Environmental Justice

Draft Analysis of Low-Income and Minority Communities –July 2003

I.   Introduction

President Clinton issued Executive Order 12898 on Environmental Justice because government programs and projects have historically had disproportionate negative impacts on low-income and minority populations. The order directs agencies to identify and address "disproportionately high and adverse human health or environmental effects of its program, policies, and activities on minority populations and low-income populations." Therefore, a key issue for the implementation of transportation projects is whether they have a disproportionate negative impact on low income and/or minority communities.

We know from previous examinations of the I-5 Corridor that there are low income and minority communities adjacent to potential transportation projects identified in the Portland/Vancouver I-5 Corridor Strategic Plan. As projects in the Strategic Plan move into an implementation phase, it is important to identify the low income and minority communities. Identification of the communities helps us to conduct targeted outreach to involve the community in the development and analysis of the projects. It will also help us to assess whether the communities are disproportionately impacted, and to design mitigation and enhancement projects to off-set any disproportionate impact.

This paper has three objectives:

- describe data sources
- explain how the data were analyzed
- present maps showing minority and low income neighborhoods

II.   Methodology and Data

Procedures from *Draft National Guidance for Conducting Environmental Justice Analyses*, published by the Office of Environmental Justice, US Environmental Protection Agency (EPA), October 1, 1998 are the primary source of guidance for this Environmental Justice (EJ) analysis. In addition, this analysis incorporates suggestions from EPA and other agency staff, as well as members of the community.

The *EPA Guidance* suggests methodologies and data sources to identify potential EJ areas of concern. The *Guidance* suggests comparing Census block group data to a reference area. This analysis compares block group data to the Portland/Vancouver Primary Metropolitan Statistical Area (PMSA). The EPA suggests using the state as the reference area. However, using the state as a reference area for this analysis would result in making comparisons to different standards—one for Vancouver residents, and another for Portland residents. This analysis compares block group data to the Portland/Vancouver PMSA data because the Portland/Vancouver metropolitan area operates as one economic and social region. Clark County in Washington, and Clackamas, Columbia, Multnomah, Washington and Yamhill Counties in Oregon comprise the Portland/Vancouver PMSA.

The following sections describe the analysis procedures used to identify minority and low income communities in the I-5 Corridor.

III.   Minority Data Analysis
A. Race, Ethnicity and Defining "Minority"

The *EPA Guidance* provides a recommendation for defining and calculating the minority population based on racial and Hispanic or Latino ethnicity Census data. This method avoids double counting, while providing an inclusive definition of minority. Census data on race and Hispanic or Latino ethnicity are derived from two questions on census forms: "Is this person Spanish / Hispanic / Latino?" and "What is this person's race?" People who are both Hispanic / Latino and a racial minority would be double counted if the totals for each question are used to calculate minorities. To avoid that double counting, the EPA Guidance recommends using a table that shows Hispanic or Latino by Race. (2000 Census Summary File 3 (SF3) Table P7 Hispanic or Latino by Race)

The recommended method sums the total number of Not Hispanic or Latino of all races except White alone and all Hispanic or Latinos. This is equivalent to an alternative calculation of the total population minus Not Hispanic or Latino White alone. Table 1 below shows how we calculated the total number of minorities for the Portland/Vancouver PMSA. The shaded numbers show what is included in the first method of calculation. The alternative method, subtracting Not Hispanic or Latino White alone from the total population is below that.

Table 1. Calculation of Minority Population for Portland/Vancouver PMSA

	Not Hispanic or Latino:	Hispanic or Latino:	Minority
White alone	1,563,973	54,093	54,093
Black or African American alone	47,020	1,429	48,449
American Indian and Alaska Native alone	14,390	2,031	16,421
Asian alone	86,184	849	87,033
Native Hawaiian and Other Pacific Islander alone	5,660	304	5,964
Some other race alone	2,538	70,655	73,193
Two or more races	56,208	12,675	68,883
Total Minority Population			354,036
Portland/Vancouver PMSA Total:	1,918,009		
Minus White Not Hispanics or Latino	1,563,973		
Minority Population =	354,036		

Data: U.S. Census Bureau, Census 2000 SF3, Table P7 Hispanic or Latino by Race

B. Identifying Potential Areas of Concern for Minorities

The *EPA Guidance* suggests identifying a potential EJ area of concern by comparing the percent minority in a Census block group to a threshold percent equal to the *reference area percent plus 20 %*. As previously stated, this analysis uses the *Portland/Vancouver PMSA* as the reference area to calculate the threshold percent. Using this methodology, the PMSA is 18.46 % minority. The PMSA percent plus 20 % is 22.15 %. Block groups with minority populations equal to or greater than 22.15% are EJ potential areas of concern. Table 2 below shows the calculation for the threshold percent for minorities for the PMSA.

