

Appendix A: Aquatic Features Impact Matrices

MD 198 Wetland Impact Matrix				
Wetland ID	Permanent Impacts (SF)	Temporary Impacts (SF)	Permanent Impacts (Acres)	Temporary Impacts (Acres)
Alternative 2 TSM				
PFO				
WET 26	28,181	270	0.65	0.01
PFO TOTAL	28,181	270	0.65	0.01
PSS				
PSS TOTAL	0	0	0.00	0.00
PEM				
PEM TOTAL	0	0	0.00	0.00
ALTERNATIVE 2 TOTAL	28,181	270	0.65	0.01
Mainline Alternative 4 Modified				
PFO				
WET 26	28,645	0	0.66	0.00
PFO TOTAL	28,645	0	0.66	0.00
PSS				
WET 25	430	0	0.01	0.00
PSS TOTAL	430	0	0.01	0.00
PEM				
WET 23	29,556	0	0.68	0.00
PEM TOTAL	29,556	0	0.68	0.00
ALTERNATIVE 4 MOD TOTAL	58,631	0	1.35	0.00
Interchange Option A: Flyover				
PFO				
WET 3	61	1,101	0.00	0.03
WET 6	0	3,079	0.00	0.07
WET 15	494	6,719	0.01	0.15
WET 17	4,803	1,567	0.11	0.04
WET 20	0	0	0.00	0.00
WET 21	0	138	0.00	0.00
PFO TOTAL	5,358	12,604	0.12	0.29
PSS				
PSS TOTAL	0	0	0.00	0.00
PEM				
WET 2a	2,293	0	0.05	0.00
WET 7	65,454	24,670	1.50	0.57
WET 8	0	1,150	0.00	0.03
WET 10	0	1,298	0.00	0.03
WET 12	0	608	0.00	0.01
WET 13	0	0	0.00	0.00
WET 16	10,277	5,826	0.24	0.13
PEM TOTAL	78,024	33,552	1.79	0.77
OPTION A TOTAL	83,382	46,156	1.91	1.06
Interchange Option C: Diamond Over Existing Bridge				
PFO				
WET 3	61	1,053	0.00	0.02
WET 6	0	1,633	0.00	0.04
WET 15	180	4,357	0.00	0.10
WET 17	4,803	1,522	0.11	0.03
WET 21	0	138	0.00	0.00
PFO TOTAL	5,044	8,703	0.12	0.20
PSS				
PSS TOTAL	0	0	0.00	0.00
PEM				
WET 5a	0	18	0.00	0.00
WET 7	20,074	16,927	0.46	0.39
WET 10	2,023	785	0.05	0.02
WET 10A	273	0	0.01	0.00
WET 11	327	1,381	0.01	0.03
WET 12	0	761	0.00	0.02
WET 16	10,277	5,817	0.24	0.13
PEM TOTAL	32,974	25,689	0.76	0.59
OPTION C TOTAL	38,018	34,392	0.87	0.79
Interchange Option D: 2 Bridge				
PFO				
WET 3	684	1,674	0.02	0.04
WET 6	25,576	10,079	0.59	0.23
WET 15	462	5,644	0.01	0.13
WET 21	0	138	0.00	0.00
PFO TOTAL	26,722	17,535	0.61	0.40
PSS				
PSS TOTAL	0	0	0.00	0.00
PEM				
WET 7	68,682	29,950	1.58	0.69
WET 7a	0	47	0.00	0.00
WET 9	1,464	307	0.03	0.01
WET 12	0	120	0.00	0.00
WET 16	11,067	5,658	0.25	0.13
WET 17	4,812	1,523	0.11	0.03
WET 18	0	168	0.00	0.00
PEM TOTAL	86,025	37,773	1.97	0.87
OPTION D TOTAL	112,747	55,308	2.59	1.27

MD 198 WUS Impact Matrix						
WUS ID	Permanent Impacts (LF)	Temporary Impacts (LF)	Permanent Impacts (SF)	Temporary Impacts (SF)	Permanent Impacts (Acres)	Temporary Impacts (Acres)
Alternative 2 TSM						
Ephemeral						
EPH TOTAL	0	0	0	0	0.00	0.00
Perennial						
WUS 23	71	0	356	0	0.01	0.00
PER TOTAL	71	0	356	0	0.01	0.00
Intermittent						
INT TOTAL	0	0	0	0	0.00	0.00
ALTERNATIVE 2 TOTAL	71	0	356	0	0.01	0.00
Mainline Alternative 4 Modified						
Ephemeral						
WUS 19	108	17	637	117	0.01	0.00
WUS 20	15	1	7	1	0.00	0.00
WUS 21	96	15	192	30	0.00	0.00
EPH TOTAL	219	33	836	148	0.02	0.00
Perennial						
WUS 23	56	72	561	357	0.01	0.01
PER TOTAL	56	72	561	357	0.01	0.01
Intermittent						
WUS 22	184	0	597	0	0.01	0.00
INT TOTAL	184	0	597	0	0.01	0.00
ALTERNATIVE 4 MOD TOTAL	459	105	1,994	505	0.05	0.01
Interchange Option A: Flyover						
Ephemeral						
EPH TOTAL	0	0	0	0	0.00	0.00
Perennial						
WUS 1	18	17	79	39	0.00	0.00
WUS 8	63	16	772	152	0.02	0.00
WUS 9	0	14	0	14	0.00	0.00
WUS 13	12	18	125	121	0.00	0.00
WUS 15	0	87	0	6,601	0.00	0.15
WUS 16	0	84	0	3,571	0.00	0.08
PER TOTAL	93	236	976	10,498	0.02	0.24
Intermittent						
WUS 14	0	30	0	71	0.00	0.00
INT TOTAL	0	30	0	71	0.00	0.00
OPTION A TOTAL	93	266	976	10,569	0.02	0.24
Interchange Option C: Diamond Over Existing Bridge						
Ephemeral						
EPH TOTAL	0	0	0	0	0.00	0.00
Perennial						
WUS 1	55	211	468	850	0.01	0.02
WUS 8	63	16	772	147	0.02	0.00
WUS 9	0	14	0	14	0.00	0.00
WUS 13	12	18	125	121	0.00	0.00
WUS 15	0	87	0	6,601	0.00	0.15
WUS 16	0	84	0	3,571	0.00	0.08
PER TOTAL	130	430	1,365	11,304	0.03	0.26
Intermittent						
WUS 5	32	0	64	0	0.00	0.00
WUS 6	28	0	47	0	0.00	0.00
WUS 14	0	30	0	71	0.00	0.00
INT TOTAL	60	30	111	71	0.00	0.00
OPTION C TOTAL	190	460	1,476	11,375	0.03	0.26
Interchange Option D: 2 Bridge						
Ephemeral						
EPH TOTAL	0	0	0	0	0.00	0.00
Perennial						
WUS 1	117	34	949	168	0.02	0.00
WUS 7	23	1	273	8	0.01	0.00
WUS 8	65	16	781	145	0.02	0.00
WUS 9	35	34	41	38	0.00	0.00
WUS 13	12	18	125	121	0.00	0.00
WUS 15	0	87	0	6,601	0.00	0.15
WUS 16	0	84	0	3,571	0.00	0.08
PER TOTAL	252	274	2,169	10,652	0.05	0.24
Intermittent						
WUS 14	0	30	0	71	0.00	0.00
INT TOTAL	0	30	0	71	0.00	0.00
OPTION D TOTAL	252	304	2,169	10,723	0.05	0.25

