



6

TRANSPORTATION EQUITY

WHAT IS TRANSPORTATION EQUITY?

The Boston Region MPO's transportation equity policies are rooted in its definition of environmental justice (EJ), below:

Environmental justice requires the MPO to examine the allocation of benefits and burdens, historically and currently, and planned for the future; to ensure that minority and low-income communities are treated equitably in the provision of transportation services and projects; and to provide full participation for minority and low-income communities to advise the MPO during its planning and decision-making process.

Environmental Justice Areas

The MPO's transportation model is composed of 2,727 transportation analysis zones (TAZs). A TAZ is an aggregation of census geography based on demographic information and numbers of trips produced, and attracted within, its borders. Each zone contains population, employment, and housing information. The average TAZ has approximately 1,800 people. The TAZ is the geographic unit for the analysis used to define environmental justice areas.

The MPO defines an environmental justice area as follows:

A TAZ will be considered an environmental justice area if it is over 50 percent minority or has a median household income at or below 60 percent of the region's median. [As of the 2000 U.S. Census, 60% of the region's median household income of \$55,800 is \$33,480.¹]

¹ The MPO used the 2000 U.S. census to define environmental justice areas. Though the 2010 census minority population data at the tract level was released on March 22, 2011, the household income data have yet to be released at the tract level. MPO staff have determined that the 2005–2009 American Community Survey (ACS) sample data have high margins of error at the tract level for minority population and did not want to use it as the source. Environmental justice areas will be redefined when complete new data are available.



The MPO adopted this income threshold from a United States Department of Housing and Urban Development’s definition of low-income households, which is “60 percent of area median income.”² This definition resulted in 28 environmental justice areas. The environmental justice areas, composed of single or localized groups of TAZs, are in the following Boston neighborhoods and municipalities. (The number of environmental justice area TAZs compared to the total number of TAZs in a neighborhood or municipality is indicated in parentheses.)

The Boston neighborhoods of:

- Allston-Brighton (16 of 39 TAZs)
- Charlestown (1 of 9 TAZs)
- Chinatown (12 of 19 TAZs)
- Dorchester (23 of 37 TAZs)
- East Boston (14 of 18 TAZs)
- Fenway (23 of 29 TAZs)
- Hyde Park (9 of 14 TAZs)
- Jamaica Plain (9 of 22 TAZs)
- Mattapan (19 of 20 TAZs)
- Roxbury (26 of 27 TAZs)
- South Boston (4 of 19 TAZs)
- South End (12 of 22 TAZs)
- Roslindale (5 of 11 TAZs)

The municipalities of:

- Cambridge (14 of 88 TAZs)
- Chelsea (18 of 19 TAZs)
- Everett (4 of 18 TAZs)
- Framingham (6 of 32 TAZs)
- Lynn (16 of 39 TAZs)
- Malden (3 of 28 TAZs)
- Medford (2 of 26 TAZs)
- Milford (2 of 18 TAZs)

² The full definition is: “60 percent of area median income. Used as low income for the low-income housing tax credit and HOME programs.” Office of Policy Development and Research of the U.S. Department of Housing and Urban Development, Rental Housing Assistance – the Worsening Crisis: A Report to Congress on Worst Case Housing Needs, March 2000.

- Peabody (2 of 23 TAZs)
- Quincy (5 of 50 TAZs)
- Randolph (1 of 15 TAZs)
- Revere (7 of 24 TAZs)
- Salem (1 of 19 TAZs)
- Somerville (7 of 41 TAZs)
- Waltham (1 of 32 TAZs)

These 28 environmental justice areas are the focus of the outreach and analysis components of the MPO's Transportation Equity Program. Table 6-1 shows the total population, minority population, and percent of the MPO's median household income for all of the TAZs within a municipality or neighborhood that meet the low-income or minority threshold. Figures 6-1 and 6-2 show the location of the environmental justice areas in the region and urban core, respectively.