Table 2. Calculation for Minority Threshold Percent

PMSA total population	1,918,009
Not Hispanic or Latino, White alone	-1,563,973
Number minorities	354,036
Percent minorities	345,036 / 1,918,009=18.46%
Percent minorities plus 20%	18.46% + (18.46% x .20) = 22.15%
	or
	18.46% x 120% = 22.15%

Figures 1 and 2 show Census block groups that are potential areas of concern, with minority populations equal to or greater than the Portland/ Vancouver PMSA percent plus 20% (22.15%). Figure

1 is a map of the I-5 corridor in North Portland and Clark County. Figure 2 is a smaller scale map with the same data for the Portland/Vancouver PMSA.

C. Non-English Speakers

Using the above methodology for identifying minority communities does not include white immigrant populations. At the request of community members, we analyzed Census data on the ability to speak English to identify communities with immigrant populations. Census data is available on ability to speak to English for respondents who reported that they spoke a language other than English at home. Census questionnaires ask respondents who speak a language other than English at home to indicate their ability to speak English in one of the following categories: "Very well," "Well," "Not well," or "Not at all." Figure 3 shows block groups where the percent of population over 5 years old for whom the response was "Not well" or "Not at all" was above the PMSA average of 3.83%. The map also shows areas with higher concentrations of those who speak English "Not well" or "Not at all" by dividing the block groups above the PMSA percent into three percentage ranges. We use the information on which languages are spoken at home to target outreach for public involvement, translate meeting announcements, and provide interpreters at public meetings.

IV. Income Data Analysis

A. Defining Low-Income

The *EPA Guidance* discusses a number of ways to identify low-income communities, but in general recommends using the poverty threshold data developed by the Census Bureau. The Census Bureau prepares statistics on the number of people below the poverty threshold. The Bureau adjusts the thresholds according to family size and number of dependents. Every individual in a family with income below the threshold is considered poor. Income for this calculation counts money income before taxes and does not include capital gains and non-cash benefits (such as public housing, Medicaid, and food stamps). Census poverty data does not include people in institutional group quarters, military barracks, or for unrelated individuals under age 15 (such as foster children). An advantage to using poverty threshold data is that they adhere to a Federal statistical standard. The Federal Office of Management and Budget prescribes this definition as the official poverty measure for federal agencies to use in their statistical work. Table 6 in the appendix shows the 1999 poverty thresholds, by household size and number of children, that the Census Bureau used to determine poverty status for the 2000 Census.

The Census Bureau reports the number of individuals in families that have incomes within ranges that are ratios of the Federal poverty threshold. We used this data to determine benchmarks to identify very low-income and low-income populations. The *EPA Guidance* defines very low income as below the

poverty line, and low-income as below two times the poverty line. Table 3 shows the poverty data for the Portland / Vancouver PMSA with the number for low-income in bold and very low-income shaded.

Table 3. Ratio of Income to 1999 Poverty Level

Portland--Vancouver, OR--WA PMSA		Totals
Under .50	78,941	
50 to .74	45,578	
75 to .99	54,009	178,528 (very low-income)
1.00 to 1.24	62,954	
1.25 to 1.49	69,224	
1.50 to 1.74	69,823	
1.75 to 1.84	32,935	457,459 (low- income)
1.85 to 1.99	43,995	
2.00 and over	1,429,164	
Total (for whom poverty status is calculated)	1,886,623	

Data: U.S. Census Bureau, Census 2000, SF3 Table P88. Ratio of Income in 1999 to Poverty Level.

B. Identifying Potential EJ Areas of Concern for Low-Income

The EPA *Guidance* suggests identifying potential EJ areas of concern by comparing the percent of population defined as low-income in block groups to a reference area percent. Again, this analysis uses the Portland/Vancouver PMSA as the reference area. Using this methodology, the PMSA very low - income percent is 9.46%; the low-income percent is 24.25%. The table below shows calculations for the reference area percents.