Appendix C: Environmental Justice Guidelines

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***ENVIRONMENTAL
JUSTICE
GUIDELINES***

***for
MD State Highway Administration's Projects***

I. INTRODUCTION

President Clinton issued Executive Order 12898 on February 11, 1994, which **reinforces the importance of fundamental rights and legal requirements contained in Title VI of the Civil Rights Act of 1964 and the National Environmental Policy Act. The Executive Order directs** that “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations”. Other documents which have been issued to further clarify the Executive Order are the US Department of Transportation’s (DOT) Order on Environmental Justice, dated April, 1997; the Council on Environmental Quality’s (CEQ) “Environmental Justice Guidance Under the National Environmental Policy Act”, dated December, 1997; and the Federal Highway Administration’s (FHWA) Order on Environmental Justice, dated December, 1998.

Maryland is committed to the principles of environmental justice (EJ) and will be assessing and documenting the impacts of transportation projects on minority and low-income populations as a normal part of our environmental analysis efforts. A key aspect of an EJ analysis is to ensure the involvement of affected communities in the project development process. These guidelines are meant to provide the project team with a consistent framework for both preparing an EJ analysis and developing an effective public involvement strategy. They contain only **principles and general** procedures, which means that the specific approach must be **tailored to the unique circumstances of each project and those communities affected by it**. If the procedures do not seem appropriate for a particular project, then the team should develop a more suitable approach.

The guidelines apply to projects requiring all types of NEPA documentation (Environmental Impact Statements, Environmental Assessments, Categorical Exclusions or environmental reevaluations). The identification of minority or low-income populations **actually** begins during **systems planning by the Metropolitan Planning Organization (MPO) or SHA’s Regional and Intermodal Planning Division. This information will be used and supplemented during the environmental inventory and alternatives development phases of the project development process as additional data, analysis and public input are refined. Decision-makers will be better informed about the important issues and concerns of low income and minority populations to be considered along with other factors in determining project location, design and mitigation.** The EJ analysis **during project development** will be conducted concurrently with other technical environmental analyses during the Alternatives Retained for Detailed Study stage.

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An EJ analysis must be completed for each build alternative. Additionally, the No-Build alternative must be carefully considered as well. For example, it's possible that not building transportation improvements could impact minority or low-income populations (i.e., increased noise or air pollution, limited access to employment, etc.). A clearly written description of all EJ findings must be included in the environmental document.

II. ENVIRONMENTAL JUSTICE AND TITLE VI

The EJ Executive Order supplements the existing requirements of Title VI of the Civil Rights Act. Title VI says that each Federal agency is required to ensure that no person on grounds of race, color, or national origin is excluded from participation in, denied the benefits of, or in any other way subjected to discrimination under any program or activity receiving Federal assistance. Supplemental legislation provides these same protections from discrimination based on sex, age, disability or religion.

The concept of environmental justice is intended to ensure that procedures are in place to further protect groups which have been traditionally underserved. **The fundamental principles of environmental justice are:**

- **To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.**
- **To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.**
- **To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.**

The major similarities and differences between the EJ Executive Order and Title VI are described below:

SIMILARITIES	DIFFERENCES
<ul style="list-style-type: none">▪ Both address non-discrimination.▪ Both capture minority populations.▪ Both are rooted in the constitutional guarantee (14th Amendment) that all citizens are created equal and are entitled to equal protection.▪ Both address involvement of impacted citizens in the decision-making process through meaningful involvement and participation.	<ul style="list-style-type: none">▪ EJ covers minority and low-income, while Title VI and supplemental legislation cover race, color, national origin, sex, age, disability and religion.▪ EJ is an executive order (an order of the President of the United States), while Title VI is a law (an act of Congress).▪ EJ mandates a process, while Title VI prohibits discrimination.

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A listing of existing laws and regulations addressing environmental justice and Title VI is included at the end of these guidelines.

III. DEFINITIONS

For your information, the following definitions are provided. They have been taken directly from the US DOT Order on Environmental Justice:

Low-Income

A person whose median household income is at or below the Department of Health and Human Services poverty guidelines.

Minority

A person who is:

- (a) Black (a person having origins in any of the black racial groups of Africa);
- (b) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race);
- (c) Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or
- (d) American Indian and Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition)

Low-Income Population

Any readily identifiable group of low-income persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy or activity.

