaborative effort between Eagle Eye Institute, YouthBuild U.S.A. and The Trustees of Reservations.

Debs Park Nature Center California Audubon  
www.audubon-ca.org/debs_park.htm  
Los Angeles, California  
Organizational Summary: The site is a cutting-edge environmental education center and ecological monitoring program within the nearly 300-acre city park, located on the border of Highland Park and Montecito Heights between Dodger Stadium and South Pasadena. Over half of the park is made up of walnut-oak woodland, grassland and coastal sage scrub – a remnant of the native habitats that once rimmed the Los Angeles Basin. Also, it is interesting to note that this Audubon facility is called a “center” and not a “sanctuary.”

Best Practices: As the nature center was being designed, Audubon undertook a neighborhood constituency building process to develop the site. The site was designed to provide larger open spaces for Latino families so that they feel comfortable recreating. The website is in both Spanish and English and many of the staff members are Latino.

Connection to Mass Audubon’s Mission: Both are Audubon sanctuaries that are fulfilling similar missions.

Sample Programs

While the center does not have any distinct programs that Mass Audubon can emulate, its creation and design is a model to follow. The center was opened after a solid neighborhood constituency was built. Audubon gained the residents’ trust by convincing them that the park would not become an exclusive, members-only retreat where locals were not welcomed. The center is set up such that large families feel welcome coming and exploring what is in fact “their” nature center.

Communities across Massachusetts are dealing with the influx of new immigrants and people of various ethnic backgrounds to varying degrees of success. Some are incorporating best practices, such as those developed by the organizations above, although most communities do not have the resources, capacity or interest to do so. As seen in on-the-ground research conducted for Mass Audubon, each community has its own story to tell.
Chapter Three — On-the-Ground Research

Introduction

In order to bring a goal of incorporating cultural competency into environmental education from vision to reality, consideration of current literature on the topic must be accompanied by practical strategies and information that help to put relevant findings to work on the ground. As Chapter Two illustrates, urban and diverse communities often require specifically tailored programs of their own. In order to determine the appropriate elements for such programs, the research team sought to create a replicable process that would be able to uncover some of the needs, interests and realities of a community and the stakeholders involved. With this information Mass Audubon should be able to further identify opportunities to provide meaningful, accessible interactions with nature for people from different cultural backgrounds and thus design more relevant programming that reaches a broader audience.

As mentioned previously, Julian Agyeman’s “Mainstreaming Diversity – From Paradigm to Practice” sought to inform Mass Audubon of some useful approaches to incorporating cultural competency by highlighting the cultivation of community-appropriate programming at the Society’s Mattapan location, the Boston Nature Center (BNC). Agyeman and the other authors found that the facility’s success stems from their ability to serve “peoples’ needs and nature,” as opposed to “nature’s needs and people.” This is done primarily by moving away from traditional programming (i.e. bird-watching, hiking, canoeing) that is neither practical, nor relevant, in the largely low-income, high-minority surrounding communities and towards an approach of through open space preservation, affordable summer camp and after school programs (Agyeman et al. 2006).

Creating a Process

Understanding peoples’ needs in urban and diverse communities – which can be quite different than those in the communities where Mass Audubon’s presence is traditionally based – is critical to strengthening the Society’s presence and boosting membership across the state. The research team therefore set out to build on Agyeman’s work by developing a process for further on-the-ground research that would help
advance culturally competent programming. Consultation with Ms. Cardoza, Dr. Agyeman and UEP Field Project instructors aided the team in designing a four-step process:

- **First**, background research was performed to assess the “lay of the land” in a community. Key resources in this step included a review of related academic literature, information on a community’s history, U.S. Census data, recent newspaper articles, and planning documents such as Open Space and Recreation Plans (OSRPs).

- **Second**, in order to maximize the quality of research in a limited timeframe, the group decided to narrow in on one specific cultural group in the community that fell into the “non-user” category in order to give voice to individuals not currently reached by Mass Audubon’s work.

- **Third**, in order to reveal the nuances central to engaging specific cultural groups, the team decided to interview members of the selected cultural community via phone, in person and through focus groups.

- **Fourth**, a review of the organizations already invested in the community was performed to uncover innovative strategies and programs, best practices and potential partnerships for Mass Audubon.

**Community-specific Research**

In order to refine this process, compare findings to the literature review, and to uncover specific areas of opportunity, the research team sought to pilot it in three Mass Audubon priority communities. After internal review, Mass Audubon identified Lawrence, Framingham and Holyoke, Massachusetts as municipalities where on-the-ground research would help them to build their presence in the corresponding regions across the state. The following case studies will further outline the uniqueness of each community and the relevance to Mass Audubon’s work, but in general they are important as they serve as strong examples of the changing face of Massachusetts. Additionally, the challenges faced by these communities, as well as their cultural relevance are recognized statewide.

**Need for Review and Replication**

The remainder of this chapter will define specific areas of opportunity that may help Mass Audubon to make quick progress in the three communities, as well as a review of areas of improvement for the team’s community-specific research process. However, it is important to note that focusing on one cultural group per community represents a starting place. As the academic literature (and common sense) demonstrates, different cultural groups have different experiences and perceptions of nature, and further research into the needs of the various cultural groups in communities where Mass Audubon hopes to build local visitorship and an appropriate presence will be required. In order to expand on these first steps, the above process must be embraced as something that should be replicated in other communities across the state with modifications made when necessary.
Lawrence, MA

Mass Audubon Role in the Region

The Ipswich River Wildlife Sanctuary (IRWS) located in Topsfield, Massachusetts is Mass Audubon’s largest sanctuary. This idyllic 2,300 acre site encompasses forests, meadows and wetlands, and it offers hiking trails, canoeing, rental cabins, bird watching and maple sugaring. Environmental education offered by the sanctuary is Massachusetts Frameworks Based Curriculum that compliments classroom learning in Earth and Life Science. Programs offered at the sanctuary familiarize children with these concepts in the context of IRWS ecosystems and include “Local Ecosystems,” “River Ecology” and “Seeds & Plants.” Similarly, programs offered at local schools by sanctuary naturalists include “Nocturnal Animals” and “Soils Underfoot.” These programs largely serve North Shore communities. While IRWS is a popular site visited by many in the area, research reveals that its programming is inaccessible to some communities.

A 50-minute drive from the IRWS is Lawrence, a Merrimack Valley mill city known for its rich multicultural background and 20th century economic decline. While the IRWS is the nearest Mass Audubon facility for residents of Lawrence, a 2008 compilation of user data revealed that none of the 94 groups that visited the Ipswich River Wildlife Sanctuary from 2004 to 2007 were from Lawrence (Massachusetts Audubon Society, 2008). On-the-ground research in the city indicates that this distance is only one of the many barriers to participation among residents. The city is an emblem of the state’s increasing diversity and speaks to the need for culturally competent programming. Increasing Mass Audubon’s understanding of the Latino community in Lawrence represents a significant step toward reaching and engaging this diverse city.

This case study seeks to provide a greater understanding of the needs, concerns and priorities of the Latino community in Lawrence as well as to outline recommendations for designing appropriate programming. The outreach process followed the structure outlined in the introduction of this section, and consisted of a background literature review, ten phone and in-person interviews and a focus group (see Appendix E). Interviews were conducted with key actors working with the Latino community, as well as Latino residents, leaders and activists.
Focus group participants were Latinos living and working in the community.

**Background: A Diverse Community of Challenges and Opportunity**

Lawrence was constructed in the 1840s as the nation’s first planned industrial city. Located 25 miles north of Boston, Lawrence became a world leader in textile production in the early twentieth century. Waves of immigrants came to work in the mills, and “Immigrant City’s” population peaked at close to 100,000 residents. By 1912, the Merrimack Valley region of Massachusetts had the highest proportion of foreign-born residents in the nation (Lawrence Community Works, 2008). Although the city has lost thousands of manufacturing jobs and population has declined to an estimated 70,662 residents, its diversity remains.

Lawrence is also a relatively young community with a median age of 30.5 years (U.S. median age in 2006 was 36.4 years) and 19,912 children over three years of age enrolled in school (U.S. Census Bureau, 2006), whose educational and extracurricular experiences could be enriched by a Mass Audubon presence. This young community faces mounting economic challenges resulting, in part, from a decline in available jobs with the city’s largest industry – manufacturing. Lawrence is the poorest city in Massachusetts, and the 23rd poorest in the nation. Household income in 2006 was $26,780—a staggering 45 percent lower than the national figure (Ibid).

Social challenges facing Lawrence at large include public health issues like high rates of respiratory disease, substance abuse and childhood obesity. Public safety is challenged by local drug trafficking, violent crimes and crimes against property. In addition, low rates of educational attainment (Figure 1) make it difficult to escape Lawrence’s many social and economic challenges.

**Natural Features: A Resource in Short Supply**

The 2004 OSRP outlines Lawrence’s environmental challenges as well as goals for future open space improvement and development in this city of only seven square miles. While access to open space is important for improving public health, attracting jobs, increasing property values, reducing crime and nurturing a sense of community (City of Lawrence, 2004),

<table>
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<tr>
<th>PERCENT OF EDUCATIONAL ATTAINMENT OF POPULATION OVER AGE 25</th>
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<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Lawrence</td>
</tr>
<tr>
<td>Massachusetts</td>
</tr>
</tbody>
</table>

*Figure 1. Levels of educational attainment in Lawrence, as compared to Massachusetts as a whole. Source: Census 2000.*
this resource is in short supply. Improving and maintaining the city’s parks and recreational facilities is hindered by “competing demands for space to accommodate the city’s growing school population, the cost and complexity of brownfield remediation projects, and the need for greater resources to support parks and maintenance” (Ibid). Recommendations from resident surveys include better park maintenance, more trash and recycling containers, increasing the accessibility and health of the water resources, more trees in the city, new open space opportunities and community involvement and stewardship.

Of particular interest to Mass Audubon may be the OSRP call for local environmental education:

“Parks and open spaces need to be integrated with educational programs to promote greater stewardship of these spaces. Specific suggestions included the development of a citywide environmental curriculum in the public schools and more service learning programs in the parks” (City of Lawrence, 2004).

The OSRP findings and recommendations reveal Mass Audubon’s opportunity to not only help meet critical open space goals, but also to offer relevant and accessible local programming.

Public Assets

Despite its challenges, Lawrence has significant assets that are also important to incorporate into programming. The most important assets relevant to Mass Audubon include local open space, potential partners and local schools.

Environmental needs in Lawrence include: park maintenance, trash and recycling containers, improving the health and accessibility of water resources, more trees in the city, new open space opportunities, community involvement and stewardship. (City of Lawrence, 2004)

Public Assets

Despite the challenges, Lawrence has significant assets that are also important to incorporate into programming. The most important assets relevant to Mass Audubon include local open space, potential partners and local schools.

1. In 2004, the parks and playgrounds used most often were North Common, South Common, O’Neill, Hayden-Schofield Playstead, Riverfront Park and boating program, Mt. Vernon, Storrow, Howard, the Reservoir, Stadium Complex, South Lawrence East and Costello Parl / Shawsheen River Trail (City of Lawrence, 2004).

2. Lawrence’s history of resident activism includes the famous 1912 Bread and Roses Strike for Labor Rights. In response to a pay cuts, an estimated 30,000 textile workers went on strike for over two months. The Bread and Roses Strike was unique due to the diversity of its coalition, as the striking laborers were from over 30 countries (Contreras, 2006), and their efforts are considered the cornerstone of the labor rights movement in this country.
ganizations have shaped their mission to reflect the needs of the community, and committed both time and money to establish their role and build relationships (see section on Potential Partners on page 26). Despite the difficulty with retaining students, schools are also cited as local assets. The Lawrence school district has 26 public schools, seven private schools, one collaborative school and two charter schools.

Expanding Relevance: Communities of Interest

The Latino presence in Lawrence is unmistakable. According to the city website, the community “has given a Latino slant to the local economy and culture” (City of Lawrence, 2008), and Latino bodegas and restaurants appear throughout the city. The first wave of Latino immigrants –Puerto Ricans followed by Dominicans– came to Lawrence in the mid 20th century. Families moved to Lawrence to work in the city’s booming textile industry, and the

Latin presence spread throughout neighboring Lowell, Boston and Lynn. In 2006, “persons of Hispanic or Latino origin” in Massachusetts represented 7.9 percent of the state’s total population. Latino radio programming, television stations and newspapers like El Mundo (and local to Lawrence, the Rumbo) inform and connect the diasporas, providing a “cultural bridge” for Spanish speakers in Massachusetts (Diaz, 2007).

According to the 2000 Census, 59.7 percent of the population of Lawrence identifies as

<table>
<thead>
<tr>
<th>Region of Birth of Foreign-Born Residents</th>
<th>Lawrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>919</td>
</tr>
<tr>
<td>Asia</td>
<td>1,929</td>
</tr>
<tr>
<td>Africa</td>
<td>99</td>
</tr>
<tr>
<td>Oceania</td>
<td>10</td>
</tr>
<tr>
<td>Latin America</td>
<td>18,509</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country of Birth for Latin American Residents*</th>
<th>Lawrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cuba</td>
<td>329</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>15,438</td>
</tr>
<tr>
<td>Haiti</td>
<td>143</td>
</tr>
<tr>
<td>Jamaica</td>
<td>67</td>
</tr>
<tr>
<td>Other Caribbean</td>
<td>114</td>
</tr>
<tr>
<td>Mexico</td>
<td>146</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>146</td>
</tr>
<tr>
<td>El Salvador</td>
<td>92</td>
</tr>
<tr>
<td>Guatemala</td>
<td>891</td>
</tr>
<tr>
<td>Honduras</td>
<td>107</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>0</td>
</tr>
<tr>
<td>Panama</td>
<td>6</td>
</tr>
<tr>
<td>Other Central American</td>
<td>7</td>
</tr>
<tr>
<td>Argentina</td>
<td>64</td>
</tr>
<tr>
<td>Bolivia</td>
<td>5</td>
</tr>
<tr>
<td>Brazil</td>
<td>78</td>
</tr>
<tr>
<td>Chile</td>
<td>0</td>
</tr>
<tr>
<td>Ecuador</td>
<td>571</td>
</tr>
<tr>
<td>Guyana</td>
<td>5</td>
</tr>
<tr>
<td>Peru</td>
<td>159</td>
</tr>
<tr>
<td>Venezuela</td>
<td>74</td>
</tr>
<tr>
<td>Other South American</td>
<td>7</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>15,816</td>
</tr>
</tbody>
</table>

*NOTE: Totals above do not include residents born in Puerto Rico (not ‘foreign-born’)

Figure 2. Lawrence’s Latino community is culturally diverse, coming from countries throughout Central and South America and the Caribbean.
Hispanic or Latino of any race. This estimate is almost five times the national figure. In the 2004-2005 school year, over 85 percent of children enrolled in public school were Latino (Massachusetts Department of Education, 2006). Examining the cultural breakdown in detail reveals the true breadth of the city’s diversity, even within the majority Latino population (Figure 2).

The team’s outreach process began by attempting to understand the needs and experiences of Puerto Ricans in Lawrence, as they are one of the largest cultural groups in the city (see Figure 2) and the pioneering immigrant Latino community. This approach was in acknowledgement of the differences between the many Latino groups and was to serve as a starting point for increasing Mass Audubon’s ability to relate to different experiences and backgrounds—a key element of cultural competency. Isabel Melendez, Director of the Community Service Center and host of the local radio program, “La Voz del Pueblo” (Voice of the Town), explains, “Even though we all speak Spanish, we come from different cultures, different countries…we have different customs” (personal communication, April 11, 2008).

Despite the differences in customs and cultures, addressing these differences through program design is not happening in Lawrence (that is not to say that some organizations are not incorporating cultural competency into their work). In seeking to explore the needs of one cultural group, tensions were revealed that created limitations and may help to explain why organizations are engaging Lawrence’s Latino community as a single entity. Tensions between the communities were broached in both interviews and the focus group and connected to immigration status, perceived advantage of one group over another and feelings of displacement among older immigrant communities toward newer communities. While it is important to recognize cultural differences amongst Latinos, the revealed tensions and limitations necessitated broadening the scope and looking into issues affecting the broader Latino community. This approach remains consistent with other elements central to increasing competence identified in Tso and Hill’s “Understanding Cultural Competency”—self-awareness, reaching people where they are, providing multiple points of access, addressing language differences and addressing differences in socio-economic backgrounds and resources among program participants and families (Tso and Hill, 2006).

Preliminary research in Lawrence revealed that many organizations are responding to community needs regardless of whose needs those are, and organizations are not keeping data on the cultural background of those served. A representative of the Merrimack Valley YMCA explained, “We are here for everyone regardless of race or ethnicity or economic background. We try to find the needs of the greater community…and we don’t have specific niche programming that would just reach out to one group” (personal communication, March 26, 2008). Other advocacy and outreach organizations recognize that Lawrence’s challenges have a disproportionate affect on Latinos and have concentrated their efforts on increasing opportu-
nities for all Latino residents. Although one in five families in Lawrence live in poverty, on the largely Latino north side of Lawrence, this figure rises to two in five families (Lawrence Community Works, 2008). One focus group participant expressed that “the system here is not working in favor of the majority, which is the minority” (focus group, April 9, 2008).

GIS (Geographic Information System) mapping of state environmental justice data illustrate these disparities (Appendix F). The idea that all people have a right to be protected from environmental pollution and to live in a clean and healthful environment is the foundation for environmental justice (EJ). The Massachusetts Executive Office of Energy and Environmental Affairs (EOEA) has developed an EJ policy so state resources are used to ensure EJ populations have a voice in environmental decision-making. The EOEA defines a neighborhood within the state as an EJ population based upon any combination of four criteria: (1) high minority (percentage of population within a neighborhood that is greater than 25 percent), (2) non-English speaking (percentage of English proficient households within a neighborhood is less than or equal to 75 percent), (3) low-income (neighborhood that had a median household income less than 65 percent of the statewide median household income) and (4) foreign-born populations (neighborhood with 25 percent or more of the population that is foreign-born). As seen in the maps, almost all parts of Lawrence qualify as EJ communities, yet foreign-born and minority populations are concentrated north of the Merrimack River, especially in the area surrounding the North Common. This area also has low rates of English proficiency, as compared to the rest of Lawrence, as well as the lowest annual household income.

Uniting Latinos in Lawrence

In the outreach process, several elements were repeatedly cited as elements that help bring the entire Latino community together. While these elements may not seem to directly connect with Mass Audubon’s vision, in light of potential tensions within the community and local barriers to participation, these elements would be important to incorporate into local Mass Audubon programming.

Sports

Sports are a significant part of community’s interaction with open space. Various programs in Lawrence organize leagues to meet demand for sports opportunities and provide an important opportunity to spend time outdoors. The Roberto Clemente League, run by the Community Service Center, offers an affordable opportunity for more than 200 children ages 5-15 to play baseball during the summer. The league’s 18 teams all practice on the North Common, in the heart of northern Lawrence.