TABLE 6-1

ENVIRONMENTAL JUSTICE AREA DEMOGRAPHICS

| LOCATION OF ENVIRONMENTAL JUSTICE AREA (EJA) | TOTAL POPULATION OF MUNICIPALITY/ NEIGHBORHOOD | TOTAL POPULATION OF EJA | MINORITY POPULATION OF EJA | PERCENT OF EJA POPULATION THAT IS MINORITY | EJA'S MEDIAN HOUSEHOLD INCOME AS A PERCENT OF THE REGION'S MEDIAN HOUSEHOLD INCOME |
|--|--|-------------------------|----------------------------|--|--|
| Allston/Brighton | 69,600 | 27,932 | 11,073 | 40% | 47% |
| Cambridge | 101,355 | 22,921 | 14,195 | 62% | 60% |
| Charlestown | 15,100 | 3,627 | 2,593 | 71% | 27% |
| Chelsea | 35,080 | 34,535 | 21,492 | 62% | 54% |
| Chinatown | 10,100 | 7,429 | 4,736 | 64% | 30% |
| Dorchester | 76,550 | 53,596 | 42,157 | 79% | 67% |
| East Boston | 38,300 | 30,241 | 17,011 | 56% | 52% |
| Everett | 38,037 | 2,956 | 978 | 33% | 52% |
| Fenway | 38,217 | 33,565 | 10,924 | 33% | 43% |
| Framingham | 66,910 | 11,247 | 6,121 | 54% | 50% |
| Hyde Park | 36,796 | 23,214 | 17,403 | 75% | 70% |
| Jamaica Plain | 36,282 | 13,547 | 10,106 | 75% | 47% |
| Lynn | 89,050 | 38,004 | 23,042 | 61% | 46% |
| Malden | 56,340 | 2,387 | 920 | 39% | 56% |
| Mattapan | 51,204 | 50,966 | 48,779 | 96% | 60% |
| Medford | 55,765 | 6,109 | 2,247 | 37% | 78% |
| Milford | 26,799 | 2,977 | 516 | 17% | 56% |
| Peabody | 48,129 | 3,141 | 682 | 22% | 43% |
| Quincy | 88,025 | 7,745 | 2,131 | 28% | 49% |
| Randolph | 30,963 | 1,622 | 876 | 54% | 88% |

TABLE 6-1 (CONT.)

ENVIRONMENTAL JUSTICE AREA DEMOGRAPHICS

| LOCATION OF ENVIRONMENTAL JUSTICE AREA (EJA) | TOTAL POPULATION OF MUNICIPALITY/ NEIGHBORHOOD | TOTAL POPULATION OF EJA | MINORITY POPULATION OF EJA | PERCENT OF EJA POPULATION THAT IS MINORITY | EJA'S MEDIAN HOUSEHOLD INCOME AS A PERCENT OF THE REGION'S MEDIAN HOUSEHOLD INCOME |
|--|--|-------------------------|----------------------------|--|--|
| Revere | 47,283 | 11,959 | 4,213 | 35% | 51% |
| Roslindale | 29,030 | 12,344 | 8,477 | 69% | 62% |
| Roxbury | 56,220 | 55,747 | 52,296 | 94% | 50% |
| Salem | 40,407 | 2,921 | 2,173 | 74% | 47% |
| Somerville | 77,478 | 7,224 | 3,189 | 44% | 52% |
| South Boston | 31,130 | 8,500 | 3,756 | 44% | 31% |
| South End | 29,911 | 16,306 | 12,441 | 76% | 42% |
| Waltham | 59,226 | 1,788 | 919 | 51% | 78% |
| TOTAL | 1,379,287 | 494,550 | 325,446 | 66% | |