Minority Population

Any readily identifiable groups of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy or activity.

Adverse Effects

The totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to:

- bodily impairment, infirmity, illness or death
- air, noise, and water pollution and soil contamination
- destruction or disruption of man-made or natural resources
- destruction or diminution of aesthetic values
- destruction or disruption of community cohesion or a community's economic vitality
- destruction or disruption of the availability of public and private facilities and services

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- vibration
- adverse employment effects
- displacement of persons, businesses, farms, or nonprofit organizations
- increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community
- denial of, reduction in, or significant delay in the receipt of benefits of DOT programs, policies, or activities

Disproportionately High and Adverse Effects on Minority and Low-Income Populations

An adverse effect that:

- (a) is predominately borne by a minority population and/or a low-income population, or
- (b) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population

IV. PUBLIC OUTREACH

Public involvement is the foundation to effectively integrating environmental justice concerns into transportation decision-making. It is not a separate task, but must be fully integrated within the full range of SHA processes. Outreach to the public is already a critical component of SHA's project development process (as outlined in the Maryland Action Plan); environmental justice simply requires us to ensure that minority and low-income populations are included in this public outreach.

The public can provide valuable input and assist in validating information obtained from secondary sources such as census data. They can play an integral role in identifying issues and concerns of their communities, cataloging community resources and past actions affecting their quality of life, suggesting project alternatives, and negotiating avoidance, minimization, mitigation, and enhancements.

A primary goal of environmental justice is to engage those groups traditionally underrepresented in the project development process. For each project, the team should proactively reach out to the minority or low-income communities identified during systems planning and the environmental inventory and alternatives development stages. It doesn't matter whether the study area is predominantly minority or low-income, or if there is only a small EJ community. Outreach is still required to get them involved in the project development process. This outreach effort begins early in the project (i.e., in the same time frame as focus group formation) and continues throughout the process. In order to be effective, your public involvement strategy **should be tailored to use adaptive or innovative approaches that overcome linguistic, institutional,**

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cultural, economic, historical, or other potential barriers to effective participation in the decision-making process.

Each project team will need to develop its own outreach strategy thoughtfully, based on the characteristics of the particular study area. There is no 'cookie-cutter' approach, so each project may need to be treated somewhat differently.

Your goal should be to identify minority and low-income populations, bring them into the project development process, and ensure that **reasonable efforts are made to address their concerns and provide them meaningful opportunities to influence transportation decisions**. This doesn't mean that your project outreach is directed only toward EJ communities to the exclusion of other communities. The outreach strategies listed below can be applied to all communities, not strictly to EJ communities.

Listed below is a menu of possible tools and strategies which may be useful in identifying, contacting, and engaging the public in the project development process. Remember, you don't have to use all of these strategies; you should use only those which are appropriate for your project and study area:

- For the following agencies, organizations and/or stores, consider posting fliers and notices on bulletin boards; including information in church bulletins, homeowner association newsletters, etc.; offering to make project presentations; etc.:
 - homeowner/community associations
 - community action agencies
 - religious organizations (churches, etc.)
 - civil rights organizations
 - minority business associations
 - Chambers of Commerce
 - business and trade organizations (e.g., Washington Board of Trade)
 - environmental and environmental justice organizations
 - rural/agricultural organizations
 - ethnic stores/shops
 - universities, colleges, vocational and local schools
 - fraternities/sororities
 - senior citizen groups (e.g., senior centers, county Office of Aging)
 - community/recreational centers
- Publish ads and notices in newspapers, radio and other media, particularly media targeted to minority and low-income populations
- In addition to ads and notices, actively pursue having articles about the project published in local newspapers
- Publish ads not just in the legal section of the newspapers, but also in more 'popular' sections
- Include minority or low-income people on project focus groups
- Depending on the make-up of the particular project area, consider translating documents, notices and hearings for limited English-speaking populations

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- For public meetings and brochures:
 - include a slide asking for input from minority and low-income communities
 - include wording in brochures soliciting input and information
- If at all possible, hold public meetings in locations that are accessible to transit
- Hold meetings at times and locations that are convenient for the attendees
- If appropriate, consider using an independent facilitator at community meetings, task force meetings, etc.
- Consider providing a minute-taker at key community meetings and providing copies of the minutes to attendees and other interested people
- Hold neighborhood open-houses or charrettes
- In any notices for EJ community meetings, ask if there are unique needs/concerns (i.e., interpreter, etc.)
- Consider adding wording in project Initiation Ads and/or project mail-back cards to solicit input on, and active involvement from, minority/low-income/other populations – wording would have to be sensitive to any perception of discrimination
- Use the internet and other electronic media (e.g., SHA/MDOT web-site, some colleges and local schools have web-sites with bulletin boards, local governments)
- Place public meeting/workshop brochures, fliers and newsletters in the management offices of apartment buildings occupied by minority or low-income people
- Provide public meeting/workshop brochures, fliers and newsletters at local festivals and fairs
- Post signs in buses
- Distribute public meeting notices at bus/Metro stops
- Post notices in local libraries
- Contact school PTAs – they may be willing to have a presentation at one of their regular meetings
- Conduct in-street interviews to identify local issues/concerns
- Set up informational kiosks in malls, libraries, etc.
- Possible innovative/unique ideas for atypical projects:
 - Open a project field office in a minority or low-income area
 - In addition to the normal workshops or informational meetings which provide information about the project as a whole, hold workshops with affected populations by alternative in order to focus more on the alternative having the most impact on them
 - Use questionnaires to identify concerns of affected populations (issues, impacts, benefits, etc.) Any questionnaire would have to be developed and distributed early, so that ample time would be available to compile, analyze and use the data.
 - Put out fliers and do a “road show” in communities, parks, festivals, malls, etc.

To keep impacted communities involved and informed during final design and construction, consider having a community representative attend certain team meetings, developing flyers/brochures, etc.