Table 4. Calculation of Very Low-Income and Low Income Reference Area Percent

	Number	Calculation of Reference Area Percent
Total (for whom poverty status is calculated)	1,886,623	
Very low-Income	178,528	178,528 / 1886623 = 9.46%
Low-income	457,459	457,459 / 1886623 = 24.25%

Figures 4 and 5 show block groups with percents of very low-income and low-income that are above the PMSA percents. Figure 4 shows the I-5 Corridor in North Portland and Clark County. Figure 2 is a smaller scale map with the same data for the Portland/Vancouver PMSA.

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V.   Conclusions

Based on the analysis conducted, the I-5 Corridor does have areas of concern for low income and/or minority communities. These communities are located both in Portland and in Vancouver. They are adjacent to potential highway and light rail projects that are recommended by the I-5 Corridor Strategic Plan. To complete an Environmental Justice analysis, the geographical area that will be impacted needs to be identified and the impacts within the areas of concern need to be identified.

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Attachments

Table 1 below shows the percent minority population for alternative reference areas that are alternative candidates for comparison to block groups for purposes of identifying minority communities.

Table 1. Comparison of Selected Thresholds for Identification of Minority Communities (with number of block groups meeting threshold criteria)

	State		County		PMSA	Combined Counties	
						Multnomah & Clark	Clackamas, Clark, Multnomah & Washington
	OR	WA	Multnomah	Clark			
Percent minority (non-white and Hispanic)	16.49%	21.12%	23.54%	13.51%	18.46%	20.10%	18.88%
Percent Minority + 20%	19.79%	25.35%	28.25%	16.21%	22.15%	24.11%	22.66%
Number of Block Groups above Threshold Percent	**Multnomah: 242**	**Clark: 17**	Multnomah: 143	Clark: 64	**Multnomah: 209** **Clark: 23**	Multnomah: 190 Clark: 18	Multnomah: 203 Clark: 23

Percent change from **State** to **PMSA** threshold in the number of EJ block groups for: Multnomah: -13%
                                                                                            Clark: +35%

Table 2. Poverty Line Threshold Percentages

	State		County		PMSA	Counties	
						Multnomah & Clark	Clackamas, Clark, Multnomah & Washington
	OR	WA	Multnomah	Clark			
Percent below 2X Poverty Line	**29.64%**	**25.89%**	29.56%	23.82%	**24.25%**	27.58%	24.16%
Number of Block Groups above Threshold Percent	**Multnomah** **M:227**	**Clark** **89**	Multnomah 227	Clark 96	**Multnomah 301** **Clark 94**	Multnomah 252 Clark 83	Multnomah 303 Clark 94

Percent change from State to PMSA Threshold in the number of EJ block groups for: Multnomah: +33%
                                                                                     Clark: +6%

Table 3. Percent Minority by Region

	Percent Minority	1.2 Times Percent Minority
Oregon	16.49%	19.79%
Washington	21.12%	25.35%
Multnomah County, Oregon	23.54%	28.25%
Clark County, Washington	13.51%	16.21%
Portland--Vancouver, OR--WA PMSA	**18.46%**	**22.15%**
Multnomah and Clark Counties	20.10%	24.11%
Clackamas County, Oregon	10.88%	13.05%
Washington County, Oregon	22.21%	26.66%
4-CountyTotal	18.88%	22.65%

Table 4. Percent of Population Below Poverty Thresholds by Region

	100% (%)	185% (%)	200% (%)
Oregon	11.61%	26.90%	29.64%
Washington	10.62%	23.57%	25.89%
Multnomah County, Oregon	12.66%	26.98%	29.56%
Clark County, Washington	9.09%	21.40%	23.82%
Portland--Vancouver PMSA	**9.46%**	**21.92%**	**24.25%**
Multnomah and Clark Co. Total	11.42%	25.05%	27.58%
Clackamas County, Oregon	6.56%	16.52%	18.74%
Washington County, Oregon	7.38%	18.75%	20.63%
4-County Total	9.49%	21.85%	24.16%