Source: 2000 US Census

PROBLEMS AND ISSUES

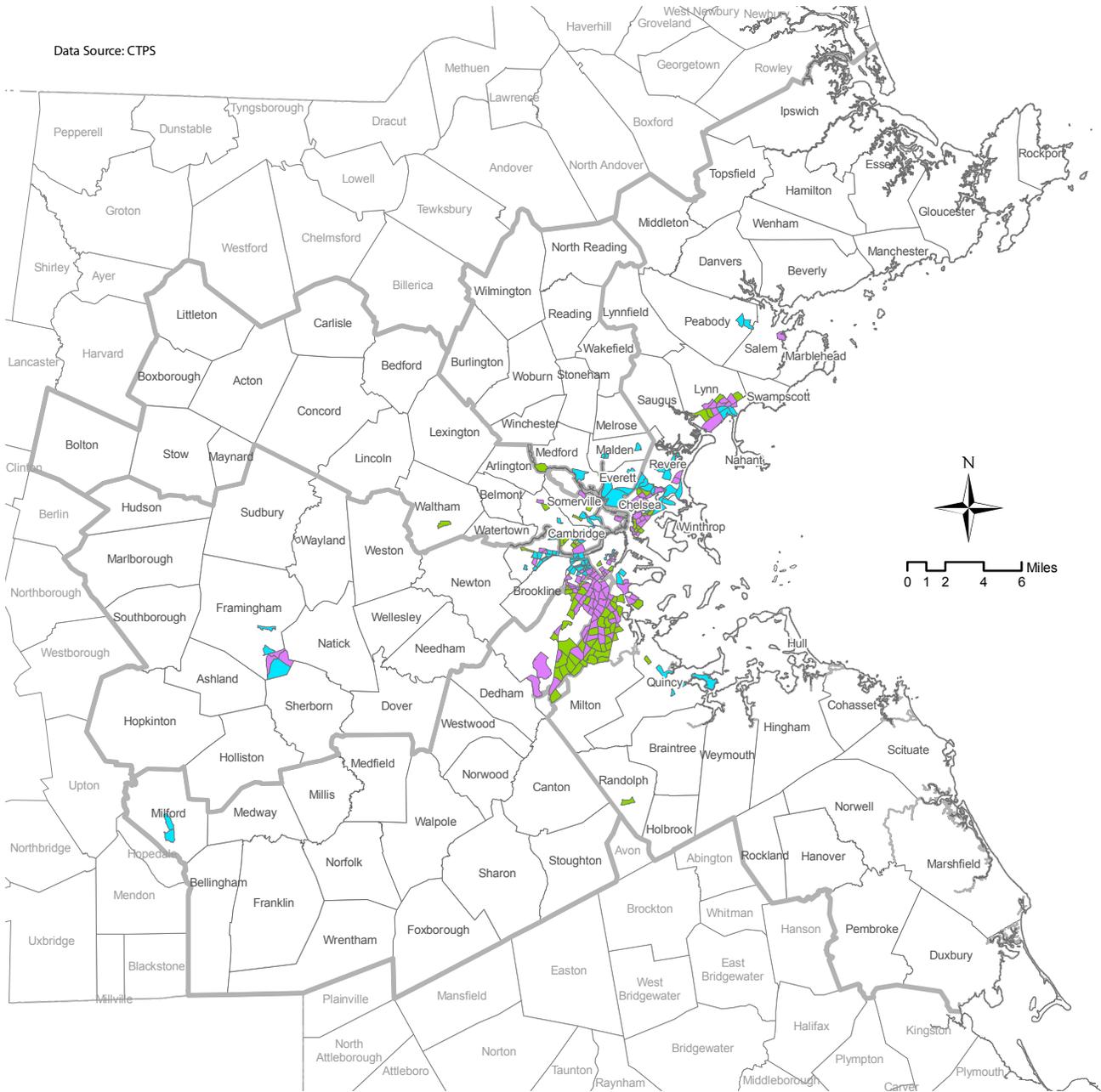
Transportation equity problems and issues are identified with the help of residents of the environmental justice communities and the community-based organizations that serve those communities. Information about the transportation needs of minority and low-income populations, the elderly, residents with limited English proficiency, and youth is gathered as part of the MPO's ongoing Transportation Equity Program and through other MPO outreach activities. Both the program and other MPO activities are discussed in the section MPO Actions to Achieve Visions, below.