V. IDENTIFICATION OF MINORITY POPULATIONS AND LOW-INCOME POPULATIONS

The identification of minority or low-income populations will begin during **systems planning by the Metropolitan Planning Organization (MPO) or SHA's Regional and Intermodal Planning Division. This information developed during planning will be used and supplemented during the project development process as additional data, analysis and public input are refined to be included in the NEPA document.** As more information becomes available and the alternatives are developed, the locations of populations will continue to be refined.

You need to be sensitive to the fact that you are identifying both minority and low-income populations, so don't just concentrate on minority communities. Also, remember that there are many wealthy minority communities and many poor non-minority communities.

A. Environmental Inventory

For environmental inventory purposes, the main sources of information regarding locations of minority or low-income populations are:

1. Census Data

Because census data is so readily available and easy to use, it is typically the first information gathered when trying to determine if there are minority or low-income populations in the project study area. However, census data is just the starting point used to "flag" census areas that potentially contain minority or low-income populations. You have to keep in mind that even census areas with a very small minority or low-income percentage may contain a protected population in your study area – in some cases, a group of a few homes could be considered a population.

"Disproportionately high and adverse effects", not size, are the basis for environmental justice. A very small minority or low-income population in the project area does not eliminate the possibility of a disproportionately high and adverse effect on these populations.

That's why it is critical to continue gathering additional information from various sources in order to successfully locate and refine the geographic locations of the populations.

- a. Determine whether you will use census "tracts" or "blocks". Generally, data based on census tracts should be used for larger project areas. For smaller project areas (like intersection improvements), data based on the smaller census blocks would probably be more appropriate.

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- b. Once the project study area is determined, identify all census tracts/blocks which overlap with it.
- c. Determine the minority or low-income percentage for each census tract/block.

- 1) Minority Percentage

If there is more than one minority group in your study area, the minority percentage should be based on the aggregate of all minority people. For example, if the percentage of Black persons in the identified census tract/block is 20% and the percentage of Hispanic persons is 20%, then the total of 40% should be used for the minority percentage.

- 2) Low-Income Percentage

Census data provides the percentage of people below the poverty level (but does not actually provide the dollar amount of that poverty level). The dollar amount is defined by the Department of Health and Human Services. **The data is revised annually and can be accessed at www.aspe.hhs.gov or www.census.gov.** In order to be sensitive to low-income communities, do not include the poverty level dollar amount in the environmental document; you should simply keep the information in your project files. Be sure to identify the poverty level associated with the year of the census data being used (e.g., if you are using 1990 census data, use the corresponding 1990 poverty level).

Keep in mind that local jurisdictions may define their own 'poverty level'; however, you are to use the poverty level defined by the Department of Health and Human Services in order to maintain consistency between various jurisdictions.

- d. Calculate the average minority percentage and average low-income percentage for your entire study area by averaging the individual tract/block percentages.
- e. Determine which census tracts/blocks should be "flagged" because they could contain minority or low-income populations by comparing the minority or low-income percentage of each individual census tract/block to the average percentage for the study area. If this individual percentage is "meaningfully greater" than the average percentage, then a minority or low-income population is potentially located within that census tract/block.

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On a project-by-project basis, the project team should define “meaningfully greater” and document the rationale. For example, if the minority percentage for a census tract is 10% and the study area average is 5%, this 5% difference could be “meaningfully greater” because it represents a doubling of the average. However, if the minority percentage for a census tract is 75% and the study area average is 70%, this 5% difference is probably not “meaningfully greater” since it represents only a small increase over the average.

2. SHA and Other Agencies

The project team should use a common sense approach when determining what further level of effort is appropriate for identifying EJ populations. For example, if the census data tells you that your project is in a mostly minority area, you probably don’t need to use the other sources discussed below to identify minority populations – in essence, your entire project area would be a minority population. (However, you would still need to go beyond just the census data to identify low-income populations.)

Even if a census tract/block has a very small percentage of minority or low-income persons - and is therefore not identified during Step 1 above - it is possible that a population(s) may still be located in that census tract/block. For example, a 5% Asian American population may be entirely located in one particular community, thus qualifying as a minority population. Therefore, you cannot rely on census data alone to identify populations.

At a minimum, you should also contact the following sources, via phone conversations, meetings (including project team meetings) or correspondence:

- a. Local planning and transportation staff, including MPOs
- b. State Highway Administration
 - 1) Regional and Intermodal Planning Division
 - 2) Office of Equal Opportunity
 - 3) District Right-of-Way Office

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In any conversations with or letters to the above sources, you must be careful to include the following information so they understand why you are collecting EJ information. Information regarding the locations of EJ communities may raise sensitive issues, so you shouldn't just request locations of EJ communities without explaining why you need the information and what you will be doing with it.

- Provide the purpose/background of environmental justice (reference the Executive Order)
- Emphasize that you are looking for information on both minority and low-income populations – and that they are not the same thing
- Explain what the 4 minority groups are and what the poverty level is
- Request information on the location of minority or low-income populations, based on their knowledge of the project study area

B. Alternatives Development

After the environmental inventory stage, as preliminary/conceptual alternatives are developed, **other sources of information must be used to confirm and further refine the locations of minority and low-income populations. As described earlier, public involvement is a critical component to this effort.** The project team will need to determine, based on each particular project, which sources are appropriate to contact.

This contact can be made via formal written correspondence (letters, flyers, etc.), meetings/presentations, phone calls and/or e-mails – the team needs to determine which method is most appropriate for a particular source. Some sources, such as religious groups and schools, in addition to providing race and national origin information about the people attending their services or classes, may also be able to provide information about any low-income communities they may assist. Keep in mind that it's very important to maintain a record of all sources you contact, as well as the input each source provides to you.