Table 5. 2002 Health and Human Services Poverty Guidelines

Number in Household	Monthly Income			Annual Income	
	100%	185%	200%	100%	200%
1	$738	$1,365	$1,476	$8,856	$17,712
2	$995	$1,841	$1,990	$11,940	$23,880
3	$1,252	$2,316	$2,504	$15,024	$30,048
4	$1,508	$2,790	$3,016	$18,096	$36,192
5	$1,765	$3,265	$3,530	$21,180	$42,360
6	$2,222	$4,111	$4,444	$26,664	$53,328
7	$2,278	$4,214	$4,556	$27,336	$54,672
8	$2,535	$4,690	$5,070	$30,420	$60,840
9	$2,792	$5,165	$5,584	$33,504	$67,008
10	$3,048	$5,639	$6,096	$36,576	$73,152

Table 6

Poverty Thresholds in 1999, by Size of Family and Number of Related Children Under 18 Years

Size of family unit	Weighted average threshold	Related children under 18 years									
		None	One	Two	Three	Four	Five	Six	Seven	Eight or more
One person (unrelated individual)....	8,501									
Under 65 years.....................	8,667	8,667								
65 years and over..................	7,990	7,990								
Two people............................	10,869									
Householder under 65 years.........	11,214	11,156	11,483							
Householder 65 years and over......	10,075	10,070	11,440							
Three people..........................	13,290	13,032	13,410	13,423						
Four people...........................	17,029	17,184	17,465	16,895	16,954					
Five people...........................	20,127	20,723	21,024	20,380	19,882	19,578				
Six people............................	22,727	23,835	23,930	23,436	22,964	22,261	21,845			
Seven people..........................	25,912	27,425	27,596	27,006	26,595	25,828	24,934	23,953		
Eight people..........................	28,967	30,673	30,944	30,387	29,899	29,206	28,327	27,412	27,180	
Nine people or more...................	34,417	36,897	37,076	36,583	36,169	35,489	34,554	33,708	33,499	32,208

Source: U. S. Bureau of the Census, Current Population Survey.

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Figure 5
Portland/Vancouver PMSA*
Low-Income Potential Areas of Concern

Portland / Vancouver
I-5
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Percent below the Poverty Line (Very Low-Income)

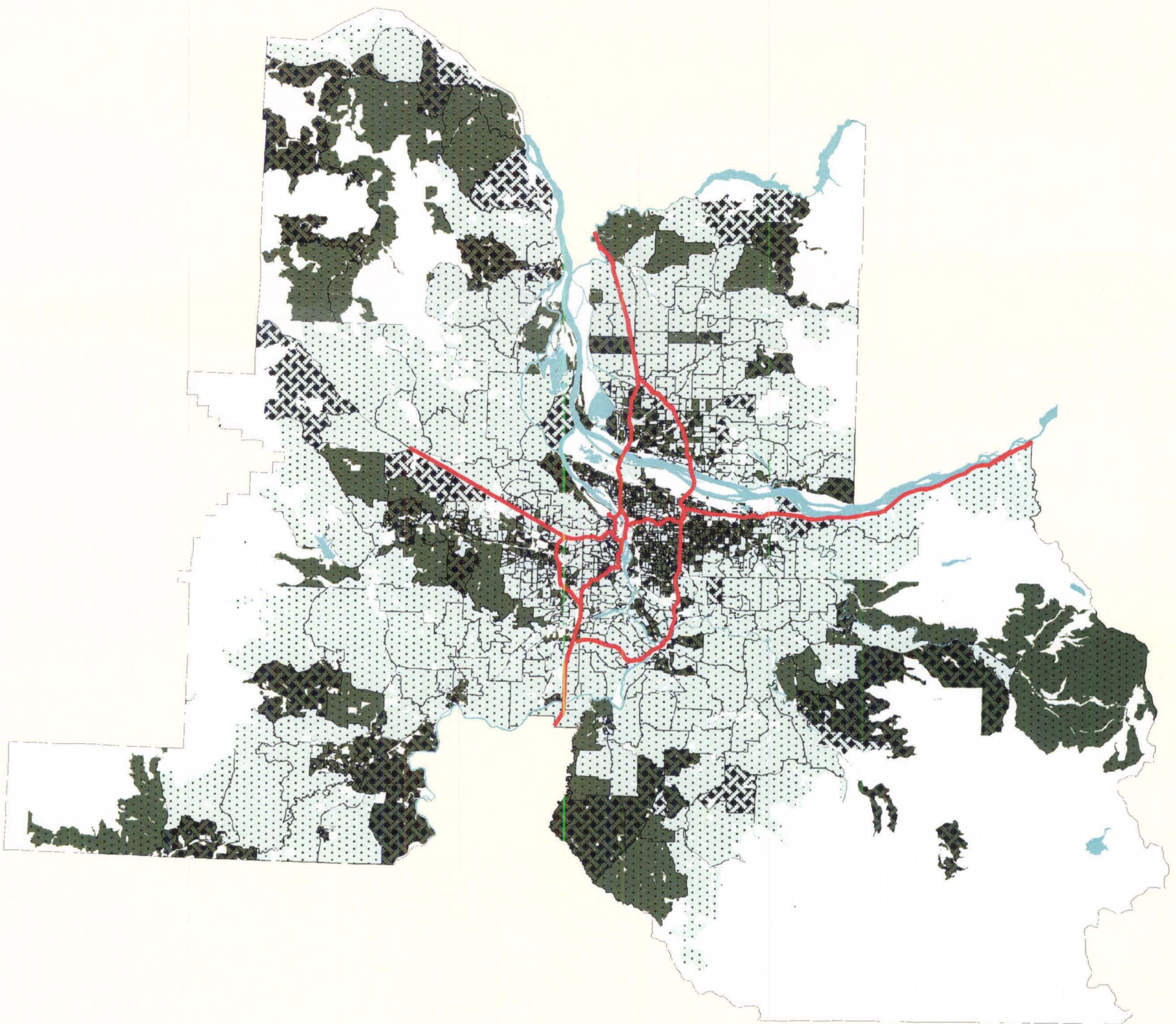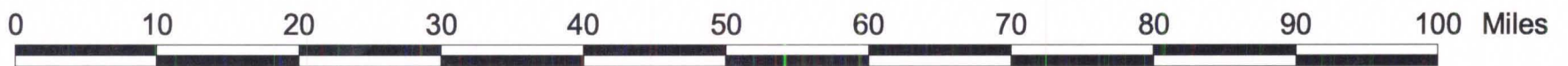9.46 - 65% (> PMSA Percent) **Potential Area of Concern**