Staff reviewed all of the feedback it received through outreach to environmental justice communities and its transportation equity contacts and summarized it in the needs assessment that was conducted for this LRTP. Chapter 10 of Volume II of the LRTP–Needs Assessment, summarized the more detailed needs that were identified by contacts in the environmental justice areas of the MPO and are also summarized below.

- Traffic speeds in many low-income and minority neighborhoods are too high, making streets dangerous for pedestrians and bicyclists. Traffic calming and complete-streets design principles will create a safer environment.
- Circumferential transit service is poor in the Central Area.
- There is no connection between the Red and Blue lines.
- Densely populated areas such as Roxbury, Jamaica Plain, Somerville, Chelsea, Medford, Everett, and Lynn lack access to rapid transit within a reasonable walking distance.
- Transit service is focused on travel to and from Boston, and can be inadequate for travel within communities outside the Central Area.

FIGURE 6-1

BOSTON MPO REGION ENVIRONMENTAL JUSTICE AREAS



Data Source: CTPS

Transportation Analysis Zones (TAZs) That Meet Environmental Justice Criteria*

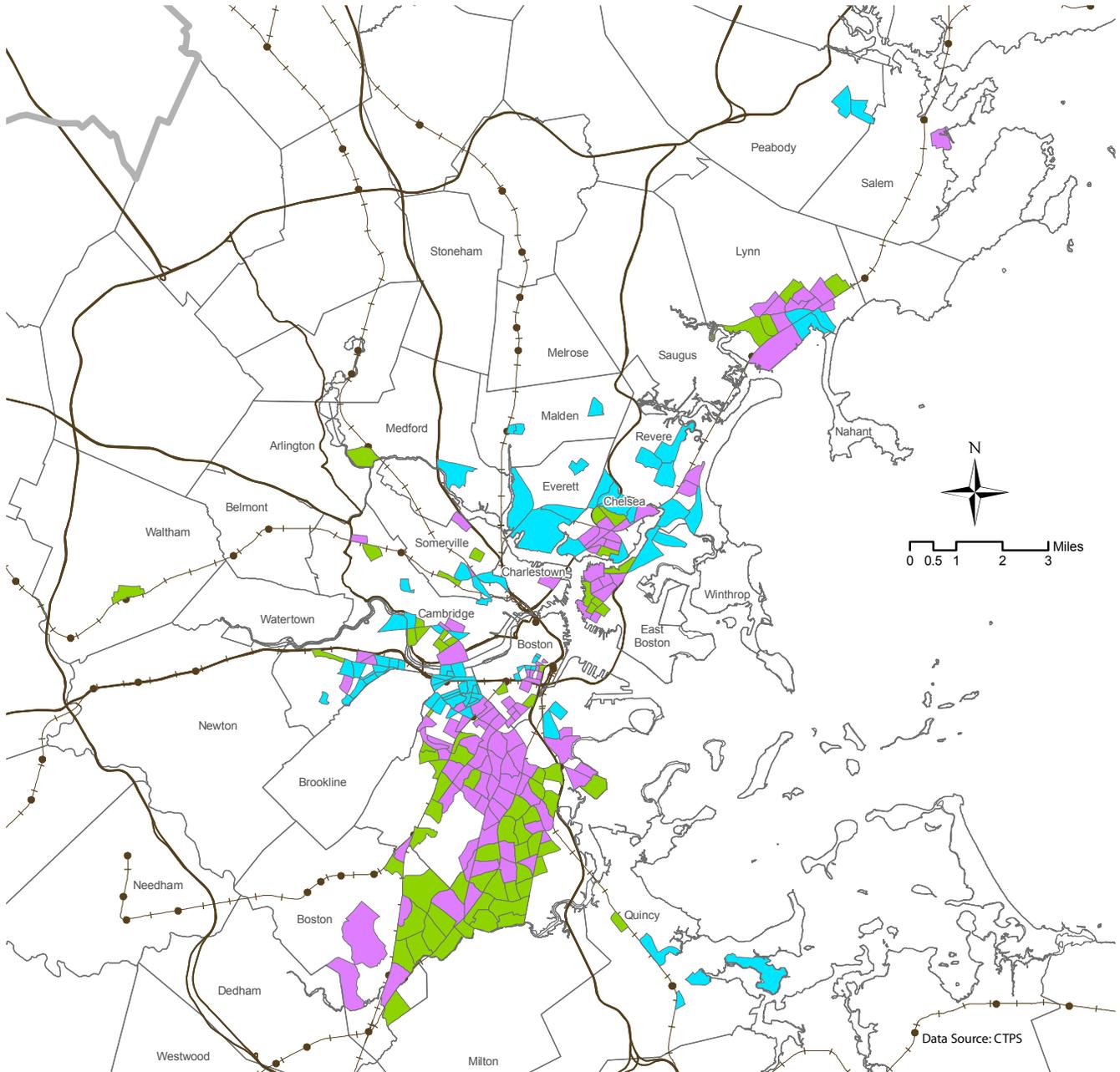
- Meets income criterion
- Meets minority criterion
- Meets both criteria