Possible additional information sources include, but are not limited to:

- homeowner/community associations
- community action agencies
- religious organizations (churches, etc.)
- civil rights organizations
- Maryland Department of Planning (GIS and other data)
- state and local tax and financing agencies
- minority business associations
- Chambers of Commerce
- business and trade organizations (e.g., Washington Board of Trade)
- environmental and environmental justice organizations
- rural/agricultural organizations
- economic and job development agencies (e.g., Welfare to Work)

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- ethnic stores/shops
- universities, colleges, vocational and local schools
- fraternities/sororities
- senior citizen groups (e.g., senior centers, county Office of Aging)
- community/recreational centers

NOTE: For purposes of a secondary and cumulative effects analysis (SCEA), census data only will be used to identify minority or low-income populations. Each census tract which overlaps with the SCEA geographic boundary should be identified. Then the individual minority and low-income percentages for each tract are to be compared to the average study area percentages as determined in Section V.A.1.d (you do not need to calculate the average percentages for the entire SCEA boundary). Those individual tracts with percentages meaningfully greater than the study area average percentage will be considered to have minority or low-income populations.

C. Documentation

In the “Affected Environment” section of the environmental document, you will need to carefully discuss your findings regarding minority and low-income populations. While the project files should include all details of your efforts to identify minority or low-income populations in the study area (letters written to agencies/organizations, phone memos, responses or non-responses, etc.), the environmental document should only provide a summary.

1. Clearly state whether minority or low-income populations have been identified in the project study area.
2. Describe how you concluded whether or not there are minority or low-income populations.
 - a. describe the results of the census data assessment
 - b. list all of the agencies, organizations and/or other groups which were contacted and describe how they were contacted (letter, phone call, meeting, etc.),
 - c. summarize the responses received and/or issues identified

The most effective way to display this information is in a matrix format.

3. If minority or low-income populations are identified, characterize them by describing their make-up, size, general location, age, etc. It's recommended that study area mapping showing all locations of EJ populations not be included in the environmental document.

VI. ASSESSMENT OF DISPROPORTIONATELY HIGH AND ADVERSE IMPACTS

The definition of adverse effects (see Section II) encompasses a wide variety of potential impacts, including those to human health, the natural and social environment, the economy, community function, etc. It also includes the denial, reduction or delay in receiving benefits, which should be addressed like any other impact. For an EJ analysis, you'll need to consider all of these.

There is no magic formula for determining if a minority or low-income community will experience disproportionately high and adverse impacts due to your project. Since each project – and each minority or low-income community – is different, the team will have to carefully consider many factors in making its determination. You will need to use an approach that combines both qualitative and quantitative information to support your conclusion.

Keep in mind that the EJ analysis must be done for each alternative, including the No-Build. The No-Build alternative is defined as no other improvements being done except maintenance to the existing road. Even under the No-Build, minority or low-income populations may be affected. Impacts such as increased noise, air pollution, congestion, travel times, etc. must be considered and documented appropriately.

One of the most important factors to consider is whether and how the community itself believes it will be impacted. What one community perceives as an impact, another may perceive as a benefit. It's also possible that, within the same community, the same action may be perceived by various segments as both an impact and a benefit. Therefore, it's imperative that you work with the EJ community to see how they feel about the project.

A. Analysis of Disproportionately High and Adverse Effects

Since a one-size-fits-all approach won't work, the team will need to address a variety of questions and considerations in order to conclude if the project will have disproportionately high and adverse impacts (including denial, reduction or delay in receiving benefits) on an EJ population. You will, in essence, be assessing the context and intensity of effects on EJ populations as compared to non-EJ populations.

You will need to carefully consider all of the items below, since no single item will lead to a supportable conclusion:

1. Is the adverse effect predominantly borne by the EJ population? For example, are more minority or low-income people impacted than non-minority or non-low-income people? Is the percentage of minority or low-income people impacted greater than the percentage of minority or low-

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income people in the study area? Be very cautious when using numbers like this, since numbers alone can be misleading.

2. Will the adverse effect on the EJ population be appreciably more severe or greater in magnitude than the adverse effect on the non-minority or low-income population? In other words, will the EJ population carry an unfair share of the impact? For example, if ten EJ residences and ten non-EJ residences will each experience noise levels above the federal standard, but noise at the EJ residences will increase by 20 decibels and noise at the non-EJ residences will increase by 10 decibels, there may be a disproportionate impact.
3. Does the project impact a resource that is especially important to an EJ populations? Does it serve an especially important social, religious or cultural function for the EJ community? For example, is a park which is used regularly for cultural festivals being impacted by the project?
4. Are there mitigation, enhancement measures or offsetting project benefits (see Section VI) to the affected EJ population? These should be taken into account when assessing if there are disproportionately high and adverse effects.
5. Have you assessed the type and severity of adverse effects on non-EJ populations? In order to determine if there are disproportionately high and adverse effects on EJ populations, you will have to take into consideration the comparative impacts in non-EJ areas.

Keep in mind that, while the identification of a disproportionately high and adverse effect on a low-income or minority population does not preclude the project from going forward, it should heighten our attention to alternatives (including alternative sites), mitigation strategies, monitoring needs and preferences expressed by the affected community or population.

Note: In the SCEA, you will need to consider the same questions and considerations listed above in order to determine if there are disproportionately high and adverse effects on EJ populations within the SCEA boundary.

B. Documentation

Your conclusions regarding impacts on minority or low-income populations must be thoroughly explained in the “Environmental Consequences” section of the environmental document.

1. The final environmental document should clearly conclude whether or not a disproportionately high and adverse impact on any minority or low-income population is likely to result. This conclusion must be reached for

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each alternative, including the No-Build. Remember to take into account mitigation, enhancement measures or offsetting project benefits (see Section VI) to the affected EJ population.