Music and the Arts

Music and arts are also valued in the community, yet the focus of both interviewees and focus group participants was the lack programs in “arts, music and dance… that give the kids options” (personal communication, April 9, 2008). The YMCA has acted to compensate for the decline in music and arts programs in local schools by building an on-site recording studio.
One focus group participant felt that celebrations that incorporate music are more likely to bring everyone together (focus group, April 9, 2008). The 35th Anniversary Celebration of El Mundo in 2007 was celebrated at Fenway Park in Boston. In order to “reflect the rainbow of backgrounds of the Boston’s Latino Community,” the son of the newspaper’s founder hired various local Latino musicians and proclaimed “Without music, it’s not a party” (Diaz, 2007).

Cultural Festivals

Cultural celebrations like the Hispanic Week Festival and the Italian Festival also act to unite Lawrence’s Latino community. In founding the popular Hispanic Week Festival, Ms. Melendez “wanted something where everybody could raise their hands [and celebrate]…that we are Latinos…that we are Lawrencians.” Appropriately, the theme of the festival is “Together in Harmony,” and the goal is to “promote culture and bring communities together, Hispanic and non-Hispanic” (personal communication, April 11, 2008). Residents share food and folk music unique to their culture in booths and on a stage set up in the North Common. The annual three day festival has swelled to an estimated 50,000 participants in recent years, with attendees coming from as far as New York and Chicago.

Challenges Facing the Latino Community

The following challenges emerged from research in Lawrence, largely through interviews and the focus group, and they should be recognized as barriers to participation within the Latino community. Mass Audubon has an opportunity to meet the needs reflected in these challenges through programming that incorporates community interests.

Immigration-Related Constraints

Immigration and citizenship was cited repeatedly as one of the largest problems facing Latinos in Lawrence. Without citizenship, residents are more vulnerable to exploitation by employers and less trusting of individuals outside of the community. As discussed in Chapter Two, immigration-related constraints –like the inability to speak English –are one of the four primary barriers that prevent Latinos from recreating (Stodolska, 1998). In order to reach such a diverse population, organizations working in the community must overcome its significant language barriers (Figure 3). Isabel Melendez expressed “the biggest problem we have [in Lawrence] is the language barrier… I believe that’s why I see over 1,000 people a month –we talk to them in Spanish… An organization should have someone at least greeting in Spanish…The first contact is very important for people.” She also felt that there is a lack of organizations that will sit down with members of the community to help them read and fill out job applications (personal communication, April 11, 2008). In addition, illiteracy, the inability to read and write, is a challenge among both English and Spanish speaking residents, further complicating communication and outreach efforts.

<table>
<thead>
<tr>
<th>LANGUAGE SPOKEN AT HOME</th>
<th>Population 5 years and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>English only</td>
<td>16,818</td>
</tr>
<tr>
<td>Spanish</td>
<td>45,157</td>
</tr>
<tr>
<td>Speak English less than ‘very well’</td>
<td>22,722</td>
</tr>
</tbody>
</table>

*Figure 3. Languages spoken at home in Lawrence, MA. Source: Selected Social Characteristics in the United States: 2006, U.S. Census Bureau*
Economic Challenges, the Importance of Work and a Lack of Spare Time

Census data illustrates the income disparity between Lawrence’s total population and the city’s Latino community (figure 4).

<table>
<thead>
<tr>
<th>ECONOMIC CHARACTERISTICS: LAWRENCE, MA</th>
<th>Total population</th>
<th>Hispanic or Latino, of any race</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median household income (in 1999 dollars)</td>
<td>27,983</td>
<td>24,873</td>
<td>41,994</td>
</tr>
<tr>
<td>Per capita income (in 1999 dollars)</td>
<td>13,360</td>
<td>9,868</td>
<td>21,587</td>
</tr>
<tr>
<td>% Individuals below poverty level</td>
<td>24.3</td>
<td>31.0</td>
<td>12.4</td>
</tr>
</tbody>
</table>

Figure 4. Economic characteristics of Lawrence at large and Lawrence’s Latino community, as compared to the US averages. Source: 2000 American Community Survey Data Profile Highlights, U.S. Census Bureau.

As there is a shortage of available jobs, for those that are employed, working multiple jobs and long hours is not uncommon. In single parent households, this situation is exacerbated. Cooke Laboe, Director of the Roberto Clemente Baseball League shared, “Most of the [Roberto Clemente] kids have never been out of Lawrence. There are a lot of hardworking single parents…the kids take to their coach as a parent-figure” (personal communication, April 9, 2008). As discussed in the academic literature, many Latino residents simply do not have leisure time (Stodolska and Alexandris, 2004).

As outlined in the literature review, economic challenges affect transportation issues and make connecting with the environment less of a priority. A representative of the Merrimack Valley YMCA explained, “When people are living paycheck-to-paycheck, and they do not have enough resources to put food on the table, they are not necessarily thinking of recreation,” instead they are “focused on trying to find work and get their basic needs met” (personal communication, March 26, 2008). A focus group participant working for the “betterment and beautification” of North Lawrence open space through his neighborhood association, shared his struggle to get the community involved—“we’ve spread out a lot of fliers, but we don’t see any response. A lot of people are all for it, all for the cleanups…but we can hardly get any people to come for the meetings” (focus group, April 9, 2008).

Decline in Local Programming

Drop-in centers and other local programming that engage children and provide some relief to single and hard-working parents has declined in recent years. This is a serious challenge that reflects an enormous opportunity for Mass Audubon. One focus group participant shared, “I see kids that would rather go to the [Adelante Youth] center than go to their house…because they go home to an empty house. And with so many programs being cut, they don’t have anywhere to go.” Another felt that when “kids stay home, they stagnate…they join gangs” (Ibid). When families cannot afford to place their children in programming, program centers have a difficult time paying rent for their facility and offering services. The combination of the decline in programming and the lack open space has left parents with few trusted options for their children to socialize and play.
Crime and Safety

Although crime has improved in recent years, Lawrence has faced significant crime issues in the past. One focus group participant shared that in the 1990s, Lawrence was “known as the car theft capital of the world” and that “many people are still living in fear.” This resident lived adjacent a city park, but she would not let her two children play there out of fear for their safety (Ibid). Despite these challenges, in Isabel Melendez’s 17 years running the Hispanic Week Festival, she asserts that there was never a problem with crime or fighting – “the stage is never empty…people don’t have time for problems, because there is so much to see” (personal communication, April 11, 2008).

Lack of Quality Open Space

Several environmental concerns were raised throughout the team’s on-the-ground research in Lawrence. Trash, water resource pollution and the lack of open space were cited most frequently. The 2004 OSRP estimated open space in the largely Latino northern part of Lawrence at less than 140 square feet per capita, while open space in the city’s southeastern and northwestern areas ranged from 672 to 2022 square feet per capita (City of Lawrence, 2004). Additionally, as of 2004, there were no dedicated soccer fields in Lawrence despite the hundreds of children enrolled in soccer programs and its importance to many members of the Latino community.

Trash and pollution affect the quality of the little open space that is available. Before community efforts to clean up the North Common, the park was “never touched,” littered with needles and pieces of glass. Isabel Melendez recognized the importance of both sports and green space to Latino families, and she spearheaded efforts to secure part of the park for the Roberto Clemente Baseball League, explaining to city government, “that in Latin countries, the park is like the plaza where families gather” (personal communication, April 11, 2008). The Lawrence Community Boating Program offers sailing on the Merrimack River, but focus group participants indicated that Lawrence’s rivers “stink,” and past clean up efforts have yielded “refrigerators, stoves, tires, cars and shopping carts.” Without clean-up efforts, programming that increases access to the city’s open space will be under-utilized.

The lack of quality open space in combination with economic challenges and lack of spare time exacerbates resident’s lack of connection to their surrounding environment. In the focus group discussion, one participant noted the loss of a connection to nature specifically among foreign-born Latinos. The loss of this cultural and experiential association to the environment

“The accommodations in Lawrence are for people to work, not live.”

Cookie Laboe, Director, Roberto Clemente Baseball League
was attributed to an acclimation to city life:

“A lot of people come here from other countries...many from the Caribbean...a lot of us tend to take for granted all of the scenery we had in our country, and some of us come from poor backgrounds...and when we come here, we tend to forget about all of that, and we become comfortable with the city way of life”

The same participant shared, “When [my family] started going to the White Mountains, I said ‘Wow, what have I been missing?’ ... going down the winding roads reminds me of being in Puerto Rico” (focus group, April 9, 2008).

Building a Relevant Presence: Potential Partners in Lawrence

Several organizations are working on the ground in Lawrence to overcome the challenges facing residents, Latino and non-Latinos. These organizations have built relationships with the community over time by responding to peoples’ needs. In light of their familiarity with the community, these organizations would be valuable partners for Mass Audubon as it looks to build a relevant presence.

Potential Lawrence Partners
- Adelante Youth Center
- Arlington Community Trabajando
- Big Brothers/Big Sisters of Greater Lawrence
- Boys & Girls Club of Lawrence
- City Community Development Department
- City Recreation Department
- Greater Lawrence Community Action Council Inc.
- Greater Lawrence Family Health Center
- Groundwork Lawrence
- Family Service Inc.: This organization explicitly lists ‘cultural competence’ as one of its core values
- Lawrence Alma/Arlington Neighborhood Association
- Lawrence Community Works, Inc
- Lawrence Cultural Council
- Lawrence-Methuen Community Coalition
- Merrimack Valley Project
- Merrimack Valley YMCA / Lawrence YMCA
- Methuen Arlington Neighborhood Association
- Youthbuild Lawrence
- YWCA of Greater Lawrence

Building a Relevant Presence: Specific Recommendations

On-the-ground research in Lawrence illustrates important points for conservation organizations looking to enter urban and diverse communities across the state –understanding community needs, innovating in response to those needs, establishing a local presence and expanding relevance by incorporating cultural competency. Creating a community-relevant presence in a city of such challenge requires that conservation organizations like Mass Audubon work within and expand upon the Boston Nature Center framework of “people’s needs and nature” (Agyeman, 2006).

The following recommendations are reflective of the Latino community’s interests and needs revealed in outreach, and they may help Mass Audubon engage this sizeable community:

1. Increase the accessibility and relevance of IRWS programming

As cost and cost-related barriers significantly affect participation in communities facing
The Merrimack Valley YMCA, formerly a “gym and swim” organization, has created innovative, community-relevant programming for all residents in need by reacting to the needs of the surrounding community. A representative of the Merrimack Valley YMCA explained that “when people are living paycheck-to-paycheck, and they do not have enough resources to put food on the table, they are not necessarily thinking of recreation,” instead they are “focused on trying to find work and get their basic needs met” (personal communication, March 26, 2008). The Merrimack Valley YMCA mission is “to break the cycle of poverty, illiteracy and homelessness by providing free basic educational services to all who apply” (Merrimack Valley YMCA, 2008). The organization has committed to helping residents overcome local challenges through the following initiatives:

- Affordable, high-quality childcare that incorporates learning to prepare young children for school
- On-site low-income housing and supportive services
- Value-oriented sports programs that promote health and wellness
- A music clubhouse and on-site recording studio to accommodate for the cutback of art and music programs in local schools
- A ‘Teen Achievers’ program that provides academic assistance, career and college awareness and mentoring opportunities to young people.
- ESL, Computer and Citizenship classes

Although the YMCA tries “to find the needs of the greater community” and does not have “specific niche programming that would just reach out to one group” (personal communication, March 27, 2008), they have increased relevance through culturally competent and community-relevant efforts. In addition to programs that reflect the needs of the community, the organization recognizes the importance of having a staff that mirrors the community –Latinos currently represent approximately 50 percent of the organization’s management team.

The Adelante Youth Center has worked in Lawrence for 16 years with the mission of providing a safe and productive after school and summer environment for the youth in Lawrence. The organization strives to be conscious and responsive to the needs and cultural values of the Latino community and to provide programs and role models that will foster Youth Development and leadership in the Latino community (Adelante Youth Center, 2007). The organization provides education preparation, homework help and scholarships to low and moderate-income students to attend tuition-based schools. Adelante does not keep record of students’ cultural background, but staff members usually learn this information in building relationships with the children. Adelante Youth Center has recently moved into the space at the Lawrence YMCA, and youth receive free access to YMCA facilities. Executive Director, David Hildt, likens cultural competency to providing good customer service and views it as a way to reach out and engage the community and provide a context through which people can relate to an organization (personal communication, March 27, 2008).
significant economic challenges, reducing or eliminating these barriers is important. As a first step, Mass Audubon should make IRWS more accessible and relevant to Lawrence’s Latino community. IRWS staff could build partnerships with Lawrence’s schools and program centers and offer reduced rates for IRWS programming. While programs offered at the sanctuary can run as high $345 for groups with less than 15 people (River Ecology), and “Programs At Your School” are currently $100/hour and cover topics like “Soils Underfoot.” These lessons could be tailored to increase their relevance in Lawrence and encourage local stewardship, for example, by educating students on pollutants in local soil, but the IRWS consultation fee for developing programming outside of pre-developed curriculum is $50/hour. This fee should be waived in low income communities where traditional programming is not relevant. Mass Audubon could also partner with schools, program centers, community development centers, neighborhood associations and churches on funding for transportation, especially for large groups like school field trips.

2. Use relevant media sources and methods to reach the community

Whether increasing the accessibility of IRWS or working within the Lawrence city limits, Mass Audubon’s efforts should be advertised through trusted and relevant media sources such as the Rumbo, El Mundo and “La Voz del Pueblo.” Fliers should be in both English and Spanish placed in windows of trusted community partners like the YMCA, the Boys and Girls Club, the Greater Lawrence Community Action Council, Inc. and the Greater Lawrence Family Health Center. Emails are not likely to be effective, but spreading news using word-of-mouth through community leaders will help raise awareness of Mass Audubon’s efforts. Programming must be affordable.

3. Increase the quality of available open space

Mass Audubon could help increase the health and quality of available open space, a valued resource in short supply, by sponsoring clean-up initiatives in partnership with established local organizations and the private sector in support of OSRP goals and voiced resident concerns. Clean-up projects bring community members together and encourage teamwork and stewardship. Cleaner parks benefit the community beyond Mass Audubon’s physical presence in the city. Mass Audubon could partner with local homework help and scholarship organizations that have a volunteer requirement (Adelante Youth Center, for example) to help students fulfill their hours through park clean-up or urban forestry. In addition, this investment of time and money offers an opportunity to interact with community members and demonstrates Mass Audubon’s commitment to the urban environment.

4. Respond to the decline in local programming

After school programs piloted at the BNC would be valuable in light of the decline in local programming, the strain that this puts on parents and the consequences for children. Affordable childcare, summer camp and mentoring opportunities (especially those tied to scholarship programs) are in great demand. These programs
could be offered in the space of a non-competitor in Lawrence or in rental space. In order to keep these efforts relevant and accessible to the Latino community, staff members should be bilingual and the program facility and planned outdoor activities should be located in northern Lawrence. Programs should focus on the natural features that are present and even those that are in danger, rather than those that are not, and could include concepts like Nature in Our Neighborhood, Merrimack and Spicket River Ecology, Improving Our Soils Underfoot and Urban Forestry and Gardening. Mass Audubon could conduct some traditional programming at Den Rock Park to increase the community’s awareness of and familiarity with this large, local resource, but the organization should provide transportation. Mass Audubon could also connect with homework help programs that are already a trusted partner in the community to make tutoring more exciting for children.

5. Incorporate unifying cultural elements

The team’s focus group discussion revealed environmental interest that conservation organizations such as Mass Audubon have an opportunity to engage. Foreign-born Latinos expressed a deep cultural connection to natural elements that do not appear in New England. One focus group participants shared several touching anecdotes about his connection with nature as a child in Puerto Rico. He expressed a fondness for his grandfather’s farm with coffee trees, avocado trees, orange trees and bananas, and felt that community gardens might be a way to engage foreign-born Latinos with similar memories. Mass Audubon could tap into the lost connection with nature among foreign-born Latinos and their children by establishing “Heritage Gardens” for growing non-native plants that reflect one’s cultural background at or in partnership with Lawrence Heritage State Park. This park has 23 acres throughout the city and exhibits on Lawrence’s industrial, labor and immigration history.

In order to build the broadest environmental constituency, elements that unite the Latino community – music, the arts, cultural festivals, sports and other – should be incorporated into programming. The organization could sponsor local sports teams, or help pay for cleaning up, lining or lighting the fields. Mass Audubon could set up a booth at the Hispanic Week Festival to educate the community about the diversity of avian species in Latino countries. Additionally, community picnics and free lecture series with Mass Audubon naturalists could be hosted at local parks and accompanied by local Latino musicians. While these recommendations may not seem mission appropriate, these elements could help build relationships and make residents more likely to participate in other Mass Audubon initiatives.

If a sanctuary or nature center is sited in Lawrence or the surrounding area, Mass Audubon should be flexible in the use of space. Green space should be set aside for picnicking, parties or large festivals and sports. A site audit should be conducted on a regular basis to assess its perceived accessibility and relevance.
Framingham

Mass Audubon Role in the Region

One of the primary ways that Mass Audubon serves the MetroWest region is through its Broadmoor Wildlife Sanctuary (BWS). Tucked away in the southern part of Natick, Broadmoor offers nine miles of trails that can be used by hikers, joggers, cross-country skiers, snowshoers and birders alike to provide picturesque views of woodlands and wetland habitats. A quarter-mile stretch of the trail and a boardwalk is also accessible to handicapped visitors. The site also features the staffed Saltonstall Nature Center complete with solar heating and composting toilets to illustrate the benefits of green architecture to visitors.

Despite the fact that BWS is visited by hundreds of people every year, Mass Audubon recognizes that there are shortcomings with their work in this area of the state. One main source of concern is the fact that the aforementioned 2008 analysis of user data from 2004-2007 revealed that the majority of the visitors to the BWS come from either Natick or other surrounding towns such as Holliston or Wellesley, with very few coming from Framingham. (Massachusetts Audubon Society, 2008). As a community that has a significantly larger population and is more diverse than neighboring communities, Mass Audubon has identified Framingham as a town where a larger presence could be felt if cultural competency was better incorporated into their education and outreach plans.

This part of the report seeks to provide greater insight into the Framingham community and potential ways to increase Mass Audubon’s impact in the MetroWest region. The process was similar to the one for Lawrence, and background research on Framingham led to the decision to focus on the Brazilian community as an underserved segment of the town’s population.

Literature on the cultural group was reviewed and a dozen one-on-one interviews were performed with members of the Brazilian community and other local advo-
cacy leaders. Researchers decided to substitute a focus group for interviews in order to accommodate schedules and transportation constraints (See Appendix E). As mentioned in the introduction, this overview is unable to provide a complete overview of the entire town, but should be considered the first step to gain integral pieces of culturally- and community-specific information that can help guide Mass Audubon with their future work.

The Town of Framingham: Background

Roughly twenty miles to the west of Boston and five miles northwest of the Broadmoor Wildlife Sanctuary is the heart of downtown Framingham. The town was first settled in 1647 and played an important role in the Revolutionary War, later serving as a center for the abolitionist movement prior to the Civil War. Framingham has since developed into the hub of MetroWest, primarily known for its sprawling retail shopping areas and large office complexes which serve as the world headquarters for companies such as TJX, Boston Scientific and BJ’s Wholesale Club.