***MPO Criteria for Environmental Justice Areas**

A TAZ in which the median household income in 1999 was equal to or less than 60% of the MPO median of \$55,800 (\$33,480) or in which the 2000 population was more than 50% minority.

FIGURE 6-2

BOSTON MPO REGION URBAN CORE ENVIRONMENTAL JUSTICE AREAS



Transportation Analysis Zones (TAZs) That Meet Environmental Justice Criteria*

- Meets income criterion
- Meets minority criterion
- Meets both criteria

***MPO Criteria for Environmental Justice Areas**

A TAZ in which the median household income in 1999 was equal to or less than 60% of the MPO median of \$55,800 (\$33,480) or in which the 2000 population was more than 50% minority.

- Several bus routes in the Central Area operate at slow speeds.
- There are negative community impacts from the MBTA's bus maintenance facilities.
- The airport generates traffic congestion in East Boston.
- Late-evening and early-morning transit service is needed by many low-income workers.
- The transit system is difficult to navigate for people who speak languages other than English.
- Transit service is limited in several environmental justice communities, including Randolph, Milford, and the Hyde Park neighborhood of Boston.
- Commuter rail fares and overnight locomotive idling are burdens.
- The elderly population is expected to grow substantially between now and 2035.



THE BOSTON REGION MPO'S VISION FOR TRANSPORTATION EQUITY

Vision: Low-income and minority residents, the elderly, youth, and persons for whom English is a second language will share equitably with others in the access and mobility benefits of the transportation network. Environmental burdens from existing and future transportation facilities and services will be identified and minimized, and low-income and minority populations will not be inequitably burdened. Expansion projects will address regional needs.

Policies: To implement this vision, the MPO has developed a set of policy statements to guide their decision making:

- Continue outreach and analysis to identify equity needs and continue to monitor system performance.
- Address identified equity needs related to service and removing or minimizing burdens (air pollution, unsafe conditions, and community impacts).
- Track implementing agencies' actions responding to transportation needs identified in MPO outreach and analysis; encourage action to address those needs.
- Strengthen avenues for involvement of low-income and minority persons in decision making.
- Reduce trip time(s) for low-income and minority neighborhood residents and increase transit service capacity.
- Give priority to heavily used transit services over new, yet-to-be proven services.