2. Whether or not an alternative results in disproportionately high and adverse impact on minority or low-income populations, you need to supply supporting information to document how you reached that conclusion for each alternative – you have to “make your case”.
 - a. Present the analysis you completed and the issues you considered in order to reach your conclusions as concisely as possible. Include a description of impacts (type and severity), any offsetting benefits and mitigation/enhancements, comparison of impacts on EJ and non-EJ populations, etc.
 - b. Document the efforts made to interact with the affected communities, the issues/concerns they identified, results of the interaction, etc. Examples of interaction could include meetings to determine whether a community considers a project’s effects to be impacts or benefits, correspondence discussing potential mitigation or enhancement measures, etc. A helpful way to present this information would be in a matrix format, which should be included in the appendix of the environmental document. The information in the matrix could include meeting dates, correspondence dates, responses received, issues/concerns identified by the community, etc. You may also want to include copies of important minutes in the appendix.
 - c. When mapping is necessary in order to clearly illustrate the effect of a project on an EJ population, mapping may be included in the environmental document; otherwise, document the impacts textually. If possible, you should refer to existing alternatives mapping rather than develop special mapping. Remember to be sensitive to the concerns of the affected communities when determining what type of mapping, if any, will be provided.

VII. AVOIDANCE, MINIMIZATION, MITIGATION AND ENHANCEMENT

If you determine that your project appears to have a disproportionately high and adverse impact on a minority or low-income population, you will then need to consider how the magnitude and severity of the impact can be prevented or reduced. The approach is first to avoid impacts if possible, then minimize impacts, then mitigate unavoidable impacts. Enhancements should also be considered. The definitions of

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these terms and examples (from the Federal Highway Administration's "Community Impact Assessment" booklet) are provided below:

A. Definitions

1. avoid – to alter a project so an impact does not occur (i.e., shift an alignment to avoid displacements, redesign a road segment as an underpass to avoid cutting off access to a community facility, etc.)
2. minimize – to modify the project to reduce the severity of an impact (i.e., shift an alignment to reduce displacements, alter an alignment to increase the distance between the facility and residences to decrease noise impacts, phase the project to minimize impedance to business access during peak shopping periods, limit interchanges to minimize incompatible land use development, etc.)
3. mitigate – to take an action to alleviate or offset an impact or to replace an appropriated resource (i.e., set aside land for a park or add to public recreation areas to replace lost facilities, erect sound barriers to mitigate noise impacts, provide a bicycle/pedestrian overpass or underpass to provide access to public facilities, etc.)
4. enhance – to add a desirable or attractive feature to the project to make it fit more harmoniously into the community; this will not replace lost resources or alleviate project impacts (i.e., provide signing to recognize specific cultural or historic resources, develop bicycle trails or pathways adjacent to roadways, plant trees and add park benches, add public artwork or a façade to a transportation facility to match the aesthetic design goals of the community, etc.)

B. Considerations in Determining Appropriate Avoidance, Minimization, Mitigation and Enhancement Measures

1. Remember to take mitigation, enhancements and project benefits into account when you are assessing if there will ultimately be a disproportionately high and adverse impact on an EJ population.
2. Another important consideration is the fairness in distribution of avoidance, minimization, mitigation and enhancement measures between EJ and non-EJ communities. When considering these measures for an EJ community vs. the entire project area, keep in mind that the measures should be proportional to the level of impact on each.
3. A disproportionately high and adverse effect on an EJ population can only be carried out if further avoidance, minimization and mitigation measures are not practicable. In determining whether a measure is 'practicable', the

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social, economic (including costs) and environmental effects of avoiding, minimizing or mitigating the adverse effects can be taken into account.

You can use experience on other projects to determine what measures may be considered practicable. You should also take into account the nature and severity of the disproportionate impacts when determining what is practicable. For example, it may be appropriate to go beyond 'the norm' depending on how disproportionate the impact is.

Throughout this effort, keep in mind that you may be able to eliminate, reduce or mitigate the initial disproportionate impacts to such a degree that the impacts to the EJ population are now proportional.

C. Coordination with the Impacted EJ Community

The most important consideration in developing avoidance, minimization, mitigation and enhancement measures is how the impacted EJ community feels about them. Throughout the process, you must consult with and elicit the views of the affected populations. Otherwise, you might unknowingly propose a mitigation measure which impacts the community in a different way. Also, if the same community is composed of various minority groups or income levels, each component may have separate (and possibly conflicting) issues or concerns to be considered by the project team.

You should be encouraging the members of the EJ communities that may suffer a disproportionately high and adverse impact to help develop and comment on possible avoidance/minimization alternatives as early as possible in the process.

In addition to community meetings and correspondence, you may want to consider using community questionnaires to solicit input on proposed mitigation and enhancement strategies and to suggest their own strategies, based on the EJ community's perception of impacts. Any questionnaire would have to be developed and distributed early, so that ample time would be available to compile, analyze and use the data.

Once you have worked with the affected EJ communities to determine the appropriate avoidance, minimization, mitigation and enhancement measures, you should continue to keep them informed about the project status and progress throughout the design and construction phases.

D. Possible Mitigation Strategies (to be coordinated with the affected community):

- Keep the impacted minority or low-income population informed (status, progress, design changes, etc.) during final design and construction of the project; this could be accomplished by posting/mailling notices, meeting with

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the community, having a community representative serve a liaison role and attend construction partnering meetings, etc.

- Provide noise walls (appropriateness to be discussed with Noise Committee)
- Provide landscaping/visual screening
- Provide lighting
- Provide sidewalk improvements
- Provide multi-modal improvements (i.e., bus shelters, bicycle/pedestrian facilities)
- Build or rehabilitate community parks or recreation centers
- If relocations are required, attempt to relocate to the same area if possible to preserve community cohesiveness

Even when SHA has no responsibility to mitigate impacts not caused by the project, we may encourage other public/private groups to partner together to improve the quality of life in EJ communities.

E. Documentation

For each alternative, you will need to clearly explain in the “Environmental Consequences” section of the environmental document any avoidance, minimization, mitigation and enhancement measures which have been adopted.