According to the U.S. Census, Framingham has a population of 66,910 with 16,573 families, making it the most populous “town” (or civic division with a town meeting form of governance) in New England (U.S. Census, 2000). Its population has diversified over the years with significant influxes of immigrants. Many of its residents are now relatively new to the United States, coming from the Caribbean, Central and South America, Russia, Asia and Africa. In 2000, the overall racial makeup of the town was 79.8 percent White American, 5.1 percent Black or African American, 0.2 percent Native American, 5.3 percent Asian American, 0.04 percent Pacific Islander American, 6.3 percent from other races, and 3.4 percent from two or more races (U.S. Census, 2000). Hispanic or Latino of any race made up 10.9 percent of the population. Economically, the community of Framingham is far different than that of Lawrence, as the household median income is $54,288 and the family median income is $67,420. Nonetheless, approximately 8.0 percent of families and 16.0 percent of the population were considered to be below the poverty line (U.S. Census, 2000).

Natural Features

Despite its dense population, Framingham has a number of natural features of note. The town is located within the Sudbury-Assabet-Concord (SuAsCo) River watershed and is bisected by the nationally-designated Wild and Scenic Sudbury River. Outdoor recreation facilities can be found at a number of town-managed athletic fields, Richard Callahan State Park, the Town’s Farm Pond and Waushakum Pond, as well as just over the border in Natick at Lake Cochitu-
ate State Park and Mass Audubon’s Broadmoor Sanctuary. According to the Town, undeveloped and recreational land in public ownership makes up approximately one-fifth of Framingham’s total land area, with the Town’s Conservation Commission responsible for 400 acres (Town of Framingham, 2003). The Sudbury Valley Trustees also manage an approximately 200-acre private conservation trust (Sudbury Valley Trustees, 2008).

According to the Town’s 2003 OSRP, the demand for public recreation facilities is determined by five key factors: population growth, population density, housing tenure, income and age of population (Town of Framingham, 2003). In this context, high levels of population growth between 1940 and 1970 and the resulting expansion of residential development increased the demand for recreational facilities while simultaneously reducing the town’s stock of open space over the past few decades. Further, as some areas of the town are densely populated by younger, lower income residents who mostly rent, the demand for recreational opportunities and open space is high. Traditionally, the onus to provide free or low-cost facilities and programs is therefore placed on the Town.

Expanding Relevancy: Communities of Interest

To broaden their reach in Framingham, Mass Audubon must take into consideration traditionally underserved and new segments of the town’s population. The relevance of environmental justice (EJ) communities, as discussed in the Lawrence section, is also present in Framingham. The maps in Appendix F illustrate how certain areas in the town qualify as EJ communities. Although the levels of income and English proficiency in these areas are higher than those in Lawrence, they are still well below the Framingham’s averages. Of particular interest is the overlap with the Brazilian community, as many members of that group live in the southern part of Framingham and shop in the business district in the southeast.

In addition to the group’s overlap with EJ communities, the presence of Framingham’s entire Brazilian community cannot be ignored. For several decades, Brazilian immigrants have been settling in the town and some analysts estimate that they currently comprise up to a fifth of the town’s total population (Ordoñez, 2005). Their presence and contributions have been notable: Brazilians and Brazilian-owned businesses helped to lead a downtown revival in the early 2000s, they make up a significant percentage of the school-aged population, work locally and fill churches in town.

However, members of the Brazilian community interviewed for this report were generally unfamiliar with the BWS and the work of Mass Audubon. As such and for the purposes of this research, their views are considered to be representative of “non-users” of the Sanctuary.

“What do they do over there? Is that some sort of spiritual place?”
- a Brazilian interviewee when asked if she was familiar with the Broadmoor Wildlife Sanctuary
For some of those that have passed by the BWS but had not visited, there was confusion as to what went on at the Sanctuary and whom it serviced.

In order for Mass Audubon to expand on its presence in Framingham, it is essential that their outreach in the town be better informed by a greater competency of the traditionally underserved communities and non-users there. The Brazilian community should serve as a starting point, one that can be informed by the history of the group and the overview of their interests, needs and challenges that this case study presents.

“The Capital of Brazuca”: Brazilians in Framingham

Taking a walk through Framingham’s downtown, it is impossible to escape the signs and sounds of the Brazilian community. The beginnings of the community go back to World War II when some Framingham residents temporarily worked in Brazil extracting mica for the war effort. Some Brazilians followed the workers back home, setting off a chain migration of their children, siblings and cousins immigrating to the town. Now with the highest percentage of Brazilian immigrants in the United States, *O Estado de Sao Paulo*, a leading newspaper in Sao Paulo, has bestowed Framingham the title of “the capital of Brazuca.” A “Brazuca” is a Brazilian immigrant who has immigrated to the United States (Ordoñez, 2005).

While Census data report there to be 3,500 Brazilian residents in Framingham, it is widely believed that town and state numbers have been vastly underestimated due to frequent confusion with U.S. Census forms and the significant
number of undocumented immigrants who did not participate in the counting. Some experts have estimated instead that these numbers are as high as 230,000 statewide and 13,000-17,000 in Framingham alone (Ballou, 2008; Brennan, 2007; Ordoñez, 2005).

According one piece of research, Brazilians in Framingham “work two or three times more than what they used to work in Brazil, hold jobs that they would never have back home, and long to go back to their homeland” (Mineo, 2004). Despite the fact that many of them have at least a high school diploma, the majority work jobs in the service industry at levels far below what is attainable in their homeland. In the past, many Brazilians - particularly single men - came to Framingham not with the hopes of settling there, but with the intention working tirelessly for a few years to save enough money before returning to start a better life back home (Brooke, 1990).

For those that stay, some have become local business owners who have recreated the offerings of their homeland through traditional restaurants and imported products. In doing so, the downtown area, where most of their businesses are located, has transformed a once under-used section of town into a busy center for the community. Even Brazilians from other cities across the state regularly make the trek to Framingham to buy these cherished products (personal communication, April 19, 2008; Mineo, 2008).

Outside of work, religion plays an important role. Even though there are sometimes tensions between them, Evangelical and Catholic churches draw the largest numbers of Brazilians in town. The churches provide a sense of trust for the community and provide a support network, a social outlet and services often not accessible by those without legal documents (personal communication, April 7 and April 19, 2008).

Finally, when time permits, outdoor recreation is also important to the community. Soccer is hugely popular with both youth and adults. According to one interviewee, many engage in recreation as families and participate in church trips to areas such as the Nobscot Boy Scout Reservation on the Framingham/Sudbury border. Additionally, while Framingham organizations and residents have struggled to host cul-
tural festivals over the past few years, the annual outdoor Brazilian Independence Day Festival held in Brighton, Massachusetts every September draws 5,000-7,000 Brazilians from the area (Georgantopoulos, 2007).

Connections to nature for the Brazilians in Framingham stem primarily from their experiences back in Brazil. According to researchers studying the town’s new Brazilian arrivals, the vast majority of them come from the same southern state of Minas Gerais and even the same city of Governador Valadares. Agriculture and mining are key in this region (Brooke, 1990) known for its ranching, gemstone extraction, and milk and coffee production. When many Brazilians talk of nature there, they mention growing vegetables in their back yards, visiting local nature reserves, sitting under mango trees, fishing, picnicking with family and generally enjoying an idyllic outdoor experience. Using the outdoors for exercise is also popular (personal communication, April 19, 2008).

On-the-Ground Realities: Challenges Faced by the Brazilian Community

While traditional cultural connections to nature are important to recognize, environmental organizations wishing to have a relevant presence in Framingham must also be aware of the “culture” of the Framingham community in which Brazilians live. Research in town revealed that Brazilians in face a number of day-to-day challenges that could significantly affect their ability to participate in programming.

Legal status

Many Brazilians are skeptical of those outside of their community and therefore are often uncomfortable attending public events. This stems from the fact that Brazilians in Framingham (undocumented or not) are often targeted by a small but determined group of anti-immigrant activists that go to great lengths to criticize and intimidate the community with tactics that include bringing video cameras to public events (Boston Globe, 2006). Additionally, according to a recent survey, 65 percent of Brazilians said they believed Framingham police were targeting them (Mineo, 2008). This comes as the police recently decided to send two officers to immigration law enforcement training from the federal government and rumors of immigration raids have been spreading quickly throughout the community (Ibid). While town selectmen passed a proclamation in 2003 to declare Framingham’s tolerance and respect for people of all backgrounds, Brazilians interviewed for this report stated that many in their cultural group feel discriminated against by the Town on issues
ranging from use of recreational fields to building inspections (personal communications, March 20 and April 19, 2008). The situation remains extremely sensitive and many feel that the town has a great deal of work to do in order to make all residents feel welcome and safe.

Employment Demands

Employment demands place added stress and time constraints on the Brazilian community. Regardless of status and like many new immigrants, much of the community struggles to work several jobs in order to meet living costs in the U.S. and send money back to Brazil. This leaves little time for recreation and an inability of some to pay transportation and admission costs required for many recreational activities such as visiting Mass Audubon sanctuaries.

Limited Opportunities for Youth

Current opportunities for young people, a key component of Mass Audubon’s outreach work, are limited for the Brazilian community in Framingham primarily due to financial constraints and family responsibilities. Many youth in the town participate in a host of recreational activities as well as special college preparatory programs, yet these come at a substantial cost that many immigrant families cannot afford. While working several jobs, finding safe and affordable childcare for families that have left their extended families and support systems behind can also be a challenge. During the summer months and after school, older children have limited transportation options, have jobs of their own or are often needed to watch their siblings at home (personal communication, April 7 and April 17, 2008).

Transportation Constraints

As outlined in the EJ section, there are transportation constraints to increasing the number of visitors to the BWS. While some members of the community have their own cars, many depend on walking, biking, public transportation and ride sharing for getting around. The MetroWest Regional Transit Authority (MWRTA) – the bus system for the region – does not service BWS (MWRTA, 2008). Without organized transportation, BWS is largely inaccessible to a sizeable percentage of the Brazilian community.

Cultural Integration & Community Advocacy

The waiting list for one Framingham ESL program was nine times longer in 2006 than it was in 1989. (Lebovits, 2007)

As raised in Chapter Two, cultural integration is a challenge for many immigrants, including Brazilians in Framingham who maintain a close connection with their homeland. According to one Framingham Brazilian, “many Brazilians have one foot here and the other in their home country and have difficulty navigating between both worlds. Many feel they are neither from here nor there” (Mineo, 2004). While a “Newcomers and Neighbors Center” (see section on Framingham Library on page 39) and other organizations are trying to help bridge the gap, waiting lists for ESL classes are lengthy,
mistrust of non-Brazilians is pervasive and segregation persists. One Brazilian advocate in town has noted that, “we have to break the wall between the Brazilian community and the rest of the community” (Boston Globe, 2006). According to another organizer however, integration will require additional coordination: “the Brazilian community is very large and successful, but we need some direction. We need more organization and a better voice” (Ordoñez, 2005).

**Transitioning Community**

There has been some question regarding the permanence of the Brazilian community in Framingham as in the past, it was thought that there was high turnover in the population. As stated above, there is a sizeable segment of the community that returns to Brazil after a few years, and it is speculated that that number has been increasing due to the recent decline of the U.S. dollar and the increasing tensions in town. While there are no official numbers, surveys with travel agencies have revealed an increase in one-way tickets to Minas Gerais (Ballou, 2008). This apparent mini-exodus has resulted in additional challenges for the community that has chosen to stay as their consumer market and support systems have been disappearing (Mineo, 2008; Ballou, 2008; Brennan, 2007). Some individuals interviewed for this report felt that the many vacant storefronts in the downtown area are indicative of Brazilians leaving town.

However, the results of a recent survey tell a different story: 53 percent of Brazilians polled said they were not thinking of returning home and more than 60 percent of those interviewed said they have been here five years or more, revealing that most Brazilians may no longer belong to a transient group, but may be part of an established community (Mineo, 2008). Some speculate that the decrease in business downtown is instead a result of Brazilian immigrants becoming more acculturated and patronizing mainstream big box stores (Ibid).

**Supporting the Community: Potential Partners in Framingham**

Several organizations are working to help the Brazilian community overcome these challenges and increase the quality of life in Framingham. With hundreds of years of combined experience, these groups have much to share in terms of lessons learned from past outreach. In some cases, Mass Audubon may want to consider these organizations as potential on-the-ground partners due to their relationship with the Brazilian community and/or their common goals. It is interesting to note that many of the community leaders interviewed for this report were familiar with Mass Audubon and/or
Broadmoor and several were even Mass Audubon members.

Potential Framingham Partners

- Boys and Girls Club, Hollis Street Clubhouse
- Brazilian-American Association (BRAMAS)
- Brazilian Business & Community Council
- Danforth Museum
- Framingham Adult English as a Second Language Plus (FAESL+)
- Framingham Civic League
- Framingham Cultural Council / Framingham START Initiative
- Framingham Downtown Renaissance
- Framingham Public Library
- Framingham Public Schools
- MetroWest YMCA
- New Life Presbyterian Community Church
- St. Tarcisius Church
Spotlight on Potential Partners

Framingham Public Library (FPL)
http://www.framinghamlibrary.org

While the Framingham Public Library has gained nationwide attention for its Portuguese catalog, the institution’s ability to incorporate cultural competency makes an impact far beyond its bookshelves. First, the FPL recognizes that people with different cultural backgrounds have different experiences with libraries. Through translated resources, Portuguese-speaking staff and networks throughout the community, the FPL works hard to make it known to Brazilians that they provide a number of accessible services. These include regularly scheduled events for Portuguese speakers such as a story hour for children, as well as free ESL tutoring and access to critical resources through their “Newcomers and Neighbors Center.” While the library recognizes that many of Framingham’s Brazilians are eager to learn English, they also make it a priority to offer enough resources in their own language so that they feel welcome and able to make the best use of the services. (personal communication, April 7, 2008; Ordoñez, 2005)

![Multilingual flyers publicizing a Jazz Brunch at the Framingham Public Library. Organizers say that the event was particularly successful in attracting a culturally diverse audience. Source: colombianflowers.files.wordpress.com](image1)

![Multilingual welcome signs at the Framingham Library circulation desk. Photo: Suzanne Pude](image2)

The library owns more than 1,000 books in Portuguese, has subscriptions to several popular Brazilian newspapers and magazines and has been recognized as the only public library in the country with the majority of its pages translated into Portuguese. (Ordoñez, 2005)

Boys and Girls Club, Hollis Street Clubhouse
http://www.bgcmetrowest.org

The Boys and Girls Club of MetroWest offers the most affordable drop-in program for Framingham youth through their Hollis Street Clubhouse location. Year-round programming (advertised in English, Spanish and Portuguese) at this site is focused on providing opportunities for outdoor and indoor recreation, social activities, developing healthy habits and homework help. The Clubhouse currently serves a diverse group of at-risk youth and as they are soon moving to a more downtown location, they will most likely play an increasing role in the Brazilian community. In an effort to change the kids’ mentality that they are “stuck” in the developed areas of Framingham, field trips to local parks play an important role in Clubhouse programming. From watching for shooting stars in Callahan State Park, to trips to some Mass Audubon sanctuaries, to digging for worms on Clubhouse property, staff are always looking for ways to make kids comfortable in and appreciative of the natural environment, as well as more aware of problems such as pollution. These interests, along with the needs of these youth, would fit well with Mass Audubon’s Teen Ambassador program. The Boys and Girls Club is also well connected to the larger Framingham community through its involvement in local organizing and planning. (personal communication, April 17, 2008).
Danforth Museum
http://www.danforthmuseum.org

The Danforth Museum of Art was established as a grassroots organization in 1975 by a group of Framingham citizens. Under a recent change in leadership and through its collection of American and contemporary art, the Danforth has seen exponential growth in their visitor numbers and membership, while simultaneously increasing their relevance in town and the MetroWest region. In addition to providing public art classes, workshops and other events, the Danforth plays a key role in helping to push for a downtown revitalization in Framingham through the development of the creative economy. In terms of cultural competency, Danforth staffers have recently gone to great lengths to outreach to the Brazilian community, with background research and a number of interviews helping to form personal relationships that guide this work. The installation of noted Brazilian sculptor Ana Maria Pacheco’s work in fall 2007 was also an effort to bring more community relevant programming to the Museum. Through the use of Portuguese-speaking interns and docents, tours given to local ESL classes and the nearby New Life Presbyterian Church, its free family “Drop into Art” program, and the distribution of over 100 free passes and memberships, the Danforth Museum is increasing its presence in Framingham’s Brazilian community (personal communication, April 17, 2008).

New England Wild Flower Society
http://www.newenglandwild.org

Established in 1900, the New England Wild Flower Society (NEWFS) has a deep history in the conservation and habitat protection movement and recognizes the challenges to staying relevant in a diversifying region. In addition to the organization’s regional and national plant conservation mission, NEWFS seeks to serve as a key cultural center for the local community through their Garden in the Woods accredited living museum in the northern part of Framingham. In particular, NEWFS has a long-standing relationship with the Framingham Public School system through an annual program for elementary school students in which they emphasize schoolyards and Garden in the Woods as living classrooms. Key staff members admit that the organization has much work to do in terms of institutionalizing cultural competency, yet they believe that the richness of Framingham’s diversity is a true asset to the community and their work. As they recognize that many Brazilians want to connect with and learn about the new area in which they are now living, NEWFS is moving forward with small steps that include translating maps and web materials and hiring docents from the community who speak Portuguese. There was strong interest indicated on the part of interviewees from the organization to use their local connections to collaborate with Mass Audubon on projects in Framingham. (personal communication, April 7, 2008).
Areas of Opportunity

According to one Brazilian interviewed for this report, the challenges in town leave many in his community feeling that “the structures (in Framingham) are not for us.” Yet when asked about how Mass Audubon could successfully increase its presence in town, he replied “so many things can be done here - just open the doors. Brazilians are willing to connect” (personal communication, April 19, 2008). Mass Audubon should capitalize on this huge potential for the organization to make a bigger impact in Framingham, as long as they are willing to incorporate cultural competency, consider the previously outlined challenges and work in partnership with a trusted local organization.

Potential areas of opportunity for Mass Audubon in Framingham might include:

1. Word-of-mouth marketing
An approach of relying on trusted community leaders to publicize events and visitors to spread the word about their experiences takes into consideration the issues of fear and mistrust that stem from the immigration tensions. More than building relationships with members of the Brazilian community and relying on them to inform others, it is also necessary to consider different venues for advertising. Brazilians in town may be able to help inform Mass Audubon of the specific places that members of the group frequent, such as churches and even local convenience stores, as well as point out popular mediums such as WSRO AM 650 (the local Brazilian radio station), TV Globo (the Brazilian-based television channel) and local public access television stations. In terms of engaging youth, this could also entail establishing a MySpace or Facebook page, an approach with which the FPL has had luck, in addition to including announcements for Mass Audubon events in regularly distributed school information packets.