0 - 9.45% (< PMSA Percent)

Percent below 2 x the Poverty Line (Low-Income)

24.25 - 75% (> PMSA Percent) **Potential Area of Concern**

0 - 24.24% (< PMSA Percent)

Census Blocks with Population = 0

N

*The Portland/Vancouver Primary Metropolitan Statistical Area includes Clark County in Washington and Clackamas, Columbia, Multnomah, Washington and Yamhill Counties in Oregon

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | Miles |

This map shows 2000 Census block groups where the percentages of the population that are very low-income (below the poverty threshold) and/or low-income (below 2 times the poverty threshold) are higher than the PMSA percent. In the Portland/Vancouver PMSA in 1999, 9.46% of the population was very low-income and 24.25% was low-income .

The Census Bureau calculates and reports poverty threshold data.

The EPA Environmental Justice Guidelines define very low-income as below the poverty threshold and low-income as below two times the poverty threshold.

Figure 4
I-5 Corridor - North Portland/Clark County
Low-Income

Portland / Vancouver
I-5
Transportation and Trade
Partnership

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Percent below the Poverty Line (Very Low-Income)

9.46 - 65% (≥ PMSA Percent) **Potential Area of Concern**

0 - 9.45% (< PMSA Percent)

Percent below 2 x the Poverty Line (Low-Income)

24.25 - 75% (≥ PMSA Percent) **Potential Area of Concern**

0 - 24.24% (< PMSA Percent)

Census Blocks with Population = 0

N

0   2   4   6   8   10 Miles

July 22, 2003
Data from Metro, State of Oregon,
and US Census Bureau
SF3 Table P88. Ratio of Income to
1999 Poverty Level

This map shows 2000 Census block groups where the percentages of
the population that are very low-income (below the poverty threshold)
and/or low-income (below 2 times the poverty threshold) are higher than
the PMSA percent. In the Portland/Vancouver PMSA in 1999, 9.46%
of the population was very low-income and 24.25% was low-income.

The Census Bureau calculates and reports poverty threshold data.