THE MPO'S ACTIONS TO ACHIEVE VISIONS

The Boston Region MPO has taken steps towards achieving its transportation equity vision. The MPO uses its Transportation Equity program to identify transportation needs of minority and low-income populations, the elderly, residents with limited English proficiency, and youth, and to provide awareness of opportunities for involvement in the planning process. This program focuses on direct outreach to social-services organizations and other community-based organizations serving environmental justice areas in the region, including conducting and participating in organized forums. The Boston Region MPO's Transportation Equity program is composed of three key elements: outreach, analysis, and integration of environmental justice into the planning process. These actions influence both how projects are selected for funding, and how the MPO collects and uses information about the concerns and needs of environmental justice communities.



Outreach

The MPO takes a proactive, grassroots approach to identifying and articulating environmental justice issues in the region. Its approach includes gathering information on the transportation needs of minority and low-income populations and the elderly, residents with limited English proficiency, and youth for consideration in the development of studies and certification documents; identifying, sharing, and connecting new contacts and sources of information for the planning process; meeting new people interested in participating in the planning process; and serving as a conduit for ideas on improving transportation that can be relayed to other agencies.

In carrying out these activities, the MPO identifies social-services and community contacts in the environmental justice areas involved in, and knowledgeable about, the transportation issues and needs of their areas. These contacts include social-services organizations; community development corporations; regional employment boards; civic groups; business and labor organizations; transportation advocates; environmental groups; and environmental justice and civil rights groups.

The Transportation Equity program includes the following outreach activities:

1. One-on-one interviews with community organizations are used to discuss transportation needs and burdens and facilitate participation. The MPO has learned that, in some cases, the people best positioned to speak about the transportation needs of environmental justice areas do not have the time and financial resources to travel to meetings in a central location or to participate in public forums. By visiting community representatives at their offices and facilitating one-on-one or small-group interviews, the MPO is able to obtain valuable information about the transportation

needs of the area that inform the MPO during its transportation decision-making process. These discussions also provide opportunities to inform participants about the MPO and the metropolitan planning process.

2. Standardized surveys are also used to gather data for analysis and presentation to the MPO. An on-line survey is posted on the MPO's web site for community contacts who are unable to schedule time for an interview and for residents and organizations located in environmental justice areas.
3. MPO staff also keep track of forums and meetings planned by community organizations. When relevant, staff attend these meetings to meet additional contacts, gather information, and provide input on questions specific to the MPO planning process as they arise.
4. Summaries of the information gathered and copies of the surveys, maps, and any other notes and information are compiled and presented in briefing books for review by MPO members, and are made available to contacts and interested parties in environmental justice areas. Prior to including this information in the briefing book and in reports to the MPO, MPO staff interpret the needs identified by each community or environmental justice area and classify them in relation to the LRTP, TIP, Unified Planning Work Program (UPWP), service planning, or other planning processes. Pertinent issues are also considered for further examination and study as part of the Transportation Equity program.

Communication is ongoing, as the MPO staff keeps community organizations updated with information and requests for input.

In addition, the staff gathers information during its cycles for certification document development. The MPO holds several open houses and workshops every year on various topics; these events include forums for discussing certification documents and the results of UPWP studies. Environmental justice contacts are encouraged to attend and to provide input at each of these events. The MPO also holds periodic meetings that focus on environmental justice, and it gives presentations on its Transportation Equity program whenever requested by a community organization. Environmental justice contacts are notified of public review periods and are encouraged to provide input. The MPO staff summarizes input from these events and distributes it to MPO members.

Analysis

The MPO performs a systemwide analysis of the set of projects that are currently funded by the MPO, and the set of projects recommended in this LRTP. The analysis focuses on



The image shows a screenshot of a web browser displaying the "TRANSPORTATION EQUITY SURVEY" form. The browser's address bar shows the URL "http://www.dps.org/apps/4_survey/0410/default.cfm". The form has a yellow background and includes the following elements:

- Header:** "TRANSPORTATION EQUITY SURVEY" with the MPO logo.
- Introduction:** "Please answer the following questions to help the Boston Region Metropolitan Planning Organization (MPO) understand your community's transportation needs. [Click here](#) to learn more about the Boston Region MPO, and [click here](#) to learn more about its transportation equity program."
- Form Fields:** "Address (or nearest intersection):" with a text input field, "City/town:" with a dropdown menu, and "Zip code:" with a text input field.
- Instructions:** "Note: There is a limit of 2,000 characters in the reply boxes. To make more extensive comments, please send them by e-mail to info@bmrpo.org."
- Questions:**
 1. Are there any unmet transportation needs in your community? Please list any below. (Text input box)
 2. Is there any part of your neighborhood negatively affected by the existing transportation system? If so, where are the problems? (Text input box)
 3. How could transportation service be improved in your community? (Text input box)
 4. Does your community need improved transportation system connections to specific destinations and parts of the region? (Radio buttons for Yes/No)

mobility, accessibility, and emissions for communities with a high proportion of low-income and minority residents. Chapter 9 details the results of this analysis.



Integration with the Planning Process

The MPO integrates environmental justice and transportation equity concerns into the planning process by encouraging and sharing input from its outreach activities, by using environmental justice as a criterion in its planning documents, and by examining environmental justice and transportation equity issues in greater detail in MPO planning work.

The potential impact of a proposed project on an environmental justice area is a criterion in the LRTP and TIP project ranking processes. The MPO now evaluates all projects that seek federal transportation funding through the MPO on the following criteria:

- Improves transit for an EJ population
- Design is consistent with complete-streets policies in an EJ area
- Addresses an MPO-identified EJ transportation issue

Projects that address a transportation issue in an environmental justice neighborhood can score points in the environmental-justice evaluation criteria. The MPO staff gives projects that are estimated to benefit environmental justice areas positive ratings and projects that may burden these areas negative ratings. This gives projects that address transportation equity issues and needs an advantage. The MPO considers these ratings when deciding what projects should be listed in the LRTP or TIP, and which should receive funding.

The MPO staff also continues to collect information, talk to people who live and work in the communities, and shares what it learns with state, regional, and municipal governments. This information is summarized and presented to the MPO for their consideration. Information collected from the MPO's outreach is also shared with the affected municipalities and the relevant implementing agencies.

NEXT STEPS – THE DEVELOPMENT OF PERFORMANCE MEASURES

There are several ways the MPO can measure progress towards its visions and policies for transportation equity. Examples of performance measures are the following:

- Travel speed for bus routes serving environmental justice neighborhoods

- Volume-to-capacity ratios for bus routes and rapid transit lines serving environmental justice neighborhoods
- Cost of a monthly transit pass relative to median monthly income in environmental justice neighborhoods
- Number of jobs, educational opportunities, and hospitals within a 40-minute transit trip, walking trip, or biking trip, and a 20-minute automobile trip
- Number of people attending and organizations represented at MPO Transportation Equity Forums
- Number of responses to MPO Transportation Equity surveys
- Number of small-group discussions held in environmental justice communities

The MPO has access to all of the above data required to track over time the performance measures listed above. Travel speed and ridership data are collected by the MBTA. The cost of a transit pass relative to neighborhood income can be evaluated using census data. The number of jobs, educational opportunities, and hospitals within close proximity can be measured using the MPO's travel demand model, and is part of the information that is reported when the MPO conducts its environmental justice analysis. Finally, the number of people attending meetings and submitting comments is easily tracked and has been studied and reported in the past by the MPO. Tracking these performance measures can become components of the ongoing Unified Planning Work Program activities. The MPO's performance measures do not adhere to defined targets, but they have the potential to effectively communicate the needs of the region and reinforce the value of certain investment decisions.

SUMMARY

The MPO is committed to its Transportation Equity program and the environmental justice principle of equitable distribution of benefits and burdens in the transportation system. This commitment will produce results through ongoing compliance with its own policies and consideration of environmental justice issues through its evaluations. The MPO will continue to expand its outreach to environmental justice areas and broaden its direct contacts with minority and low-income residents, the elderly, residents with limited English proficiency, and youth in order to maintain the flow of information, and to strengthen communication and its working relationships.