   “Publicizing events through word of mouth and a network of personal contacts, rather than newspapers, works best. Community leaders or a trusted person needs to be involved to get the word across.”
   - Framingham Public Library staff

2. Increase the accessibility of programming
There are four primary aspects of this:

2.1 Cost – A few interviewees made the point that some immigrants are willing to spend their hard-earned money on recreational activities and even derive a sense of satisfaction from doing so. However, as highlighted in Chapter Two, these types of expenditures are clearly not an option for all immigrants. Increasing the number of free Mass Audubon passes available to the community and diversifying their locations, as well as offering (and widely-advertising) free events or days with no admission fee could help to overcome this challenge.

2.2 Timing of events – With many Brazilians working several jobs, it is difficult to find one time that could accommodate the busy schedules of so many. Therefore Mass Audubon should consider holding events at a number of different times, and potentially work their programming into other events that many Brazilians will already be attending.

2.3 Transportation options – On one hand,
Mass Audubon could overcome the limitations created by the distance to BWS by coming into the town and providing programming there as they do in the city of Worcester with the “Neighborhood Nature” program (Agyeman, 2006, at p.18). As previously stated, some groups are already visiting the Nobscot Reservation and parks near the downtown area and Framingham Common are frequently used. In particular, the Boys and Girls Club mentioned a preference for the Anna Murphy Park.

On the other hand, one Brazilian interviewed for this report said that one of the best things that BWS had going for it was that it is located in Natick, outside the borders of the town in which so many Brazilians feel unwelcome. Providing transportation to BWS would be logistically and financially challenging, so Mass Audubon could instead opt to work with local churches or other groups to help organize trips that offer transportation to the Sanctuary.

2.4 Site Audit – It is important that Mass Audubon evaluate BWS with a lens for cultural competency in order to ensure that members of the Brazilian community feel comfortable when they are visiting. A site audit, as outlined in the 2006 Agyeman report, may include a review of signage, printed materials and the languages spoken by staff and would be extremely useful in an effort to increase the number of visitors to the Sanctuary.

3. Incorporate culturally-specific information

By considering the connections to nature that many of the Brazilians had either in Brazil or have developed while living in Framingham, Mass Audubon could increase the community’s interest in its programming. For instance, because of the connection many of Framingham’s Brazilians have to agriculture, a community gardening project (like the one suggested in the Lawrence case study) that was established in an easily accessible location may attract new audiences. Mass Audubon could also play a role in strengthening Framingham-Valadares Sister City Program by developing a relationship with a nature preserve in the Valadares area in order to teach Framingham about the connection between their natural resources and those in Brazil. As soccer plays such a huge role across the community, Mass Audubon could also consider connecting the sport to their programming in a creative way.

4. Expand on youth-specific programming:

As noted previously, there is room to expand the opportunities for Brazilian youth in Framingham. The BWS currently hosts an annual summer camp; if it were to reach out more to the Brazilian community and widely market its scholarship program, it may be able to serve as an important introduction to Mass Audubon and its mission. Approaching the high school or other organizations working with teens in town such as the Boys and Girls Club to consider establishing a Teen Ambassador program like the one at the BNC could provide an invaluable service to Framingham’s community as a whole. Finally, increased interaction with youth in the Brazilian community would also help to strengthen the lines of communication and help to foster a relationship of trust with the organization.
5. Support cultural integration

Enjoyment of the natural environment has the potential to play a uniting role in Framingham. As mentioned in the Lawrence section, when celebrated in ways that incorporates music, dance, the arts and cultural events, it can build pride in the community as a whole. As one Brazilian advocate once stated in response to Brazilian victories in the 2006 World Cup, “We are residents of Framingham, and we are of Brazilian origin. This is our culture, and there should be space for us to celebrate our culture” (Abraham, 2006). In addition to hosting their own events, BWS could have a presence at events in town such as the new “Celebrate Framingham: Framazing!” Festival.

Additionally, it is important to recognize that Mass Audubon may be able to contribute to the many Brazilians enrolled in ESL classes by supporting trips to the BWS as a vocabulary exercise. While this is not something that is explicitly stated in their mission, it is a service that the immigrant community is in great need of and one that other organizations in town are beginning to incorporate into their work. For instance, the Danforth Museum is currently hosting visits that enable class members to tour the museum to learn art vocabulary. Afterwards, students are given free passes so that they can return back to the museum (personal communication, April 17, 2008). With a similar program based on nature vocabulary, Mass Audubon would be able to reach huge numbers of immigrants and introduce them to one of the region’s finest natural resources in a safe and positive way.

6. Remain adaptive and in touch with the community

The “transitioning community” discussion on page 46 is indicative of the inherent nature of immigration in this country. While the Brazilian community is extremely relevant in Framingham now, Mass Audubon will need to repeat this process for other cultural groups in town and recognize that the interests, needs and challenges highlighted by this report are not static. By investing in strong relationships with individuals, Mass Audubon will be in touch with how the lay of the land will change in Framingham in years to come. By adapting to these changes, the Society will be able to remain relevant in a large and important Massachusetts town.
Holyoke

Mass Audubon Presence in the Region

In an effort to provide a comprehensive review of Mass Audubon’s presence in the state, the research team also took a brief look at western Massachusetts. The area is far less densely populated than the other regions studied but is equally rich in natural features and, in some places, diversity. The Society also has a significant presence in this section of the state with wildlife sanctuaries that include Pleasant Valley in Lenox, Laughing Brook in Hampden, Road’s End in Worthington and Canoe Meadows in Pittsfield. The City of Holyoke – approximately a 20-minute drive from Mass Audubon’s Arcadia Wildlife Sanctuary – is the focus of this abbreviated section. Mass Audubon once had active programs in this city, but they are no longer in existence. This section should help them restart these programs in a more effective way.

Holyoke: An Introduction

Like Lawrence and Framingham, Holyoke plays a key role in its region of the state. Holyoke, like Lawrence, is one of the first planned industrial cities. After being settled in 1745, its paper mills and extensive system of canals earned it the title of “Paper City.” Also like Lawrence, the city and its mills have long-served as a home to working class immigrants from across the globe, beginning with the Irish and then the French-Canadians in the 19th century.

In 2000 the city had a population of 39,838 with a population density of 1,871 people per square mile (U.S. Census, 2000). With a level of racial diversity similar to that of Lawrence and Framingham, Holyoke illustrates once again the need for Mass Audubon to incorporate cultural competency into its outreach in order to remain relevant. 2000 U.S. Census data report that the racial makeup of the city was 65.8 percent White, 3.7 percent African American, 0.4 percent Native American, 0.8 percent Asian, 0.1 percent Pacific Islander, 26.4 percent from other races, and 2.8 percent from two or more races. Hispanic or Latino of any race were 41.4 percent of the population. The 2000 Census also illustrates that the city’s population is relatively young with a median age of 34 years.

Puerto Ricans make up a significant percentage of the Latino population in the city. In fact, the numbers are so high that according to the 2000 U.S. Census Holyoke has the second highest percentage of Puerto Ricans of any city in the United States outside Puerto Rico. In addition to its sheer numbers, the Puerto Rican community makes its cultural presence known with an annual Puerto Rican Day parade in July. They have even become active participants in the city’s annual St. Patrick’s Day parade in March.

Economically, Holyoke is one of the poorest cities in Massachusetts with a median annual household income in the city of $30,441 in 2000. Census data also states that almost 50 percent of the city’s schoolchildren and 26.4 percent of the total population live below the poverty line. According to the City’s 2006 OSRP, these levels highlight the “critical importance of providing programming and recrea-
tional opportunities that are affordable to all sectors of the community” (City of Holyoke, 2006 at p20).

Thanks to the efforts of active community groups and committed government however, Holyoke has begun a rebound from its economic decline and troubled past. New leadership in key city agency positions is working to move the city forward (City of Holyoke, 2006). Brownfield clean-up, reuse and redevelopment is also playing an important role in these revitalization efforts (Tighe and Bond, 2008). According to the City’s website, “low utility rates, a skilled work force, and easy access to I-91, and the Mass Pike make Holyoke an attractive site for business and industry” (City of Holyoke, 2008).

Despite this emphasis on industry, there are many natural features in Holyoke and its surrounding area for the City to market and from which residents can benefit. Waterways play an important role in the city with its location on the banks of the Connecticut River, as well as the four and a half miles of the Holyoke Canal System that line the city. Picturesque Mount Tom, a favorite of local hikers, is also located just northwest of downtown Holyoke. Holyoke Heritage State Park connects nature and history in a beautifully landscaped, unique setting overlooking three canals downtown.

Despite its challenges, Holyoke has a strong civil society that works hard to embrace and promote its history, diversity and natural resources. Currently there are a number of initiatives that seek to promote these elements of the city’s identity. They include the Living Museum project and the Canal District development plan. An important feature of the latter is the Canal Walk project which will create a two-mile pedestrian promenade that borders the city’s canals while promoting the arts, attracting visitors and linking up a necklace park system. Supporters of these initiatives speak of sharing a common vision or dream and working together to make it a reality (Holyoke.org, 2008).

As with the previous two case studies, more in-depth research should take place to better understand the lay-of-the-land in Holyoke in general, and the interests, needs and challenges of the Puerto Rican community in particular. This will help speak to the fact that, according to the 2006 OSRP, “the needs of a multi-cultural community must be considered in the planning of recreational programming. Activities must be both culturally sensitive and inclusive for all groups” (City of Holyoke, 2006 at p20). Reaching out to local organizations early on will help to guide this research process, as well as to provide insight regarding potential partners with whom to work in the future.
Potential Partners in Holyoke

The following organizations have built relationships with the community and could share insights on how to best engage residents:

- Boys & Girls Clubs of Greater Holyoke
- Children’s Museum of Holyoke
- Community Education Project
- Girls Inc. of Holyoke
- Greater Holyoke Youth Service Corps
- Holyoke Health Center
- Holyoke Tutor/Mentor Program
- Northfield Mt. Hermon Upward Bound Program
- Nuestras Raices
- Save the Mountain
- Shackleton Schools, Inc.
Reflections on the Outreach Process

The outreach process used by the research team was designed to increase Mass Audubon’s understanding of communities and cultural groups across the state. In evaluating this process, the findings that it yielded and its feasibility as model for future outreach for Mass Audubon, several limitations are important to note.

Capturing the voices of non-users through focus groups, using questions shaped by initial research, gives a good overview of residents’ sentiments and demonstrates that Mass Audubon is listening to their opinions and suggestions. Yet, focus groups may not be feasible in communities facing significant challenges. Busy, hardworking individuals and those with transportation issues especially if they are unfamiliar with the organization conducting the outreach would be more likely to attend a focus group if childcare and dinner are provided. As seen in Framingham, immigrants who are not comfortable with those outside of their community and fear for their safety and security are highly unlikely to participate. Casual interviews or a door-to-door approach would be best in these cases. An additionally alternative is to “piggyback” onto meetings hosted by organizations that already have a relationship with the community and whose meetings garner high turnout. On-the-ground realities in a community should inform the decision of whether to host a focus group or substitute for an alternative.

A community based participatory research approach that allows community members to participate in shaping questions and interpreting answers would be ideal. In the absence of this approach, initial stages of research helped shape questions. For example, as the majority of early interviewees spoke of fearing for their safety, it was neither relevant nor sensitive to begin further interviews with questions about connections with nature and interest in conservation. Additionally, in the absence of a community based participatory research approach, if research respondents’ statements leaves interpretive latitude, researchers should ask for further explanation.

As time constraints limited the ability of the research team to use a community based participatory research in all three case studies, the findings of this report are limited by the Tufts team’s own cultural biases and backgrounds (Appendix H).

Finally, the outreach process requires a significant and commitment, and Mass Audubon should be prepared to invest resources in pursuit of their urban initiatives. The team’s research in Holyoke had to be abbreviated due to the time required to fully explore the other two communities. Exploring the needs and interests of urban and diverse communities and creating programs in response to these findings will require commitment at the highest levels of the organization and should influence staffing, planning and visioning.
Chapter Four — Lessons from Best Practices

The following are recommendations based on the findings from Chapter Two — Literature Review. The recommendations have been broken down into the categories used in Chapter Two.

Recommendations Based on Findings of Differences in Interest in Environmental and Recreational Activities of Ethnic Communities Research

The Mancl study shows that the majority of residents in suburban areas are more familiar with environmental issues than urban residents. Mass Audubon can use these findings to increase awareness of their mission and get more people involved in activities offered at their sanctuaries by sending programmatic information to residents of small towns or areas of cities with low income. Limited marketing resources should be focused on these areas to get the most bang for their marketing buck as they have been shown to be less cognizant of environmental issues.

The Quimby study showed that people are more willing to have environmentally friendly behavior if they can see their actions leading to positive results. This also includes choosing an environmental career. Due to this, Mass Audubon should focus their environmental education activities in ethnic minority areas on concrete actions residents can undertake that have a positive effect on their surroundings. This will help to connect people to the environment in their own backyard. Mass Audubon could also offer a job shadow program to ethnic minority students to show them the level of respect their staff are given.

Newell and Green’s research showed that ethnic minorities are just as likely to be concerned about the environment when normalizing the results by education level. Mass Audubon could therefore be missing out on potential participants by not directing advertising about their programs and events towards minority neighborhoods. This is important for Mass Audubon to consider as minority neighborhoods are faced with more environmental degradation than white neighborhoods (Newell and Green, 1997). A first step for Mass Audubon to take to address the lack of outreach in ethnic minority neighborhoods could be to hold environmental education sessions there. To increase turnout, child care and food could be provided for the participants.

Ho et al’s study demonstrates the need for Mass Audubon to recognize that people of different backgrounds interact differently with nature and may need different types of facilities than their white visitors. Since Latinos prefer enjoying nature in larger groups, Mass Audubon should provide larger common areas with picnic facilities. Latinos favor organized recreational facilities. Where appropriate, Mass Audubon should place tot lots³ for children to use, as well as basketball courts or half-basketball courts, in some of their sanctuaries.

**Recommendations Based on Findings from Recreation Participation and Assimilation Research**

Mass Audubon could help to facilitate assimilation of immigrants to their new country and attract new participants at the same time by focusing efforts on determining immigrant groups’ recreational needs and acting accordingly. Since a barrier to new immigrants participating in recreational activities includes a lack of free time, Mass Audubon could combine recreation with networking for housing and employment at their sanctuaries. This will help immigrants to associate Mass Audubon sanctuaries with a positive, welcoming feeling, making it more likely that they will return.

Other ideas that Mass Audubon should consider are providing discounted admission to new immigrants to overcome the cost barrier; employing a workforce that speaks more than just English and installing Spanish-language signage to deal with the language barrier and providing child care for parents and holding activities outside the typical work day to overcome time constraints.

**Recommendations Based on Findings from Multicultural Awareness Research**

Mass Audubon educators should develop lesson plans based on the demographics of the community. For instance, in a more rural area, educators should focus on environmental issues such as pesticides and erosion. In an urban area, educators should focus on issues such as pollution and exposure to toxins. Also important is to utilize the different ways cultures interact with the world and its environment. This may require an educator to step outside of his or her comfort zone and to explore new ways of teaching a familiar concept. For example, Latinos are generally from collective societies that emphasize that citizens are part of a larger societal group, not individuals looking out for their own self interest. Lesson plans and outreach strategies should be developed with this in mind to more successfully reach a Latino audience.

Activities that reinforce immigrants’ cultural practices could be offered at Mass Audubon sanctuaries. One way to accomplish this would be to hire a bilingual member of the immigrant group who can help to understand Latinos’ recreational needs, as well as act as an interpreter for visitors. Some of the activities offered could help the immigrants adjust to the United States.

**Recommendations Based on Findings from Barriers to Participation Research**

Identifying the barriers to participation is important in getting minority populations to recreation centers such as Mass Audubon sanctuaries. As Wolch and Zhang demonstrated in their study, misinformation on the extent of the pollution at recreational areas prevented Latinos from going. If Mass Audubon would like to get Latinos to their sanctuaries, they should educate them about their area’s environmental conditions. This may reduce the level of fear that people have over the site’s quality.

Transportation may be preventing people from enjoying natural settings. Mass Audubon should provide public transport, perhaps in the form of buses and/or vans, to minority...
neighborhoods so that they can more easily access sanctuaries. Focusing on the most park-poor areas would be an important place to start as these are the populations that have the least access to outdoor recreation sites. By offering transportation to sanctuaries, this will help to make up the park deficit some populations experience.

Since outreach can be a daunting and expensive task, Mass Audubon should collaborate with local organizations that serve Latinos, or other ethnic minority groups they wish to serve, such as churches. Also, Mass Audubon could attend established events frequented by Latinos. Schools in ethnic minority neighborhoods should be visited by staff members. The distribution of materials in Spanish would also help make Spanish-speakers feel more welcome.

The cost barrier preventing groups from coming to Mass Audubon sanctuaries could be overcome by offering scholarships or reduced program prices to ethnic minorities or those below a particular income level. This barrier may be even more prevalent for Latinos than other ethnic minorities because they tend to bring the entire family when going somewhere, including parents, children, and grandparents, driving up the cost of a sanctuary visit. Mass Audubon could search for funding to pay for this idea. If this becomes an overwhelming extra expense, a yearly cap on this benefit could be set.

The most important thing for Mass Audubon to consider when overcoming barriers to participation is that without the ability to get outside and learn about the threats facing nature, many ethnic minorities will not feel that it is necessary to actively engage in Mass Audubon’s mission. If ethnic minorities are able to get to sanctuaries and learn more about environmental issues, they may be more likely to participate in Mass Audubon activities and perhaps become members.
As previously stated, the demographics of Massachusetts are changing. Mass Audubon recognizes the need to evolve with the changing face of Massachusetts in order to continue their work in education, advocacy and land conservation in an effective manner. Education plays a prominent role in achieving the vision set out in the Society’s Strategic plan, therefore, it is essential to evaluate the Educational Master Plan (EMP) with an eye towards the changing client populations. To effect the institutional change necessary to remain valid, it is essential a look at the framework for educational decisions.

The frameworks guiding educational practices can be called a variety of names. For example: educational master plans, conceptual frameworks, and curriculum development plans all generally refer to a written document that is designed to provide a direction for an organization’s educational components. They identify institutional strengths, weaknesses, and priorities, and reflect on where the institution has been educationally, and where they would like to go. While they provide overall goals and direction, they typically leave programs with a good degree of autonomy when they are implemented.

To maintain relevance, forward direction, and a current outlook, the frameworks are usually designed with a particular timeframe in mind. The Mass Audubon EMP is structured for a ten year period. The first EMP covered 1990-2000, while the current Mass Audubon EMP is intended for 2000-2010. The EMP is purposefully dynamic in nature and intended for periodic review as new educational trends emerge and the needs of students and Mass Audubon itself evolve.

Education has played a significant role within Mass Audubon ever since its founders introduced bird conservation concepts to children in Boston in the late 1800s. Although educational programming and partnerships with various educational institutions existed in different formats, a formal review of Mass Audubon’s educational components did not come about until Mass Audubon Education Planning Overview in 1985. Since the Overview, there have been various task forces, policy documents, reports, and briefing documents in the past twenty-three years.

A structured, periodic review of the EMP is important for the future direction of Mass Audubon. Failure to change curriculum or the method of instructional delivery may result in becoming an outdated educational provider, and decrease its ability to create an audience of motivated adults. As Mass Audubon would like to continue to be a “leader and catalyst for conservation, by stimulating actions through education, advocacy and habitat protection,” the Director of Education, Gloria Villegas-Cardoza, has reached out to Tufts University’s Field Project program for a review of the current EMP.