The EPA Environmental Justice Guidelines define very low-income
as below the poverty threshold and low-income as below two times
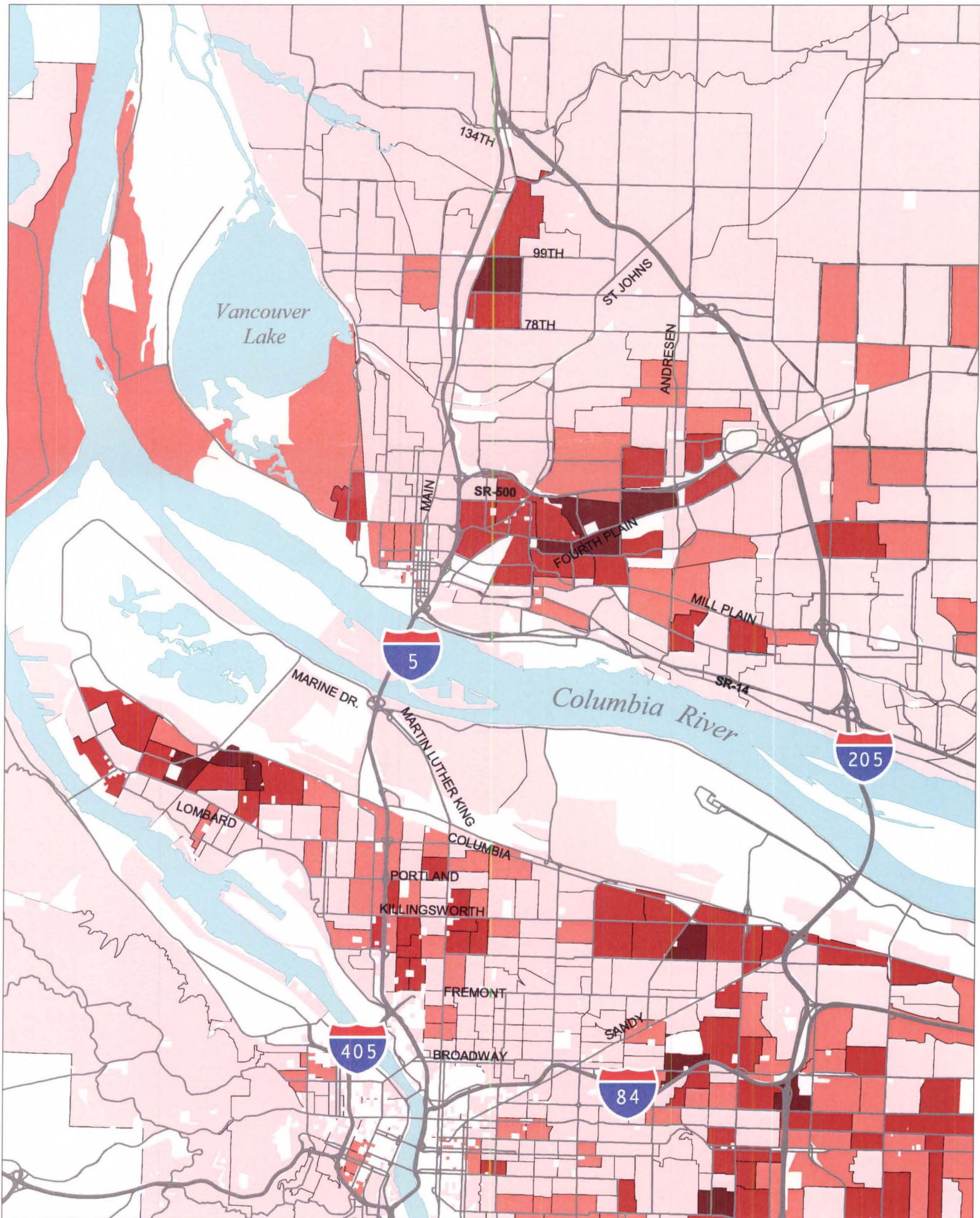the poverty threshold.

Figure 3
Ability to Speak English

Percent of Population over
Age 5 that Speaks English
Not Well or Not at All

Number of Block Groups
within Percent Range

	Percent	Number
	15.50 - 32 %	19
	6.50 - 15.49 %	107
	3.837 - 6.49 %	128
	0 - 3.836 %	487
	Census Blocks with Population = 0	

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N

0   2.5   5   7.5   10   Miles

This map shows 2000 Census Block Groups where the percentage of the
population that speaks English either not well or not at all is above the
Portland/Vancouver PMSA Average (3.837 %). This criteria for identifying
minority communities was developed at the request of Portland,Vancouver
and Clark County community members.