1. Document the strategies taken to reduce, avoid or mitigate impacts to EJ communities. The discussion of these strategies should be clearly ‘linked’ to the associated community impacts. If appropriate, include a discussion of how these strategies helped turn a disproportionate adverse impact into a proportionate adverse impact.
2. Include a summary of the public interaction used to develop and/or review the various strategies.
3. If necessary in order to clearly illustrate the strategies and results, mapping may be included in the environmental document; otherwise, document the information textually.

Once mitigation commitments have been made in the final environmental document, they are to be recorded in the Environmental Compliance and Considerations Checklists and discussed at the project transition meeting between the planning and design divisions. Planning staff will continue to be involved in the project during final design to ensure that the commitments are incorporated into the construction documents.

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EXISTING LAWS AND REGULATIONS

- Environmental Justice Executive Order 12898
- US DOT EJ Order, April 1997
- FHWA EJ Order, December 1998
- Title VI Act of 1964
- **23 USC 109(h)**
- US DOT Title VI Regulations [49 CFR 21.5 (b)(2)(3)] - addresses contracts and site selections
- Civil Rights Restoration Act of 1987
- National Environmental Policy Act of 1969
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
- 23 USC 324 – addresses discrimination on the basis of sex
- Section 504 of the Rehabilitation Act of 1973 (29 USC 790) – addresses discrimination on the basis of disability
- Age Discrimination Act of 1975 (42 USC 6101) – addresses discrimination on the basis of age
- Fair Housing Act of 1988 - addresses discrimination on the basis of religion
- Religious Freedom Restoration Act of 1993 - addresses discrimination on the basis of religion
- **23 CFR 450 - FHWA Planning Regulations**
- **23 CFR 771 - FHWA Environmental Regulations**

ADDITIONAL SOURCES OF INFORMATION

“Community Impact Assessment: A Quick Reference for Transportation” (FHWA, 9/96)

“Community Impact Mitigation Case Studies” (FHWA, 5/98)

“Transportation & Environmental Justice Case Studies” (FHWA, 12/00)

“Assistance for Reviewing the Application of Title VI and Environmental Justice in the Transportation Planning Process” (FHWA, 2001)

“Environmental Justice Guidance Under the National Environmental Policy Act” (CEQ, 12/97)

“Environmental Policy Statement” (FHWA, 1994)

“EPA Guidance for Consideration of Environmental Justice in Clean Air Act Section 309 Review” (EPA, 4/98)

OMB Bulletin 00-02, “Guidance on Aggregation and Allocation of Data on Race for Use in Civil Rights Monitoring and Enforcement” (OMB, 3/00)

Technical Advisory 6640.8A “Guidance for Preparing and Processing Environmental and 4(f) Documents” (FHWA, 10/87)

FHWA Environmental Justice web site: www.fhwa.dot.gov/environment/ej2.htm

Appendix D: Uniform Relocation Assistance Program

**SUMMARY OF THE RELOCATION ASSISTANCE PROGRAM OF THE
MARYLAND STATE HIGHWAY ADMINISTRATION**

All State Highway Administration projects utilizing Federal funds must comply with the provisions of the Uniform Relocation and Real Property Acquisition Policies Act of 1970 (42 USC 4601) as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), Public Law 105-117 in 1997, and Title 49 CFR Part 24 in 2005. State-funded projects must comply with Sections 12-112 and Subtitle 2, Sections 12-201 to 12-212, of the Real Property Article of the Annotated Code of Maryland.

The State Highway Administration's Office of Real Estate administers the Relocation Assistance Program for the Maryland Department of Transportation.

The aforementioned Federal and State laws require that the State Highway Administration provide relocation assistance payments and advisory services to eligible persons who are displaced by a public project. There are two categories of residential occupants: 180-day owner-occupants and 90-day tenants and short-term owner-occupants. Non-residential occupants may be businesses, farms or non-profit organizations.

A displaced person that has owned and occupied a subject dwelling for at least 180 days prior to the initiation of negotiations for the property may receive a replacement housing payment of up to \$22,500. The replacement housing payment is composed of three parts: a purchase price differential; an increased mortgage interest differential; and reimbursement for incidental settlement expenses.

The purchase price differential is the difference between the value paid by the State Highway Administration for the existing dwelling and the cost to the displaced owner of a comparable replacement dwelling, as determined by the State's replacement housing study.

The increased mortgage interest differential is a payment made to the owner at the time of settlement on the replacement dwelling to negate the effects of less favorable financing in the new situation. The payment is calculated by use of the "buy-down" mortgage method.

Reimbursable incidental expenses are necessary and reasonable incidental costs that are incurred by the displaced person in purchasing a replacement dwelling, excluding pre-paid expenses such as real estate taxes and insurance. The maximum reimbursable amount for these incidental expenses is based upon the cost of the comparable selected in the replacement housing study.

A displaced person who has leased and occupied a subject dwelling for at least 90 days prior to the initiation of negotiations for the property may receive a replacement rental housing payment of up to \$5,250. The replacement rental housing payment is the difference between the

monthly cost of housing for the subject dwelling, plus utilities, and the monthly cost of housing for a comparable replacement rental unit, plus utilities, over a period of 42 months. Owner-occupants of 90-179 days prior to the initiation of negotiations for the subject dwelling are eligible for the same replacement rental housing payments as tenants.

As an alternative to renting, a displaced tenant-occupant may elect to apply the rental replacement housing eligibility amount toward the down payment needed to purchase a replacement dwelling.

The comparable properties used in calculating any replacement housing payment eligibility must comply with all local standards for decent, safe and sanitary (DS&S) housing and be within the financial means of the displaced person.

If affordable, comparable DS&S replacement housing cannot be provided within the statutory maximums of \$22,500 for 180-day owner-occupants or \$5,250 for 90-day tenants or short-term owners, the maximums may be exceeded on a case-by-case basis. This may only be done after the completion and approval of a detailed study that documents the housing problem, explores the available replacement options and selects the most feasible and cost-effective alternative for implementation.