General Thoughts on the EMP

Overall, the EMP provides a good foundation for Mass Audubon’s educational efforts. There is good recognition that Massachusetts is composed of a variety of regions with unique ecology and different populations with varied
learning styles. The EMP also indicates a need for an institutional commitment to education that must span all departments and divisions. However, there is room for the EMP to become more specific regarding its approach to the rapidly diversifying demographic population.

The EMP references a need to reach a broader audience through various forms of media. However, as all cultures carry different perceptions, biases and value systems, it is important to understand cultural differences when communicating and developing programming. While the EMP is concerned with identifying the most effective ways to use education to motivate action, the only mention of cultural contexts as a foundation for learning is within the “Using Education to Realize our Vision” section. The EMP speaks to a need for multiple learning style preferences, but does not refer to culturally competent approaches. Culture is a complicated issue that can manifest itself in many different ways. By providing institutional support through organizational structure and clarity, Mass Audubon can demonstrate a focus on outreach, advocacy and education while alleviating unnecessary structural stress for its educational staff (Margolis, 2005).

There is a recognition that the “traditional Society programs” where a teacher/naturalist leads a group in an interactive, inquiry-based learning experience appeals only to people who prefer that style of learning, but no suggestion of modifying the “traditional Society program” to include cultural relevancy. The addition of culture within environmental issues is important, as culture influences how individuals see themselves in relation to the natural world, and helps them to understand the different decisions people may make regarding the environment. There must be an appreciation that every culture has legitimate, disparate perspectives, and that these variations can play a role in students’ understanding of and decision making regarding environmental issues (North American Association for Environmental Education, 2000).

While the EMP is concerned with identifying the most effective ways to use education to motivate action, the only mention of cultural contexts as a foundation for learning is within the “Using Education to Realize our Vision” section. The EMP wisely resists the need for a program to be self-supportive in terms of costs. This is critical, as good programs could be lost if the measurement tools are solely built on bottom-line performance. Although there is a desire to not be swayed by market forces and whims, the EMP needs a concrete mechanism for reorientation or redirection of the curriculum, when necessary, to make it more attractive to prospective students at community and regional levels. The Society’s regions, sanctuaries and other program units will determine the specific path for education due to their unique qualities. This is helpful, as it recognizes that all locations are distinctive ecologically and demographically.

Although the EMP states that every site
determines their own approaches to programming, it also says that “more than a random conglomeration of activities” and a shared philosophical framework are needed. While a shared philosophical framework is possible and encouraged through a framework such as the EMP, programming differences at various locations, when developed in accordance with interest and specific educational goals, should not be viewed in a negative light. By developing unique curriculum or course offerings that are not available elsewhere, based upon the needs and desires of local community diversity and ecology, Mass Audubon will continue to be a leader in the local environmental education domain. Doing so in a culturally relevant manner will attract new users Mass Audubon seeks to engage that are not currently active in the province of environmental conservation.

A mechanism created through the EMP to help develop and foster partnerships with other educational institutions, community groups and the private sector could bring new options for curriculum development. It may be beneficial to think outside of the box a bit in terms of collaborating with organizations like the Urban Ecology Institute or Alternatives for Community & Environment for urban initiatives. Another option could be to partner with state and local parks that have strong links to a variety of cultural communities. In addition to replicating successful long-term Mass Audubon relationships with schools in other Mass Audubon communities, perhaps an approach of teaching the teachers could further the students’ learning process. By educating teachers on the local ecology, teachers can continue lessons beyond the dedicated classroom time of the Mass Audubon teacher/naturalist.

Potential Changes to EMP

Although the EMP is purposefully and appropriately broad, one of the best ways to institutionalize a change is to spell out the desired outcome as a guiding principal when developing all activities. In order to address environmental education and to begin to institutionalize cultural competency, the EMP needs to incorporate outreach approaches, recommendations for future directions and relevant programming findings from the literature review, interviews and focus group outlined in previous chapters. As Saul concludes, the next step in environmental education is to include cultural theory in both educational content and critical thinking models (Saul, 2000).

As mentioned within the NAAEE Workbook, educational materials should be inclusive of different cultural perspectives and experiences (NAAEE Workbook, 2000). Ideally, this should go beyond nominal gestures toward diversity, such as an ethnic story or legend. For example, immigrants will often bring plants that they use as food sources to their new home. One way to target multicultural groups may be to create a guide to non-native plants that have been introduced to the region through immigration. As Mass Audubon staff members are involved in all levels of advocacy, outreach and educational development, it should be a Society-wide requirement that all Mass Audubon staff participate in training to recognize their own
cultural biases and how program material can be presented in a culturally competent manner.

The EMP looks to integrate environmental education and environmental action into the social context of people’s lives through the classroom, household and neighborhood. To take this one step further, the EMP should suggest a culturally significant way of integrating environmental education and environmental action into people’s lives. For example, perhaps a joint effort by Mass Audubon and the New England Wildlife Society to bring special programming regarding migratory birds found in both Massachusetts and Brazil and their habitats in each area.

There are a few instances within the EMP where the state’s communities are painted with a broad brush, or are not clarified as being unique from one another. For example, within the “Strengthening our Internal Capacity” section of the Executive Summary, there is reference to the unique qualities and strengths of the Mass Audubon sites. However, later in the EMP, there is mention that the “curricula at the Massachusetts Audubon day camps are very similar from site to site.” It is necessary to recognize all sites as being composed of unique scenarios. Communities and regions are different in both the ecology and the population demographics. If there is similar successful programming at multiple sites, it should be clarified that the curriculum is ecologically and culturally relevant to the various sites.

Within the “Adult, Children’s and Family Public Programs” section there is good recognition of the growth of adult education and that there is not simply one type of adult audience. However, there should be some recognition of the differences between adult and young adult approaches and programming. The priorities and resources of people within their 20s and 30s are much different from those within their 50s or 60s. Many young adults are currently, or will be in the future, located within the urban centers throughout the state. For example, according to the 2005 American Community Survey, close to 33 percent of Bostonians are between 20 and 35 years old. In many instances, the current and future young adults are minorities. As the Boston Indicators Project points out, “figures from the 2000 US Census show that Boston will only become more diverse: 75 percent of residents under the age of 18—the young adults of the next decade—were African Americans, Asian Americans, or Latinos” (Boston Indicators Project, 2008, para 2). Mass Audubon should develop programming and partnerships to reflect the diversity and priorities within this distinct section of the population.

Within the “School Programs” section of the EMP, it is commendable for Mass Audubon to comply with the Massachusetts Curriculum Frameworks and the Massachusetts Comprehensive Assessment System in an effort to be more beneficial to schools. It may be advantageous to establish that Mass Audubon programs are strong and effective educational materials that also include cultural components reflected within the Massachusetts Curriculum Frameworks. This in turn would boost the unified school brochure as a marketing tool mentioned within the “Initiative” portion of the “School
Programs’ heading by allowing schools to see the further applicability to Massachusetts Curriculum Frameworks, as well as the breadth and diversity of Mass Audubon offerings.

The EMP could make mention of the interrelation between marketing strategies and educational program evaluation. To market to non-users, they must first be identified. Note, however, that there is also a need to market in a culturally competent manner. When evaluating programs, it is necessary to collect full demographic information of participants so non-users can be identified. Similarly, a study of web site users, sanctuary site usage, and the surrounding communities to determine the demographic make-up could be useful. Once a full picture of users and non-users emerges, audiences can be targeted more effectively.

For example, perhaps culturally relevant programming could reflect festivals, activities or interests pertinent to the community’s cultural composition. To use the world of sports as a basis, in Framingham, programming to celebrate soccer’s annual Copa do Brasil or Brazilian National team successes. However, in Lawrence and Holyoke, programming reflecting Puerto Rico’s team successes within the Caribbean World Series.

Finally, as a note of caution: ambiguity in word choice can lead to situations of uncertainty or misinterpretation. The EMP should be cautious when referencing a ‘cultural shift.’ In some instances within the EMP, the stated cultural shift does not describe an ethnic or culturally related movement, but rather a Society-wide movement to a different framework or set of values. With the addition of culturally relevant text, perhaps the currently referenced ‘cultural shift’ can be modified to indicate an ‘institutional shift’ to provide a more clear distinction between cultural, ethnic or diversity-based approaches and something that refers to the Society as a whole.
Institutionalizing cultural competency is a complex issue that challenges an individual or an organization to go beyond what is familiar to them and view environmental education with a different lens. As this report illustrated with case studies in Massachusetts, the methodology of accomplishing this goal are not cut and dry – each culture and geographic community carries with it nuances and challenges that must be understood before the specific elements of cultural competency can even be defined. Additionally, as previously stated, Tso and Hill emphasize that this task is an “ongoing process” or evolution that requires continuous evaluation.

As supported by the 2006 Agyeman report, integrating cultural competency into the work of Mass Audubon will require significant capacity and dedication. All guiding principles of the organization must be re-evaluated to reflect the new priorities. Although it is crucial to integrate cultural competency within the EMP, it is also imperative to integrate cultural competency into the Strategic Plan. Such an effort would serve as an important representation of Mass Audubon’s commitment to the Massachusetts population, as well as a guiding platform for all Mass Audubon communication, advocacy and educational activities and approaches.

Moving this work forward necessitates a shift in current resources as well additional funding for which several opportunities have been laid out in this report. Appendix C lists foundations that are likely to fund Mass Audubon projects in this area. Further, while not all of the funders supporting the Environmental Education organizations in the Best Practices section in Chapter Two (listed in Appendix D) are completely relevant to either Massachusetts or Mass Audubon, the list gives a sense of the wide range of donors that will support culturally competent environmental education programs. Other possibilities include community foundations located in the sanctuaries’ towns and cities.

Much of an organization’s funding – whether from private foundations or a membership program – comes as a result of the effective communication of an organization’s vision and work. As such, Mass Audubon’s communication of their programming must also evolve to reflect any new commitments to cultural competency. This will require the language of Mass Audubon’s marketing, communication and development staff to reflect the unique needs of diverse communities, the relevance of “urban
programs” to the Society’s mission, and an organiza-
tion-wide commitment to the issue. One simple way to represent this shift and potentially attract a larger audience would be to change some of the photographs in the organization’s marketing materials from basic wildlife shots to groups of people interacting with nature. In doing so, Mass Audubon should find that the door will be opened to different sources of grant funding that could be used to support increased culturally competent programming as well as capacity building and training in the subject.

In addition to these broad areas in need of improvement, the following serves as a summary of key points that emerged from each section:

**Top Recommendations from the Literature Review**

- Employ a more diverse workforce to make a more welcoming retreat for immigrants and minorities that can also translate for those visitors
- Base lesson plans on the specific audience to make it more relevant – i.e., in rural areas, discuss issues of pesticides and erosion, in urban areas focus on issues such as pollution and toxin exposure
- Collaborate with existing organizations that serve a community’s largest minority group such as churches in order to make limited outreach funding and capacity go further

**Top Recommendations from the Community-Specific Research Process**

**Lawrence**

- Increase the accessibility and relevance of Ipswich River Wildlife Sanctuary
- Use relevant media sources and methods to reach the Latino community
- Increase the quality of availability of open space through investments in clean-up and lighting
- Fill the void in local programming for youth through affordable childcare, summer camp and mentoring or volunteering opportunities
- Incorporate unifying cultural elements, such as music and arts, sports and festivals
- Engage cultural connections to nature among foreign-born residents
Framingham

- Invest in personal networking and word-of-mouth marketing to build trust with the community
- Increase the accessibility of programming through reduced cost programming, varied timing of events, addressing transportation issues and a site audit of the BWS
- Incorporate culturally-specific information into programming and outreach
- Expand on youth-specific programming
- Support cultural integration and community connections through nature
- Remain adaptive and in touch with the community as it changes

Holyoke

- Build relationships with organizations that have a community-wide presence to gain a better understanding of the lay-of-the-land in Holyoke
- Repeat the process outlined in Chapter Three to gain a greater insight into the interests, needs and challenges of the Puerto Rican community.

Top Recommendations from the EMP Review

- Integrate culturally relevant approaches and programming at all levels of the EMP
- To successfully raise the effectiveness of programs, cultural competency must be taken into consideration and be a guiding principle.
- Recognize differences within the population of focus. For example, differences between Puerto Ricans and Dominicans or between retired adults, working adults, and young adults.

Next Steps

It cannot be emphasized enough that the work outlined by this report should be considered as important first steps in a much larger project. As such, next steps for Mass Audubon to take include:

- Literature Review
  * Consider which of the recommended actions are most plausible
  * Find appropriate funding for what cannot be accomplished by in-house talent
- Replicate the case study process for other cultural communities statewide
- In addition to the EMP, incorporate cultural competency into the Strategic Plan

While there is a great deal of work to do and changes cannot take place overnight, there is also much to gain in terms of making true
progress on “protecting the nature of Massachusetts for people and wildlife.” Mass Audubon has the opportunity to lead the way and be known in the next century for having made a bold shift to maintain the relevance of their environmental education programming while helping to protect Massachusetts’ natural resources for communities to learn from and cherish for generations to come.
Appendix A—References


Contreras, Russell. (2006, July 30). Search For A Spiritual Home; Closings, Social Changes Have Many Catholics And Former Catholics Looking For New Church; Evangelical Churches Appeal To Latinos. The Boston Globe, pp. 1.


Gavilan Coll., Gilroy, CA. (1999). Gavilan college educational master plan


Massachusetts Audubon Society. (2008, January 29). Group Programs By Town and Group Details, 3 years [Internal Document].


In accordance with materials submitted to the Tufts Institutional Review Board (IRB), the names of individuals interviewed for this report are not being included in its public version. A list has been compiled for UEP records only and will NOT be disclosed to the public.
Appendix B—Funders from Environmental Educational Organizations in Chapter Two

Literacy for Environmental Justice

• The San Francisco Department on the Environment
• The California Coastal Conservancy
• The California Endowment
• The California State Parks Foundation
• The Tobacco Free Project/ Department of Public Health
• The California Wellness Foundation
• ARC Ecology
• The San Francisco Foundation
• The Port of San Francisco
• The Tides Foundation
• The SF Department of Public Health/Seven Principles Project
• The Potrero Nuevo Fund

Greenest City

• Canadian Tire
• Ontario Trillium Foundation
• Service Canada
• Woodgreen Community Services
• Scadding Court Community Center
• Laidlaw Foundation
• Carrot Cache
• HIVA Environmental Fund
• Ontario Ministry of the Environment
• Toronto Atmospheric Fund
• Transport Canada – Moving on Sustainable Transportation (MOST)
• Toronto Heart Health Network (Love Your Heart!)
• Toronto Works and Emergency Services
• Toronto Public Health
• North American Fund for Environmental Cooperation
• Helen McCrea Peacock Foundation
• The Co-operators

Dodge Nature Center

• Alliance Bank
• Briggs and Morgan
• Buell Consulting
• CHS
• Gray Plant Mooty
• Kowalski's Markets
• Lindquist and Vennum
• Mairs and Power Funds
• Morsekode

• Mountain Equipment Co-Op
• Foodshare Toronto
• Natural Resources Canada
• Green Communities Association
• Go For Green
• Natural Resources Canada
• City of Toronto Energy Efficiency Office
• Energy Action Council of Toronto (EnerAct)
• Green Tourism Association
• Toronto Association of Business Improvement Areas (TABIA)
• Toronto Hydro Energy Services Inc.
• Clean Air Partnership
• GTA Clean Air Council
• Volunteer Centre of Toronto
• Community Bicycle Network
• Grass Roots

• Northern Trust
• Preferred Adventures, Ltd.
• Tapemark
• T.C. Field Insurance
• Thrivent Financial For Lutherans
• The UPS Store
• U.S. Bank
• U.S. Trust
• Waste Management
Eagle Eye Institute
- Massachusetts Cultural Council
- Anonymous Foundation
- Cahn Family Funds for Social Change
- The Orville W. Forté Foundation
- Roy A. Hunt Foundation
- Henry P. Kendall Foundation
- Massachusetts Department of Conservation and Recreation
- Plourde Family Charitable Trust
- The Trustees of Reservations
- YouthBuild USA
- Dolphin Trust
- Living Springs Foundation
- USDA Forest Service

Kids for the Bay
- Alameda County Clean Water Program
- Bernard Osher Foundation
- S.D. Bechtel, Jr. Foundation
- California Bay Delta Authority Watershed Program
- Capital Group Companies
- Cedar Tree Foundation
- Cheese Board Pizza Collective
- City of Antioch
- City of El Cerrito
- City of Hercules
- City of Pinole
- City of Pittsburg
- City of Richmond
- City of San Pablo
- Contra Costa Clean Water Program
- Contra Costa County Watershed Project
- Contra Costa Fish & Wildlife
- East Bay Community Foundation
- Giant Steps Foundation
- Give Something Back
- David B. Gold Foundation
- Golden West Women Flyfishers
- Richard and Rhoda Goldman Fund
- Green Planet Real Estate
- Clarence E. Heller Foundation
- Holloway Family Fund
- J. Vance Huckins Fund
- National Oceanic and Atmospheric Administration/Bay Watershed Education & Training
- Rose Foundation
- SF Station
- San Francisco Estuary Project
- Sierra Club
- StopWaste.Org
- Timberland Corporation
- Town of Danville
- Wells Fargo
- West Berkeley Foundation
- West Contra Costa County Integrated Waste Management Authority/Recyclemore
Sustainable South Bronx
- Saul Z. and Amy S. Cohen Foundation
- American Cities Foundation
- UC Berkeley, Haas School of Business
- Clean Air Communities
- Consolidated Edison
- The Nathan Cummings Foundation
- Deutsche Bank
- Forestry Service, US Treasury
- Robert Wood Johnson Foundation
  (Active Living by Design)
- JM Kaplan Fund
- Krasdale Foods
- Merck Family Fund
- Mitsubishi International Corporation
- Hugo Neu Corporation
- New York Community Trust
- New York Foundation
- Novogratz Family Foundation
- Jessie Smith Noyes Foundation
- the Sundance Channel
- Rockefeller Brothers Fund
- Scherman Foundation
- Barry and Dolly Segal
- Surdna Foundation
- Starry Night Fund of Tides Foundation
- Taproot Foundation
- Timberland Foundation
- Union Square Awards, a project of the
  Tides Center
- Vista Food Exchange
- Warren-Wilson College
- The Weather Channel
- Western Illinois University
- Ramapo College, NJ
- Center for International Education
- De Pauw University, IN
- Dorris and Howard Conant
- Oberlin College
- LaGuardia College
- General Electric
- Princeton University
- The Office of the Governor of
  Pennsylvania, Ed Rendell
Appendix C—Possible Funders for Mass Audubon Projects

The A.C. Ratshesky Foundation
The A.C. Ratshesky Foundation is committed to fostering economic and social justice for low- and moderate-income families residing in Boston and its surrounding communities. Within these broad interests, the Foundation has decided to focus on the fields of childcare, education and training, and arts and culture.