Firgure 2
Portland/Vancouver PMSA*
Percent Minority Population

Portland / Vancouver
I-5

Transportation and Trade
Partnership

Percent Non-White or
Hispanic by Block Group

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� 22.15 - 82 % (≥ 1.2 x PMSA Average) **Potential Areas of Concern**

▯ 0 - 22.14 % (< PMSA Average)

▯ Census Blocks with population = 0

N

*The Portland/Vancouver Primary Metropolitan Statistical Area includes Clark County in Washington and Clackamas, Columbia,
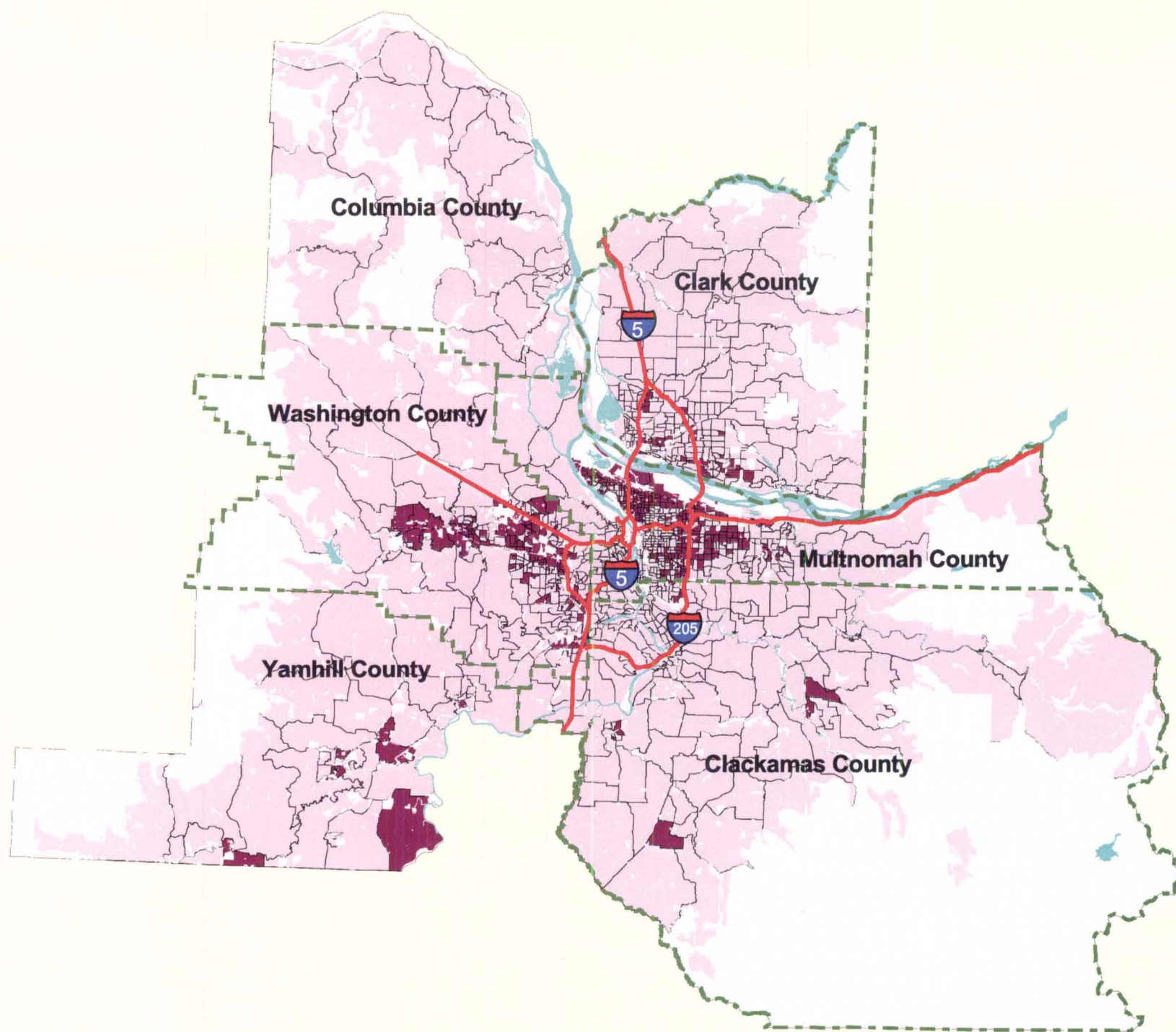Multnomah, Washington and Yamhill Counties in Oregon

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 Miles |

Columbia County

Clark County

I-5

Washington County

Multnomah County

Yamhill County

Clackamas County

I-5

205

EPA Environmental Justice Guidelines recommend using the percent minority
population of a reference area plus 20% as a benchmark to identify minority
communities. This map shows 2000 Census block groups in the Portland/
Vancouver PMSA where the minority population percent is above the
Portland/Vancouver PMSA percent plus 20% (22.15%).