In addition, eligible displaced residential occupants may be reimbursed for the expense of moving personal property up to a maximum distance of fifty (50) miles, using either an actual cost or fixed schedule method.

Actual cost moves are based upon the lower of at least two commercial moving estimates and must be documented with receipted bills or invoices. Other incidental moving expenses, such as utility reconnection charges, may also be paid in the same manner.

As an alternative method, the fixed schedule move offers a lump sum, all-inclusive payment based upon the number of rooms to be moved. Other incidental costs are not separately reimbursable with this method.

Non-residential displaced persons such as businesses, farms or non-profit organizations may also receive reimbursement for the expense of relocating and re-establishing operations at a replacement site on either an actual cost or fixed payment basis.

Under the actual cost method, a non-residential displaced person may receive reimbursement for necessary and reasonable expenses for moving its personal property, the loss of tangible personal property that is not moved, the cost of searching for a replacement site and a re-establishment allowance of up to \$10,000.

The actual reasonable moving expenses may be paid for a move by a commercial mover or for a self-move. Payments for the actual reasonable expenses are limited to a 50-mile radius unless the State determines a longer distance is necessary. The expenses claimed for actual cost moves must be supported by firm bids and receipted bills. An inventory of the items to be moved must be prepared in all cases. In self-moves, the State will negotiate an amount for

payment, usually lower than the lowest acceptable bid. The allowable expenses of a self-move may include amounts paid for equipment hired, the cost of using the business vehicles or equipment, wages paid to persons who participate in the move, the cost of actual supervision of the move, replacement insurance for the personal property moved, costs of licenses or permits required and other related expenses.

In addition to the actual moving expenses mentioned above, the displaced business is entitled to receive a payment for the actual direct losses of tangible personal property that the business is entitled to relocate but elects not to move. These payments may only be made after an effort by the owner to sell the personal property involved. The costs of the sale are also reimbursable moving expenses.

If the business elects not to move or to discontinue the use of an item, the payment shall consist of the lesser of: the fair market value of the item for continued use at the displacement site, less the proceeds from its sale; or the estimated cost of moving the item.

If an item of personal property which is used as part of a business or farm operation is not moved and is promptly replaced with a substitute item that performs a comparable function at the replacement site, payment shall be the lesser of: the cost of the substitute item, including installation costs at the replacement site, minus any proceeds from the sale or trade-in of the replaced item; or the estimated cost of moving and reinstalling the replaced item.

In addition to the moving payments described above, a business may be eligible for a payment up to \$10,000 for the actual reasonable and necessary expenses of re-establishing at the replacement site. Generally, re-establishment expenses include certain repairs and improvements to the replacement site, increased operating costs, exterior signing, advertising the replacement location, and other fees paid to re-establish. Receipted bills and other evidence of these expenses are required for payment. The total maximum re-establishment payment eligibility is \$10,000.

In lieu of all moving payments described above, a business may elect to receive a fixed payment equal to the average annual net earnings of the business. This payment shall not be less than \$1,000 nor more than \$20,000. In order to be entitled to this payment, the State must determine that the business cannot be relocated without a substantial loss of its existing patronage; the business is not part of a commercial enterprise having more than three other establishments in the same or similar business that are not being acquired; and the business contributes materially to the income of a displaced owner during the two taxable years prior to the year of the displacement. A business operated at the displacement site solely for the purpose of renting to others is not eligible. Considerations in the State's determination of loss of existing patronage are the type of business conducted by the displaced business and the nature of the clientele. The relative importance of the present and proposed locations to the displaced business and the availability of suitable replacement sites are also factors.

In order to determine the amount of the "in lieu of" moving expense payment, the average annual net earnings of the business is to be one-half of the net earnings before taxes during the two taxable years immediately preceding the taxable year in which the business is relocated. If the two taxable years are not representative, the State may use another two-year

period that would be more representative. Average annual net earnings include any compensation paid by the business to the owner, owner's spouse, or dependents during the period. Should a business be in operation less than two years, the owner of the business may still be eligible to receive the "in lieu of" payment. In all cases, the owner of the business must provide information to support its net earnings, such as income tax returns, or certified financial statements, for the tax years in question.

Displaced farms and non-profit organizations are also eligible for actual reasonable moving costs up to 50 miles, actual direct losses of tangible personal property, search costs up to \$2,500 and re-establishment expenses up to \$10,000 or a fixed payment "in lieu of" actual moving expenses of \$1,000 to \$20,000. The State may determine that a displaced farm may be paid a minimum of \$1,000 to a maximum of \$20,000 based upon the net income of the farm, provided that the farm has been relocated or the partial acquisition caused a substantial change in the nature of the farm. In some cases, payments "in lieu of" actual moving costs may be made to farm operations that are affected by a partial acquisition. A non-profit organization is eligible to receive a fixed payment or an "in lieu of" actual moving cost payment, in the amount of \$1,000 to \$20,000 based on gross annual revenues less administrative expenses.

A more detailed explanation of the benefits and payments available to displaced persons, businesses, farms and non-profit organizations is available in the brochure entitled, "Relocation Assistance – Your Rights and Benefits," that will be distributed at the public hearing for this project and be given to all displaced persons.

Federal and State laws require that the State Highway Administration shall not proceed with any phase of a project which will cause the relocation of any persons, or proceed with any construction project, until it has furnished satisfactory assurances that the above payments will be provided, and that all displaced persons will be satisfactorily relocated to comparable decent, safe and sanitary housing within their financial means, or that such housing is in place and has been made available to the displaced persons.

In addition, the requirements of Public Law 105-117 provides that a person who is an alien and is not lawfully present in the United States shall not be eligible for relocation payments or other assistance under the Uniform Act. It also directed all State displacing agencies that utilize Federal funds in their projects to implement procedures for compliance with this law in order to safeguard that funding. To this end, displaced persons will be asked to certify to their citizenship or alien status prior to receiving payments or other benefits under the Relocation Assistance Program.