The Boston Foundation
The Foundation makes grants in the following areas: Arts and Culture; Civic Engagement; Economic Development; Health and Human Services; the Nonprofit Sector; and the Urban Environment.

The Brown Rudnick Charitable Foundation
The Brown Rudnick Charitable Foundation Corp., a nonprofit tax-exempt entity established by attorneys from Brown Rudnick Berlack Israels LLP, has launched a Community Grant Program. Created to support frontline educators who often do not have a voice in funding decisions, the program will subsidize small, concrete projects to improve inner-city education in Boston, Hartford, Providence, or New York City.

The Clipper Ship Foundation
The Clipper Ship Foundation was founded in 1979 by David Parmely Weatherhead. The foundation makes grants to federally tax qualified nonprofit organizations offering human services to individuals living in Greater Boston (cities and towns lying on or within Route 128) or the cities of Lawrence and Brockton. Priority is given to those organizations devoted to helping the homeless and ill-housed, the destitute, the handicapped, children and the aged, or addressing the needs of new immigrants and other needy communities and neighborhoods.

The Frank Stanley Beveridge Foundation
The mission of The Frank Stanley Beveridge Foundation, Inc. is to preserve and enhance the quality of life by embracing and perpetuating Frank Stanley Beveridge’s philanthropic vision through grantmaking initiatives in support of The Stanley Park of Westfield, Inc. and programs in youth development, health, education, religion, art and environment primarily in Hampden and Hampshire Counties, Massachusetts.

The Gary Payton Foundation
The Gary Payton Foundation benefits underprivileged youth. It provides grants and supports community events that build opportunities in education, recreation, and overall wellness for at-risk youth who live in the greater regions of Boston, Massachusetts and Oakland, California.

The New England Biolabs Foundation
NEBF is an independent private foundation started in 1982 by the founder of New England Biolabs, Inc. to support grassroots organizations working with the environment, social change, the arts, elementary education, and science.

The Red Sox Foundation
The Foundation's efforts are primarily focused on improving health, educational and recreational opportunities, as well as social service programs in urban neighborhoods.

The Prospect Hill Foundation
The Foundation's efforts are primarily focused on improving health, educational and recreational opportunities, as well as social service programs in urban neighborhoods.
Appendix D—Additional Listing of Best Practices of Environmental Education Organizations

The following organizations are performing critically important environmental outreach to their communities and have been recognized as leaders in their field. These results were not included in the body of the report because their missions vary significantly enough that their programs will not be easy for Mass Audubon to replicate in the short-term. They are, however, ideas that could be instituted over the long-term. The organizations are listed in no particular order.

**Greenest City**
www.greenestcity.net
Toronto, Ontario

**Organizational Summary:** Greenest City’s vision is one of environmental stewardship that connects communities. Diversity is seen as a key source of the creativity needed to generate integrated solutions to the city’s environmental challenges. Greenest City develops air pollution, climate change, energy consumption, and other environmental pollution mitigation programs that enable diverse and multicultural communities to take action to build healthy, livable urban environments.

**Best Practices:** The stewardship of nature is promoted through social justice. Relevant environmental programming for urban audiences was developed by Greenest City. The organization’s limited funds have been maximized through collaboration with other groups.

**Connection to Mass Audubon’s Mission:** Both organizations are dedicated to environmental stewardship and undertake education programs.

**Sample Programs**

- In 1996, Greenest City initiated the first Active and Safe Routes to School (ASRTS) program in Canada, with participation from three Toronto Public schools. ASRTS is a strategy to regain the healthy and sustainable practice of walking to school in Ontario. ASRTS raises awareness concerning climate change and air pollution, effectively contributing to greenhouse gas emissions mitigation. As well, ASRTS works with schools and local communities to encourage safer routes for students to walk or cycle to school, which in turn helps to increase physical activity for improved health, and repopulates neighborhood streets.

- Greenest City has helped 18 communities start community gardens since 1996 as part of the Multicultural Greening Project. This project has involved more than 300 gardeners of Korean, Chinese, Portuguese, Jamaican, Trinidadian, Somali, Tamil, Indian, Caribbean, Sri Lankan, European, Arab, Filipino, and Pakistani decent, male and female, young and old. These gardeners have learned sustainable urban agriculture practices and helped the environment by growing their own food rather than buying food that has been grown using pesticides and chemical fertilizers and shipped long distances emitting many tons of GHGs in the process.

- ‘From the Ground Up’ is a summer program initiated by Greenest City that employs marginalized youths and environmentally conscious students into various actions such as increasing food security, strengthening community ties, and developing skills and knowledge needed for a greener community and economy.
Trust for Public Land
www.tpl.org
Organizational Summary: The Trust for Public Land (TPL) is a national, nonprofit, land conservation organization that conserves land for people to enjoy as parks, community gardens, historic sites, rural lands, and other natural places, ensuring livable communities for generations to come.
Best Practices: TPL has developed an effective participatory process that works with neighborhoods to create dynamic park designs. They also work to put facilities in park-poor areas of cities, as well as on ecologically-rich lands.
Connection to Mass Audubon’s Mission: Outdoor recreation and the protection of ecologically-sensitive land is a common mission of both.
Sample Programs
Parks for People Program: Helping public agencies and communities create city parks was one of the founding goals of TPL. TPL works with community leaders to identify opportunities for park creation, secure park funding, and acquire parklands.
New York East River Greenprint Program: TPL helped the North Brooklyn neighborhoods of Williamsburg and Greenpoint establish a new recreational foothold on the waterfront in 2000 with its acquisition of two city blocks in Williamsburg that now make up East River State Park.

Urban Ecology Institute
www.urbaneco.org
Massachusetts-wide organization
Organizational Summary: For nearly ten years, the Urban Ecology Institute (UEI) and its community and educational partners have been improving the health of urban ecosystems through environmental education, action, and advocacy programs. Their mission is to help urban communities build healthy, vibrant cities by educating residents about their environment, connecting them to each other, and engaging them in the transformation of their neighborhoods into places where people love to live.
Best Practices: UEI recognizes that there is worthwhile ecological value to be found in urban areas. Students are taught marketable environmentally-related skills and are able to learn about science through the nature in their own backyards.
Connection to Mass Audubon’s Mission: Youth environmental education and the development of environmentally-related curriculum is a common mission of both.
Sample Programs
• Education programs serve students grades 2-12, teachers, and youth development professionals throughout the state. Scientific, instructional, and technological training and tools in urban ecology field studies and youth development are provided, helping students become socially and ecologically engaged and prepared to succeed in a sustainable economy.
• The Sustainable Cities Program partners with community organizations, local and state government agencies, scientists, and public policy experts to transform neglected urban lands and restore the
urban forest to create safe, ecologically healthy, and livable neighborhoods.

- The Urban Ecology Field Studies Program provides opportunities for students to engage in real-world scientific inquiry, increase their intellectual and social self-confidence, and gain a sense of responsibility for their urban environment. School teachers and out-of-school (OST) educators are given the tools and training to lead young people in ecological investigations to answer questions about the health of their environment. Students contribute to the practice of real science by sharing their data using a citywide, online database of field studies results. UEI also provides participating teachers and OST professionals with extensive professional development and on-site support through the summer and the academic year. Using UEI’s curricula, lesson plans and activities, materials, and support, participating teachers and OST professionals engage students in hands-on investigations of their local environment, using field sites near schools, after school programs, and community centers.

- The In-School Program provides teachers in urban schools with curriculum, equipment, training, and support for conducting ecological field studies with their students right on their school grounds, in the surrounding neighborhood or in nearby parks and natural areas.

- The Out-of-School Program supports scientific inquiry among young people outside of regular school hours in after school and summer programs. In partnership with Boston Community Learning Centers and community-based organizations, UEI provides educators and youth development professionals with curriculum, equipment, training, and support for conducting ecological field studies with their students.

Ma’at Youth Academy
maatya.org
Richmond, California

Organizational Summary: Ma’at Youth Academy’s (MYA) mission is to improve public and environmental health in the urban areas around Richmond, California by developing and modeling multicultural environmental education, promoting economic opportunities for youth, and increasing community involvement in environmental protection.

Best Practices: MYA educates youth about environmental issues that are pertinent to them, such as exposure to environmental hazards. Global environmental issues are links to local problems.

Connection to Mass Audubon’s Mission: Youth environmental education is a common mission of both.

Sample Programs
- Civic Engagement through Environmental Science (CETES) is a place-based program that uses the local environment to explore the impacts of the built environment on vital natural resources by linking learning and action with a science curriculum that connects local ecology to global issues. CETES allows 14-18 year old urban youth an opportunity to learn and lead within their community. The goal is to provide students and teachers with the scientific knowledge and critical thinking skills
required to link community conditions to strategies for improving the quality of life locally and globally while promoting academic achievement and increased retention levels.

- Youth Environmental Ambassadors of Health (YEAH!) creates a system of “community monitors” by training youth to be the monitoring and enforcement agents of public and environmental health policy. Youth ambassadors investigate the science and policies behind environmental issues and share the insights gained with elected officials, regulatory agencies, and community members.

- Green Futures for Urban Youth recognizes that community members are often the experts in identifying existing conditions, environmental hazards pathways, relevant land use, and business practices that can potentially affect public health. MYA uses this knowledge to train community members with effective strategies to mitigate conditions experienced daily and advocate for policies designed to improve the quality of life in their communities. Through Green Futures for Urban Youth, MYA program graduates and other dedicated high school students use their training and experience at MYA as well as their own peer voices and concerns to inform and guide the city planning process of local cities in the East Bay. Youth leaders collaborate with local governmental, environmental, health, and social agencies to conduct research, analyze, and disseminate their findings, and make recommendations on how to address the impact of built environments on vital natural resources in urban areas and beyond.

**DC Greenworks**
www.dcgreenworks.org
Washington, District of Columbia

**Organizational Summary:** DC Greenworks is a nonprofit, 501(c)(3) social enterprise that serves the Washington, District of Columbia community by providing training, tools, and technologies that utilize, advance, and protect the environment. Their approach is entrepreneurial, as they work hand-in-hand with community leaders, inner-city residents, neighborhood organizations, and small businesses to leverage grassroots participation and bring about creative solutions that redress the effects of pollution and create a higher quality of life for residents. As an advocate for the environment, the organization believes in strengthening communities through knowledge and hands-on discovery and participation.

**Best Practices:** DC Greenworks teach green job skills to minorities, which provides economic benefits to the participants and ecological benefits to the city. The organization also educates the public about the need for green roofs.

**Connection to Mass Audubon’s Mission:** Protection of the environment is core to both missions.

**Sample Programs**
- DC Greenworks provides full-service green roof design, installation, and consulting. All of the contracts serve to train and employ underserved adults in the skills necessary to meet the growing demand for these new environmental services and technologies.
- DC Greenworks believes in learning by doing. They find that any number of situations can provide
an opportunity for growth, potentially be “a teachable moment.” Students learn in concrete, hands-on ways that take them out of the textbook and into the field.

- DC Greenworks recognizes that environmental awareness will only be valuable to people if it translates in practical terms. Their training results in new jobs and new opportunities for business growth. Their efforts continue to be focused largely on DC’s underserved, low-income populations.

**Kids for the Bay**

kidsforthebay.org
Berkeley, California

**Organizational Summary**: Kids for the Bay teaches hands-on, environmental science to elementary school children in schools throughout the San Francisco Bay Area. The programs teach the latest California state science and social science standards. Teachers are offered a long-term, in-depth, experiential training and the opportunity to learn alongside their students. Teachers learn to use the local environment as a key educational resource to stimulate learning.

**Best Practices**: Kids for the Bay promotes the hands-on restoration of local habitats. Teachers learn how to teach science through the local environment, as well as educating their students about local watershed issues.

**Connection to Mass Audubon’s Mission**: Both organizations work on environmental education and restoration projects.

**Sample Programs**

- In the School Wide Impact Approach, principals, teachers, parents, and students work together, sharing key strategies and resources, to achieve common goals for their local environment. Kids for the Bay gives students powerful reasons to connect with and care about the environment. The concepts and skills needed to make informed choices and environmentally friendly behavior changes are taught to the students, leaving them feeling empowered to help solve local environmental problems.

- Kids for the Bay has taught creek restoration, the importance of reducing pollution, and safe bay food consumption to more than 40,000 elementary school students, 1,700 teachers, and over 5,000 parents. Teachers have been trained to teach our hands-on, integrated environmental education curricula using their local environment as a resource.

- The Watershed Action Program is Kids for the Bay’s signature program. Lessons include interactive classroom workshops and field trips to a local creek or bay habitat. The students learn their place in the watershed and choose how they will take action to help clean up and restore their local environment.

- The Reduce, Reuse, Recycle, and Rot (Four Rs) Action Program teaches students and their families how to reduce the waste stream and decrease the amount of refuse entering waterways and landfills.

- The Storm Drain Rangers Program is designed to educate students in Alameda County from grades 3-5 to reduce storm water pollution. Students learn through hands-on investigations about water-
sheds, bay-creek-ocean connections, urban runoff pollution, and storm water pollution prevention in a program consisting of three lessons.

- The Storm Drain Rangers Program is also a teacher training program. The activities are modeled for the teacher in the classroom with the students. Both a curriculum guide and an equipment kit are provided to classroom teachers to teach the program to future students.
- The School Wide Creek Education Program is a partnership between Kids for the Bay and an entire elementary school. The principal, teachers, students, and parents adopt, clean up, and restore a local creek and use the creek habitat as an outdoor classroom.

**Sustainable South Bronx**

www.ssbx.org
South Bronx, New York

**Organizational Summary:** Founded in 2001 by life-long South Bronx resident, Dr. Majora Carter, Sustainable South Bronx (SSBx) addresses land-use, energy, transportation, water and waste policy, and education to advance the environmental and economic rebirth of the South Bronx, and inspires solutions in areas like it across the nation and around the world.

**Best Practices:** Environmental Justice is promoted through economically viable projects. SSBx was able to collaborate with others to develop a greenway. They provide green roof installation training so that residents have a marketable skill that also improves the local environment. SSBx advocates for environmental policy changes.

**Connection to Mass Audubon’s Mission:** Both organizations work on environmental education and serve as policy advocates.

**Sample Programs**

- **South Bronx Greenway Project (SBG)** is a community-led plan for a bicycle/pedestrian greenway along the South Bronx waterfront, which will provide much needed open space, waterfront access, and opportunities for mixed-use economic development. SSBx received a $1.25 million federal transportation planning grant to conduct a feasibility study for the Greenway. The study provided a unique opportunity for the community to impact design and policy. To date, nearly $30 million is secured for greenway related projects. This project will help people struggling with obesity by giving them the opportunity to exercise safely outdoors. SSBx is developing the South Bronx Greenway to provide safe public space and create better transportation policy. Integrating traffic calming measures and truck routes that keep trucks away from the residential areas will help integrate physical activity into daily life.

- **Green roofs** provide space for Urban Agriculture, leading to the production of fresh, healthy food, and educational opportunities for kids and adults. The jobs created by higher demand for these roofs can be filled by many people from low-skill to professional levels. These include: structural analysis, waterproofing, design, material production, installation, maintenance, and harvesting of agricul-
 Residents of the South Bronx have been trained by SSBx to install the roofs. Native plant species are utilized on the green roofs since they offer more benefits to the local eco-system than exotics do. Birds and beneficial insects need these plants to complete vital parts of their life cycle.

- Bronx Environmental Stewardship Training Program is a 10-week program that is free to qualified applicants. Students graduate with several certifications, job readiness preparation, and a powerful environmental justice perspective on all of the important work they are qualified to do. SSBx works with graduates to help find the right job.

- The Solid Waste and Energy program at SSBx aims to address the problems associated with the unjust clustering of polluting facilities that receive waste in all its forms, including rotting garbage, construction and demolition debris, fill material, waste water, and sewage sludge. It also works to address wasteful energy consumption and dirty energy generation that is located in the South Bronx. SSBx tackles these problems through a combination of advocacy activities aimed at winning increased community accountability for polluters, more protective government policies, and implementing environmentally sound and community friendly alternatives to current practices.

**Brooklyn Center for the Urban Environment**

bcue.org

Brooklyn, New York

**Organizational Summary:** Founded in 1978, the Brooklyn Center for the Urban Environment is dedicated to educating individuals about the built and natural environments of New York City.

**Best Practices:** The Center teaches about land use through neighborhood design and that there is ecology worth studying right in members’ backyards.

**Connection to Mass Audubon’s Mission:** Both organizations educate people about the importance of the environment.

**Sample Programs**

- **Urban Ecology** uses hands-on explorations to engage students and educators in scientific study. With a focus on the interconnectivity of ecological systems in local urban environments, the division’s curriculum-based school, after-school, and community-based programs help foster a sense of stewardship and environmental awareness among students. Hands-on science experiences, such as observing, experimenting, creating, dissecting, writing, and drawing help students develop a personal connection to scientific inquiry and an appreciation for the world around them.

**Eco Education**

www.ecoeducation.org

Saint Paul, Minnesota

**Organizational Summary:** Eco Education is a non-profit environmental education organization based in Saint Paul, Minnesota, that has served over 130,000 students since 1991. The organization is committed
to making environmental education relevant to urban learners and to help them address their unique environmental concerns.

**Best Practices:** Eco Education teaches their members about the urban environment through environmental improvement efforts.

**Connection to Mass Audubon’s Mission:** Both organizations educate people about the importance of the environment.

**Sample Programs**

- **Model Schools** is an award-winning program that provides schools with an interdisciplinary environmental education model that leads students from knowledge to action. The Model Schools in Urban Environmental Education program consists of two interconnected courses, City Connections and Urban Stewards, both of which provide opportunities to address science, social studies, language arts, and mathematics standards.

- **City Connections** is an interdisciplinary urban environmental education curriculum designed for middle school level (fifth-seventh grade) students in Minneapolis and Saint Paul. Urban students need to know how to get around safely, stay healthy, and understand the natural and built components of their environment in order to improve and protect the places where they live. City Connections helps students develop an appreciation of the beauty and complexity of cities. By using City Connections, students gain an understanding of ecosystems through developing a familiarity with and affinity for their own neighborhoods. Students look at the basic needs of living things: food, water, shelter, and space. In addition, they learn about solid waste management, water and energy provision, food supply, housing, open space, and natural areas in their own community.

- **Urban Stewards** is a service-learning program for fifth-twelfth grade students in core city neighborhoods. The program encourages students to initiate and lead their own environmental improvement projects. Teachers and Eco Education staff serve as facilitators who connect out-of-classroom experiences to the curriculum. Since the program was launched in 1996, it has initiated creative projects including water quality testing in an urban lake, a composting program at a school cafeteria and graffiti clean up efforts.

**Greater Newark Conservancy**

Newark1.com
Newark, New Jersey

**Organizational Summary:** Located in Newark, New Jersey, the Greater Newark Conservancy teaches more than 5,000 children and trains more than 300 teachers about environmental education. 55.0% of Newark’s population is African American and 29.5% is Latino. Of the female headed households in Newark, 40.1% of them are below poverty level.

**Best Practices:** The Conservancy provides one space for learning – both indoor and outdoor facilities, such as libraries and sustainable energy displays. The organization promotes environmental justice
through brownfields redevelopment.

**Connection to Mass Audubon’s Mission:** Outdoor education facilities and children and teacher training are common to both.

**Sample Programs**

- Gardening cycles from root to fruit are taught at the center. Teachers and students learn to grow seedlings and minutes later step outside to explore the products of the demonstration garden. Teachers and students learn to use weather instruments at the weather station, then go indoors to learn how to share their observations over the internet.

- The outside space, the Outdoor Learning Center, provides an opportunity for residents to have hands on learning experiences in the garden. Teachers learn how to incorporate their experiences into existing curricula resulting in greater self-confidence and long-term commitment to the environment for the students.
Appendix E—Research Specifics

Lawrence

Interview questions included (but were not limited to):

- What does [organization name] do in Lawrence?
- What are the most important things happening in Lawrence with regard to the Latino community? What are the areas greatest assets?
- What are the challenges faced by the Latino community in Lawrence?
- How did [organization name] come to understand these issues and incorporate them into the services provided?
- Does [organization name] work connect to issues of open space and recreation needs?

The focus group discussion questions were predetermined, but the conversation was allowed to flow naturally with topics brought up by discussion participants.

Focus group questions included:

- What is your familiarity with Mass Audubon? Have you visited any of the sites?
- Would you like to tell us about yourselves –where you are from, what you like to do and what you do in your spare time?
- Do you think that people in Lawrence share some of your same concerns? When you speak of cleaning up the city, is it your impression that people would want to get involved with that? How about your neighbors?
- How do you decide on the places where you have cleanups? Are they usually the parks or a street?
- Are these same issues important to the kids you are working with? [referring to children who volunteer through the Adelante Youth Center]
- Trash seems like it is the big issues. Beyond the environmental issues, can you speak to the other challenges in Lawrence?
- We are interested in open space for recreation, and one of the things we are trying to understand are the barriers and challenges that make it hard for people to spend time outdoors?
- It sounds like you like nature outside of the city, but also in the city?
- Are there community gardens in Lawrence where people can gather and grow things? Do you think people would be interested?
- What do your children think about nature?
- Do you think that people, if the parks in town were nicer, that the people would use them? Or do they use it already?
- What do you think would get the community motivated? What is the appropriate programming that would get people involved? What do you think are the most important things to include?
- Do you think that safety is one of the most main things that makes people not want to go outside?
  What kinds of things really bring the [Latino] community together?
• You were talking before about how a lot of organizations left and there are not a lot of organizations now doing things with the kids. What were those organizations that left doing [when they were here]?
• If an organization comes to Lawrence and hopes to engage the Latino community, what do you think is the most important thing for them to do, or include or remember?

Though these questions approach issues of open space and cultural competency indirectly, interviews revealed important themes about best serving the Latino community in Lawrence. In a community facing so many challenges, recreation needs are often secondary to meeting basic needs.

Framingham

Sample Interview Questions for Framingham Community Members:

Introduction

Background: How long have you been living in Framingham? Where are you from and what did you do there? What are the things that you like about living in Framingham? What do you not like about living here? Are you involved with any groups or special activities in town? Which ones?

Recreation: About how much time per week do you have to devote to leisure time? How do you like to spend it? Where do you like to go? Places in town? Places out of town?

Outdoor Spaces: In general, how do you feel about outdoor spaces in the area? Are there parks or other outdoor spaces in Framingham or nearby towns that you like to go to? Are there issues about feeling welcome, understanding signs, getting to places (transportation), knowing where places are, language barriers?

Ideas of Nature: Part of my research is to find out about how people experience nature or the outdoors. What do you think about nature? In general, do you think that your cultural background has a special sort of connection with nature? Does it play an important role in cultural celebrations or holidays? What about religion? The family?

Mass Audubon presence in the area: Do you know about the Broadmoor Nature Center in Natick? Have you ever been there? Have you ever heard of Mass Audubon? Do you know what they do?
**Mass Audubon programming/future:** Mass Audubon runs programs such as (insert example/s) - would you ever be interested programs like this? Do you think that others in Framingham would be interested?

**Sample Interview Questions Outreach and Community Leaders in Framingham:**

**Introduction**

*Background:* How long have you been living/working in Framingham? What does your work seek to accomplish?

*Work in town:* How is Framingham unique? In terms of your work, what are some of the positive things that are going on in town? What are some of the challenges? How is your organization/your work responding to these strengths and challenges? Does your work consider cultural backgrounds? What types of approaches have worked well for your organization? Do groups work together?

*Recreation:* To your knowledge, what are some of the ways that people in Framingham spend their leisure time? What role does recreation play? In general, how do you feel about outdoor spaces in the area? Are there parks or other outdoor spaces in Framingham or nearby towns that you like to go to? Do you or the people that you work with (to your knowledge) feel that there are issues about feeling welcome, understanding signs, getting to places (transportation), knowing where places are, language barriers?

*Mass Audubon presence in town:* Do you know about the Broadmoor Nature Center in Natick? Have you ever been there? Have you ever heard of Mass Audubon? Do you know what they do? Does your organization work with them?

*Mass Audubon programming/future:* Mass Audubon runs programs such as (insert examples). Do you think that others in Framingham would be interested? Do you think that your organization would be interested in potentially working on such programs with Mass Audubon?
Appendix F—Environmental Justice (EJ) Maps

Percent of English Proficient Households within Framingham’s Environmental Justice Population, by Block Group, Census 2000

Framingham Environmental Justice Population

% of English Proficient Households

- 52.4 - 63.2
- 63.3 - 76.5
- 76.6 - 80.9
- 81.0 - 91.9
- Protected and Recreational Open Space

Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs.
Percent of Population that is Foreign-Born within Framingham's Environmental Justice Population, by Block Group, Census 2000

Framingham Environmental Justice Population

% Foreign-Born Population

- 17.0 - 29.7
- 20.8 - 34.3
- 34.4 - 43.8
- 40.7 - 68.7
- Protected and Recreational Open Space

Annual Household Income within Framingham's Environmental Justice Population, by Block Group, Census 2000

Framingham Environmental Justice Population

Annual Household Income

- $23,814.00 - $26,805.00
- $26,806.01 - $31,094.00
- $31,094.01 - $39,125.00
- $39,126.01 - $60,318.00
- Protected and Recreational Open Space

Percent of Population That is a Minority within Framingham's Environmental Justice Population, by Block Group, Census 2000

Framingham Environmental Justice Population

% of Minority Population

- 17.9 - 27.0
- 27.1 - 32.3
- 32.4 - 45.7
- 45.8 - 74.5
- Protected and Recreational Open Space

Source: Office of Geographic and Environmental Information (MassGIS)
Commonwealth of Massachusetts Executive Office of Environmental Affairs.
Percent of English Proficient Households within Lawrence's Environmental Justice Population, by Block Group, Census 2000

Lawrence Environmental Justice Population

% of English Proficient Households

- 49.1 - 67.9
- 68.0 - 78.3
- 78.4 - 88.1
- 88.2 - 100.0

Source: Office of Geographic and Environmental Information (MassGIS)
Commonwealth of Massachusetts Executive Office of Environmental Affairs.
Percent of Populations that is Foreign-Born within Lawrence's Environmental Justice Population, by Block Group, Census 2000

Annual Household Income within Lawrence's Environmental Justice Population, by Block Group, Census 2000
Percent of Population That is a Minority within Lawrence's Environmental Justice Population, by Block Group, Census 2000

Lawrence Environmental Justice Population

<table>
<thead>
<tr>
<th>% of Minority Population</th>
<th>Legend</th>
</tr>
</thead>
<tbody>
<tr>
<td>32.3 - 51.2</td>
<td>Light Blue</td>
</tr>
<tr>
<td>51.3 - 67.2</td>
<td>Blue</td>
</tr>
<tr>
<td>67.3 - 83.1</td>
<td>Dark Blue</td>
</tr>
<tr>
<td>83.2 - 99.1</td>
<td>Very Dark Blue</td>
</tr>
<tr>
<td>Protected and Recreational Open Space</td>
<td>Lime Green</td>
</tr>
</tbody>
</table>

Percent of English Proficient Households within Holyoke's Environmental Justice Population, by Block Group, Census 2000

Holyoke Environmental Justice Population

% of English Proficient Households

- 60.8 - 68.6
- 68.7 - 77.2
- 77.3 - 90.6
- 90.7 - 100.0
- Protected and Recreational Open Space

Percent of Population that is Foreign-Born within Holyoke's Environmental Justice Population, by Block Group, Census 2000

Holyoke Environmental Justice Population

% of Foreign-Born Population

- 0.7 - 1.9
- 2.0 - 5.1
- 5.2 - 8.6
- 8.7 - 13.9
- Protected and Recreational Open Space

Annual Household Income within Holyoke's Environmental Justice Population, by Block Group, Census 2000

Holyoke Environmental Justice Population

Annual Household Income
- $9,750.00 - $13,750.00
- $13,750.01 - $20,850.00
- $20,850.01 - $29,937.00
- $29,937.00 - $40,649.00
- OPENSPEC POLY selection

Source: Office of Geographic and Environmental Information (MassGIS)
Commonwealth of Massachusetts Executive Office of Environmental Affairs.
Percent of Population That is a Minority within Holyoke's Environmental Justice Population, by Block Group, Census 2000

Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs.
# Appendix G—Specific Comments for the EMP

<table>
<thead>
<tr>
<th>Location within the Education Master Plan</th>
<th>Word of Caution</th>
<th>Good</th>
<th>Suggestion for Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td></td>
<td></td>
<td>When mentioning the Mass Audubon of the future, mention the changing demographics of Massachusetts and an example of culturally relevant programming.</td>
</tr>
<tr>
<td>Executive Summary</td>
<td></td>
<td></td>
<td>References “a focus that gives our audiences the knowledge, skills and motivation to want to protect nature” Could emphasize humans’ role and connection with nature, our dependence on nature to survive and how this can vary in interpretation depending on one’s cultural perspective.</td>
</tr>
<tr>
<td>Executive Summary: Aiming for Significant Life Experiences</td>
<td></td>
<td></td>
<td>This would be a good place to add that not all families are the same, therefore to enhance family experiences Mass Audubon needs to recognize cultural variations in how families connect with nature.</td>
</tr>
<tr>
<td>Executive Summary: Fostering Community Conservation Leaders</td>
<td></td>
<td></td>
<td>Would be a good area to emphasize diversity in community conservation leadership.</td>
</tr>
<tr>
<td>Executive Summary: New Tools</td>
<td></td>
<td></td>
<td>Add culturally relevant programming to the mention of “articles on natural history and ‘conservation in local papers…”</td>
</tr>
<tr>
<td>Executive Summary: Strengthening Our Internal Capacity</td>
<td></td>
<td></td>
<td>Modify wording to: “based on the unique qualities and strengths of their sites” and the communities served.</td>
</tr>
<tr>
<td>Executive Summary: Common Focus, Common Goals</td>
<td></td>
<td></td>
<td>Would also add having these “tools” available in multiple languages based on the communities demographics.</td>
</tr>
<tr>
<td>Executive Summary: Common Focus, Common Goals</td>
<td></td>
<td></td>
<td>This is an area that could mention increasing diversity among educators, scientists, and advocacy staff.</td>
</tr>
<tr>
<td>Location within the Education Master Plan</td>
<td>Word of Caution</td>
<td>Good</td>
<td>Suggestion for Improvement</td>
</tr>
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</tr>
<tr>
<td>Using Education to Realize Our Vision</td>
<td>Recognizes that the ‘map’ for education cannot be delegated to any subgroup within Mass Audubon. It requires commitment across all departments and divisions.</td>
<td>Modify what is seen as a “traditional Society program” to or reflect cultural competency.</td>
<td></td>
</tr>
<tr>
<td>Using Education to Realize Our Vision</td>
<td>Recognizes the need to reach a much broader audience through various outlets.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using Education to Realize Our Vision</td>
<td>The EMP refers to a cultural shift, but that is in reference to an institutional shift, not a culture/minority-based shift.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using Education to Realize Our Vision</td>
<td></td>
<td>Determine the audience that is being attracted and determine best method of contact. May not be print or broadcast media. May be word-of-mouth or alternative methods (billboards, etc.)</td>
<td></td>
</tr>
<tr>
<td>Using Education to Realize Our Vision</td>
<td></td>
<td>Specify or clarify that not all communities are the same. The variety of cultures represented may vary from town-to-town, as should the programming.</td>
<td></td>
</tr>
<tr>
<td>Using Education to Realize Our Vision</td>
<td>Integrate environmental education and environmental action into social context in people’s lives… via classroom, household, neighborhoods.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location within the Education Master Plan</td>
<td>Word of Caution</td>
<td>Good</td>
<td>Suggestion for Improvement</td>
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<td>------------------------------------------</td>
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<td>-------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Using Education to Realize Our Vision</td>
<td>There is good recognition that environmental education programs utilize the community’s cultural contexts.</td>
<td>Suggest a culturally significant way of integrating environmental education/environmental action into people’s lives.</td>
<td></td>
</tr>
<tr>
<td>Guiding Principals</td>
<td>It is good to note that all locations are different when stating that the Society’s regions, sanctuaries and other program units will determine the specific path for education due to their unique qualities.</td>
<td></td>
<td>To be successful in raising the effectiveness of environmental programs, cultural competency must be taken into consideration and guide programs. There needs to be an institutional commitment for cultural competency.</td>
</tr>
<tr>
<td>Focus on the Nature of Massachusetts</td>
<td></td>
<td>There should be some mention of relating other areas to Massachusetts nature in a culturally competent manner? eg. Immigrants that farmed in Brazil can be shown that a community gardens is a good way to interact with Massachusetts nature (maintains open/green space in neighborhoods)</td>
<td></td>
</tr>
<tr>
<td>Create Significant Life Experiences</td>
<td></td>
<td>Help people to make a connection with their culture (relate it to homeland or past experiences, not just a translation of materials into another language).</td>
<td></td>
</tr>
<tr>
<td>Learning Not Teaching</td>
<td>Good recognition that learners construct their own knowledge.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Not Teaching</td>
<td></td>
<td>Present material in as many ways possible (including with an eye towards cultural competency) so audiences process it in a manner consistent with their culture, previous experiences and personal learning style.</td>
<td></td>
</tr>
<tr>
<td>Location within the Education Master Plan</td>
<td>Word of Caution</td>
<td>Good</td>
<td>Suggestion for Improvement</td>
</tr>
<tr>
<td>-------------------------------------------</td>
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</tr>
<tr>
<td>Aspirations, Goals, Initiatives: Aspiration 1</td>
<td></td>
<td>Add within the italicized portion: “so also can become a personally moving and emotional” and culturally relevant “experience.”</td>
<td></td>
</tr>
<tr>
<td>Aspirations, Goals, Initiatives: Aspiration 1, Initiatives</td>
<td></td>
<td>Add a new initiative to develop and offer more culturally related programs to capitalize on people’s connection with their ancestry and/or culture. Or, integrate the same idea into pre-existing initiatives.</td>
<td></td>
</tr>
<tr>
<td>Aspirations, Goals, Initiatives: Aspiration 1, Initiatives</td>
<td></td>
<td>Offer cultural competency training opportunities for the staff. This can be integrated into either of the options above for initiatives.</td>
<td></td>
</tr>
<tr>
<td>Aspirations, Goals, Initiatives: Aspiration 2, Initiatives</td>
<td></td>
<td>Within Initiative #2, (3rd bullet) include community culture-based programs, in addition to issue-based.</td>
<td></td>
</tr>
<tr>
<td>Aspirations, Goals, Initiatives: Aspiration 2, Initiatives</td>
<td></td>
<td>Within Initiative #2, (7th bullet) include culture-based conservation issues, in addition to community-based.</td>
<td></td>
</tr>
<tr>
<td>Aspirations, Goals, Initiatives: Aspiration 3</td>
<td></td>
<td>Goal A does not reflect outreach to people that do not utilize Society programs or visit sanctuaries. eg. Are there any programs in Lawrence schools?</td>
<td></td>
</tr>
<tr>
<td>Aspirations, Goals, Initiatives: Aspiration 3, Initiatives</td>
<td></td>
<td>Perhaps the communication strategies could include culturally-relevant topics related to nature in Massachusetts. eg. Any festivals, programs, etc.</td>
<td></td>
</tr>
<tr>
<td>Aspirations, Goals, Initiatives: Aspiration 4, Initiatives</td>
<td></td>
<td>Include within #1, in a culturally competent manner pertaining to the region and areas within the region.</td>
<td></td>
</tr>
<tr>
<td>Aspirations, Goals, Initiatives: Aspiration 4, Initiatives</td>
<td></td>
<td>Within #2, include that each program site will determine its own standard menu of offerings based on the region’s framework and cultural make-up.</td>
<td></td>
</tr>
<tr>
<td>Location within the Education Master Plan</td>
<td>Word of Caution</td>
<td>Good</td>
<td>Suggestion for Improvement</td>
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</tr>
<tr>
<td>Aspirations, Goals, Initiatives:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspiration 4, Initiatives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Within #2, under specific initiatives, the 2nd bullet, the newsletters can be sources of info about … and goings on in both the natural world &amp; local communities, including culturally-relevant programming.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspirations, Goals, Initiatives:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspiration 4, Initiatives</td>
<td></td>
<td></td>
<td>#3, 1st bullet, Tools will assess … add how culturally competent the program is.</td>
</tr>
<tr>
<td>Aspirations, Goals, Initiatives:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspiration 5, Initiatives</td>
<td></td>
<td></td>
<td>Within #2, 1st bullet, add cultural competency.</td>
</tr>
<tr>
<td>Aspirations, Goals, Initiatives:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspiration 5, Initiatives</td>
<td></td>
<td></td>
<td>Within #4, 3rd bullet, ensure materials reflect the cultural competency required to the applicable area.</td>
</tr>
<tr>
<td>Monitoring and Evaluating the Plan</td>
<td></td>
<td></td>
<td>Will monitor on a regular basis, and there is a reporting mechanism for accountability.</td>
</tr>
<tr>
<td>Monitoring and Evaluating the Plan</td>
<td></td>
<td></td>
<td>Collect data regarding where visitors/users are from (town, neighborhood, etc.), and any cultural backgrounds that could be important. Otherwise, don’t know where growth potential is.</td>
</tr>
<tr>
<td>Monitoring and Evaluating the Plan</td>
<td></td>
<td></td>
<td>Within 4th bullet, another interpretive tool could be culturally relevant materials.</td>
</tr>
<tr>
<td>Closer Look at Specific Program Areas:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult, Children’s and Family Program Areas</td>
<td></td>
<td></td>
<td>Recognition that adult education is rapidly growing &amp; there isn’t just 1 type of an adult.</td>
</tr>
<tr>
<td>Closer Look at Specific Program Areas:</td>
<td></td>
<td></td>
<td>Call it out, not just ‘local residents’. Add minority or cultural leader/member of the to the list at the end of the blurb to the examples of audience types.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location within the Education Master Plan</td>
<td>Word of Caution</td>
<td>Good</td>
<td>Suggestion for Improvement</td>
</tr>
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<td>------------------------------------------</td>
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</tr>
<tr>
<td>Closer Look at Specific Program Areas: Adult, Children’s and Family Program Areas, Initiatives</td>
<td></td>
<td></td>
<td>Also create culturally relevant learning opportunities.</td>
</tr>
<tr>
<td>Closer Look at Specific Program Areas: Urban Programs, Initiative</td>
<td></td>
<td></td>
<td>Include within “long-term nature, with multi-session” culturally competent experiences for the student.</td>
</tr>
<tr>
<td>Closer Look at Specific Program Areas: Day Camps</td>
<td></td>
<td></td>
<td>Indicate that scholarships and need-based programs exist or will exist even with a rise in camp fees.</td>
</tr>
<tr>
<td>Closer Look at Specific Program Areas: Day Camps, Initiative</td>
<td></td>
<td></td>
<td>Mention that a wider base of campers means a greater diversity of cultures. Awareness of the cultures and their interaction can provide a more meaningful experience and serve educate others.</td>
</tr>
<tr>
<td>Closer Look at Specific Program Areas: Preschool Programs, Initiative</td>
<td></td>
<td></td>
<td>Also create family culturally-related workshops.</td>
</tr>
<tr>
<td>Closer Look at Specific Program Areas: World Wide Web, Initiative</td>
<td></td>
<td></td>
<td>Add some descriptions of upcoming special programming. eg. Any festivals or other culturally relevant workshops</td>
</tr>
<tr>
<td>Closer Look at Specific Program Areas: World Wide Web, Initiative</td>
<td></td>
<td></td>
<td>Mention the need to market in a culturally competent manner.</td>
</tr>
<tr>
<td>Closer Look at Specific Program Areas: Site Interpretation, Initiative</td>
<td></td>
<td></td>
<td>In addition to the last line, be sure to maintain a focus on the demographic composition of visitors so the implementation is most effective.</td>
</tr>
<tr>
<td>Closer Look at Specific Program Areas: Publications, Initiative</td>
<td></td>
<td></td>
<td>Document development and distribution should be inclusive of different cultural perspectives and populations.</td>
</tr>
<tr>
<td>Closer Look at Specific Program Areas: Publications, Initiative</td>
<td></td>
<td></td>
<td>Mention the need to market in a culturally competent manner.</td>
</tr>
<tr>
<td>Location within the Education Master Plan</td>
<td>Word of Caution</td>
<td>Good</td>
<td>Suggestion for Improvement</td>
</tr>
<tr>
<td>------------------------------------------</td>
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</tr>
<tr>
<td>Evaluation</td>
<td></td>
<td></td>
<td>Modify to include cultural competency: “understanding or our impact,” <em>cultural competency,</em> “and improve our programs.”</td>
</tr>
<tr>
<td>Professional Development</td>
<td></td>
<td></td>
<td>Include cultural competency within the 2nd sentence listing the training opportunities.</td>
</tr>
</tbody>
</table>
Appendix H—Team Biographies

Melissa Cryan graduated from the University of Rochester in 1998 with a B.S. in Ecology and Evolutionary Biology. Since graduating, she has been working at the Executive Office of Energy and Environmental Affairs in various capacities. She was the Outreach and Education Coordinator for the Massachusetts Watershed Initiative from 2000-3 before her current job as Urban Self-Help Grants Manager. This program provides communities with funding to acquire parkland, build new parks or renovate existing parks. While working full-time, Melissa is enrolled in Tufts University's Urban and Environmental Policy and Planning Program part-time with a planned graduation date of May 2009.

Katherine Moore grew up in North Carolina and Michigan. She received a B.A. in Political Science from the University of Michigan in 2000. She works full-time for Eastern Research Group, a multidisciplinary consulting firm, as a Conference and Peer Review Coordinator. Katherine also provides part-time support to the Town of Lexington as Greenhouse Gas Emissions Analysis Intern. She is enrolled in Tufts University's Urban and Environmental Policy and Planning graduate program part-time, with an expected graduation date of May 2010.

Suzanne Pude grew up in Massachusetts, exploring the state's forests, trails and parks as a cross country runner. In 2003, she received a B.A. in International Development Studies and Political Science from McGill University in Montreal, Canada. From 2005 to 2007 she served as the Outreach and Development Coordinator at EARTHWORKS, an environmental advocacy organization dedicated to reducing the impacts of mining, oil and gas development on communities and the environment in the U.S. and beyond. She is currently enrolled in Tufts University's Urban and Environmental Policy and Planning graduate program, where she is focusing on the relationship between environmental issues and economic development in the state of Maine as well as continuing her outreach work through a number of university-wide green initiatives.

Erin Sweet grew up in Florida and moved to Massachusetts in 2006 after graduating from the University of Florida with a B.S. in Microbiology and Cell Science and a B.A. in Film Theory. She worked in retail management for two years, spending spare time rock climbing around New England. Since moving to Boston, Erin has volunteered with Youth Enrichment Services, teaching skiing to youth from low-income families. She is currently focusing on renewable energy and equity in the Tufts Urban and Environmental Policy and Planning Program and works for the Council for Responsible Genetics, researching conflict of interest and disclosure policies in academic science and health journals.
MEMORANDUM OF UNDERSTANDING
BETWEEN
TUFTS UNIVERSITY FIELD PROJECTS TEAM NO. 6
AND
MASSACHUSETTS AUDUBON SOCIETY

I. Introduction

Project (i.e., team) number: 6
Project title: Nature’s New Curriculum – Creating Educational Opportunities in Urban and Diverse Communities
Client: Massachusetts Audubon Society

This Memorandum of Understanding (the “MOU”) summarizes the scope of work, work product(s) and deliverables, timeline, work processes and methods, and lines of authority, supervision and communication relating to the Field Project identified above (the “Project”), as agreed to between (i) the UEP graduate students enrolled in the Field Projects and Planning course (UEP-255) (the “Course”) offered by the Tufts University Department of Urban and Environmental Policy and Planning (“UEP”) who are identified in Paragraph II(1) below (the “Field Projects Team”); (ii) Massachusetts Audubon Society, further identified in Paragraph II(2) below (the “Client”); and (iii) UEP, as represented by a Tufts faculty member directly involved in teaching the Course during the spring 2008 semester.

II. Specific Provisions

(1) The Field Projects Team working on the Project consists of the following individuals:

1. Melissa Cryan  email address: melissa.cryan@gmail.com
2. Katherine Moore  email address: katherine.moore@tufts.edu
3. Suzanne Pude  email address: suzannepude@gmail.com
4. Erin Sweet  email address: erinsweet@gmail.com
(2) The Client’s contact information is as follows:

Client name: Massachusetts Audubon Society
Key contact/supervisor: Gloria Villegas-Cardoza
Email address: gvcardoza@massaudubon.org
Telephone number: 781-259-2175
FAX number: 81-259-2375
Address: 208 South Great Road, Lincoln, MA 01773
Web site: www.massaudubon.org

(3) The goal/goals of the Project is/are:

The work of the Tufts UEP Field Projects Team will help build a foundation for Massachusetts Audubon Society’s efforts to design new program elements and, ultimately, an education plan that remains relevant through a better understanding of the dynamics of the many urban and culturally diverse communities in Massachusetts and their perceptions of environmental education.

(4) The methods and processes through which the Field Projects Team intends to achieve this goal/these goals is/are:

- Determine demographic composition of three regions in statistical and graphical formats.
- Solicit each region’s Massachusetts Audubon Society staff and community leaders for feedback and suggestions regarding community interest and involvement.
- Analyze and synthesize literature, case studies, existing programs, and educational master plans for implementation techniques and best practices.

(5) The work products and deliverables of the Project are (this includes any additional presentations for the client):

The Field Projects Team will produce a written report for Massachusetts Audubon Society that will include recommendations for the steps needed to deliver effective urban environmental education among urban and diverse communities. The Field Projects Team will also develop a toolkit of case studies and best practices from similar outreach efforts.
The anticipated Project timeline (with dates anticipated for key deliverables) is:

- Wednesday, February 6, 2008 – Signed Memorandum of Understanding
- Wednesday, February 27, 2008 – Submit initial project outline
- Wednesday, April 4, 2008 – Draft report due
- April – Presentation of findings and recommendations to class
- **Date to be determined**
- Friday, May 2, 2008 – Final report due

The lines of authority, supervision and communication between the Client and the Field Projects Team are (or will be determined as follows):

Melissa Cryan will act as the primary contact for the Field Projects Team and the team will be under the supervision of Gloria Villegas-Cardoza at Massachusetts Audubon Society.

The understanding with regard to payment/reimbursement by the client to the Field Projects Team of any Project-related expenses is:

There is no expectation for any monetary compensation or reimbursement for the project.

III. Additional Representations and Understandings

A. The Field Projects Team is undertaking the Course and the Project for academic credit and therefore compensation (other than reimbursement of Project-related expenses) may not be provided to team members.

B. Because the Course and the Project itself are part of an academic program, it is understood that the final work product and deliverables of the Project (the “Work Product”) – either in whole or in part – may and most likely will be shared with others inside and beyond the Tufts community. This may include, without limitation, the distribution of the Work Product to other students, faculty and staff, release to community groups or public agencies, general publication, and posting on the Web. Tufts University and the Field Projects Team may seek and secure grant funds or similar payment to defray the cost of any such distribution or publication. It is expected that any issues involving Client confidentiality or proprietary information that may arise in connection with a Project will be narrow ones that can be resolved as early in the semester as possible by discussion among the Client, the Field Projects Team and a Tufts instructor directly responsible for the Course (or his or her designee).

C. It is understood that the Field Projects Team must receive notification from the Client, and submit their approval, before any changes to the final work product and deliverables of the Project are made. If the work product is distributed widely, the work must be attributed to the Field Projects Team.

D. It is understood that this Project may require the approval (either through full review or by exemption) of the Tufts University Institutional Review Board (IRB). This process is not expected to interfere with timely completion of the project.
IV. Signatures

For Massachusetts Audubon Society
By: Gloria Villegas-Cardoza
Date: ____________, 2008

Representative of the Field Projects Team
By: Melissa Cryan
Date: ____________, 2008

Tufts UEP Faculty Representative
By: Rusty Russell
Date: ____________, 2008
Re: IRB Study # 0803029
Title: Nature's New Curriculum: Creating Educational Opportunities in Urban and Diverse Communities
PI: Suzanne Podes
Co-Investigator(s): Erin Sweet
IRB Review Date: 3/14/2008

March 17, 2008

Dear Suzanne,

The Institutional Review Board (IRB) has reviewed the above referenced study.

This protocol meets the requirements set forth by the IRB and is hereby approved. Approval is valid for a period of one year from the IRB Review Date and expires on 3/13/2009.

Enclosed you will find stamped consent forms and other study materials that show the date through which these materials are valid. Only these stamped consent forms and materials may be utilized for conducting your study.

Any changes to the protocol, consent forms, or study materials must be submitted to the Office of the IRB for approval by completing the Request for Protocol Modification form. In addition, all Adverse Events and Unanticipated Problems must be reported to the Office of the IRB promptly, and by utilizing the appropriate reporting forms.

Investigators are required to submit a Request for Continuing Review or a Request for Study Closure six weeks prior to the expiration date of the protocol.

Please know that the PI is responsible for all information contained in both this letter and on the Investigator Responsibilities Sheet. If anything is unclear or if you have any questions, please contact the IRB office at (617) 627-3417.

Sincerely,

Yvonne Wakeford, Ph.D.
IRB Administrator
Re: IRB Study # 0803029
Title: Nature's New Curriculum: Creating Educational Opportunities in Urban and Diverse Communities
PI: Suzanne Puda
Co-Investigator(s): Erin Sweet
IRB Review Date: 4/8/2008

April 8, 2008

Dear Suzanne,

The Institutional Review Board (IRB) has reviewed the request for protocol modification dated 3/31/2008 to the above referenced study.

This amended protocol meets the requirements set forth by the IRB and is hereby approved. Approval is valid for a period of one year from the original IRB Review Date and expires on 3/13/2009.

Approved changes to the protocol and consent form are detailed below:
1) Addition of Holyoke, MA as a site in the study.
2) Use of interviews instead of focus groups in collecting data.
3) Modifications to the telephone recruitment and consent scripts for adults reflecting the change in methods of data collection.

Enclosed you will find stamped consent forms and other study materials that show the date through which these materials are valid. Only these stamped consent forms and materials may be utilized for conducting your study.

Any changes to the protocol, consent forms or study materials must be submitted to the Office of the IRB for approval by completing the Request for Protocol Modification form. In addition, all Adverse Events and Unanticipated Problems must be reported to the Office of the IRB promptly, and by utilizing the appropriate reporting forms.

Investigators are required to submit a Request for Continuing Review or a Request for Study Closure six weeks prior to the expiration date of the protocol.

Please know that the PI is responsible for all information contained in both this letter and on the Investigator Responsibilities Sheet. If anything is unclear or if you have any questions, please contact the IRB office at (617) 627-3417.

Sincerely,

Yvonne Wakeford, Ph.D.
IRB Administrator
CONSENT FORM
For Participation of a Minor in Tufts University Research for the Massachusetts Audubon Society

Study Title: “Nature’s New Curriculum – Creating Educational Opportunities in Urban and Diverse Communities”

Study Number: 0803029

Principal Investigators: Suzanne Pude & Erin Sweet, Graduate students, Department of Urban and Environmental Policy and Planning, Tufts University

Purpose and Duration: This study seeks to gain an understanding of your ideas about nature, in general and in your community. Specifically, this information will be used to inform the Massachusetts Audubon Society as they work to better serve the state. This study is expected to take approximately 60-90 minutes of your time.

Procedures: Tufts researchers will lead a group discussion by asking open-ended questions while recording participants’ responses.

Costs, Risks and Discomfort: There are no anticipated costs, risks or discomfort associated with this research.

Benefits: There are no direct benefits to participants. However, it is expected that the findings will help to bring community-relevant Mass Audubon programming to the city/town. Participants will have an opportunity to shape what this programming involves.

Confidentiality: The results of the group discussion will be presented to the Massachusetts Audubon Society and Tufts University, and may be cited in a scholarly journal or book or used for teaching purposes. Specific comments will not be assigned to an individual by name.

Compensation: No monetary compensation will be provided for participants. Refreshments will be served during the session.

Request for More Information: You may ask questions about the study at any time. Please email the principal investigators at Suzanne.pude@tufts.edu or erin.sweet@tufts.edu or via telephone at (617)627-3394 with any questions or concerns. In addition, you may contact Yvonne Wakeford at the Office of the Institutional Review Board at (617)627-3276.

Withdrawal of Participation: Should you wish at any time during the study that you no longer care to participate, you are welcome to withdraw consent to the study and end your participation in the research.

Signature: I confirm that the purpose and duration of the research, the study’s procedure, the possible risks and discomforts as well as the benefits have been explained to me. I have read the above consent information. My signature indicates my consent to participate in this study.

Do you consent to being audiotaped? (Please check) YES NO

_______________________________   _________________ ______
Signature       Date

_______________________________   _________________ ______
Printed Name       Experimenter Signature
**ASSENT FORM**

**For Participation of Minors in Tufts University Research for the Massachusetts Audubon Society**

**Study Title:** “Nature’s New Curriculum – Creating Educational Opportunities in Urban and Diverse Communities”

**Study Number:** 0803029

**Principal Investigators:** Suzanne Pude & Erin Sweet, Graduate students, Department of Urban and Environmental Policy and Planning, Tufts University

**Purpose and Duration:** This study seeks to gain an understanding of ideas about nature, in general and in your community. Specifically, this information will be used to help the Massachusetts Audubon Society as they work to better serve the state. This study is expected to take approximately 60-90 minutes of your time.

**Procedures:** Tufts researchers will lead a group discussion by asking open-ended questions while recording participants’ responses.

**Costs, Risks and Discomfort:** There are no anticipated costs, risks or discomfort associated with this research.

**Benefits:** There are no direct benefits to participants. However, it is expected that the findings will help to bring community-relevant Mass Audubon programming to the city/town. Participants will have an opportunity to shape what this programming involves.

**Confidentiality:** The results of the group discussion will be presented to the Massachusetts Audubon Society and Tufts University, and may appear in a scholarly journal or book or used for teaching purposes. Specific comments will not be assigned to an individual by name.

**Compensation:** No monetary compensation will be provided for participants. Refreshments will be served during the session.

**Request for More Information:** You may ask questions about the study at any time. Please email the principal investigators at Suzanne.pude@tufts.edu or erin.sweet@tufts.edu or via telephone at (617)627-3394 with any questions or concerns. In addition, you may contact Yvonne Wakeford at the Office of the Institutional Review Board at (617)627-3276.

**Withdrawal of Participation:** Should you wish at any time during the study that you no longer care to participate, you are welcome to withdraw your consent to the study and end your participation in the research.

**Signature:** I confirm that the purpose and duration of the research, the study’s procedure, the possible risks and discomforts as well as the benefits have been explained to me. I have read the above consent information. My signature indicates my willingness to participate in this study.

Do you consent to being audiotaped? (Please check)       YES  NO

_______________________________   _________________ ______
Signature       Date

_______________________________   _________________ ______
Parent Signature       Date
THIRD PARTY CONSENT FORM
Parental Consent of Participation of a Minor in Tufts University Research for the Massachusetts Audubon Society

Study Title: “Nature’s New Curriculum – Creating Educational Opportunities in Urban and Diverse Communities”

Study Number: 0803029

Principal Investigators: Suzanne Pude & Erin Sweet, Graduate students, Department of Urban and Environmental Policy and Planning, Tufts University

Purpose and Duration: This study seeks to gain an understanding of your child’s ideas about nature, in general and in your community. Specifically, this information will be used to inform the Massachusetts Audubon Society as they work to better serve the state. This study is expected to take approximately 60-90 minutes of your time.

Procedures: Tufts researchers will lead a group discussion by asking open-ended questions while recording participants’ responses.

Costs, Risks and Discomfort: There are no anticipated costs, risks or discomfort associated with this research.

Benefits: There are no direct benefits to participants. However, it is expected that the findings will help to bring community-relevant Mass Audubon programming to the city/town. Participants will have an opportunity to shape what this programming involves.

Confidentiality: The results of the group discussion will be presented to the Massachusetts Audubon Society and Tufts University, and may be cited in a scholarly journal or book or used for teaching purposes. Specific comments will not be assigned to an individual by name.

Compensation: No monetary compensation will be provided for participants. Refreshments will be served during the session.

Request for More Information: You may ask questions about the study at any time. Please email the principal investigators at Suzanne.pude@tufts.edu or erin.sweet@tufts.edu or via telephone at (617)627-3394 with any questions or concerns. In addition, you may contact Yvonne Wakeford at the Office of the Institutional Review Board at (617)627-3276.

Withdrawal of Participation: Should your child wish at any time during the study that they no longer care to participate, they are welcome to withdraw consent to the study and end their participation in the research.

Signature: I confirm that the purpose and duration of the research, the study’s procedure, the possible risks and discomforts as well as the benefits have been explained to me and the participating minor. I have read the above consent information. My signature indicates my consent and the minor’s willingness to participate in this study.

Do you consent to the participating minor being audiotaped? (Please check) YES NO

_______________________________   _________________ ______
Signature       Date

_______________________________   _________________ ______
Printed Name       Experimenter Signature