Figure 1
I-5 Corridor - North Portland/Clark County
Percent Minority Population

Portland / Vancouver
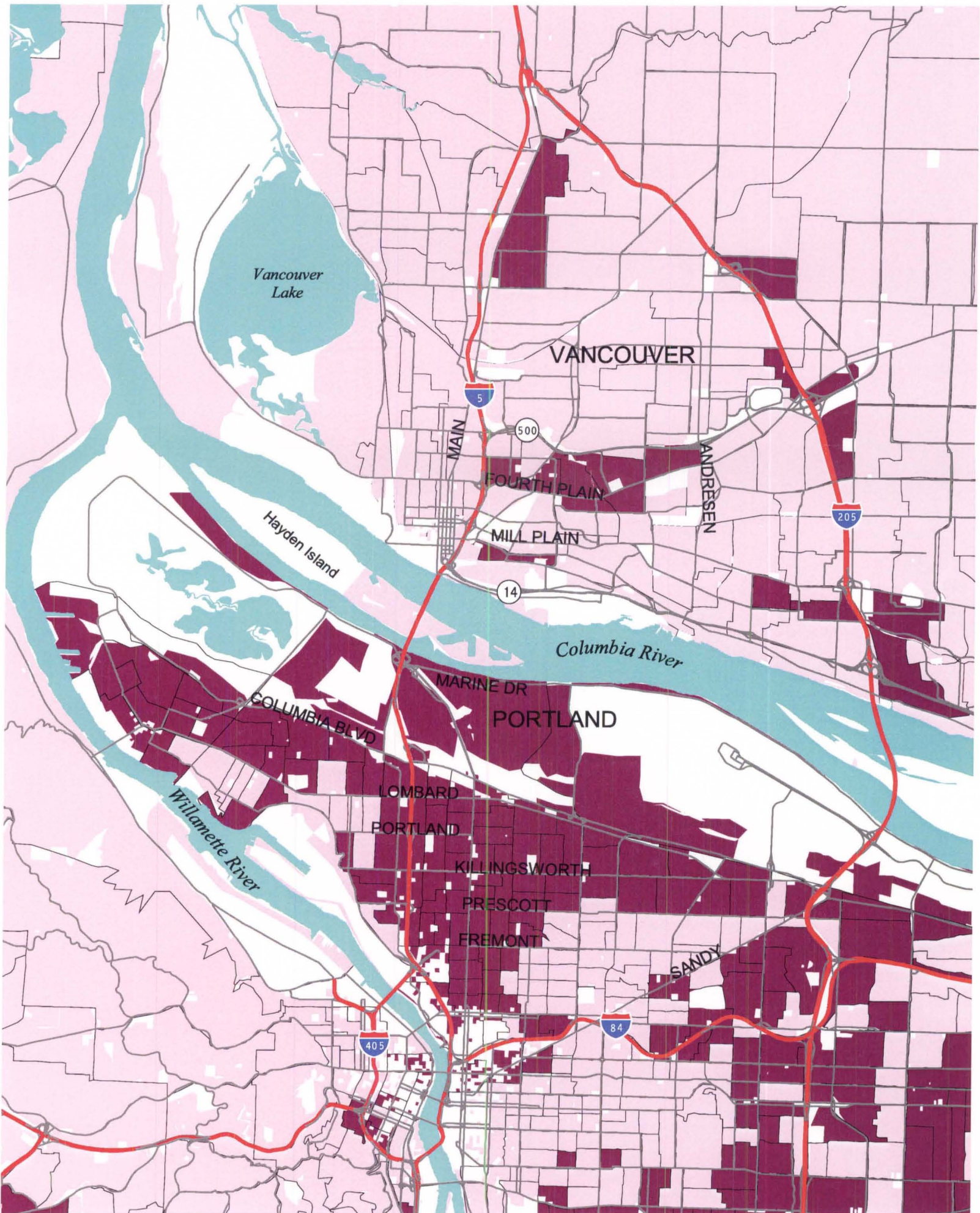**I-5**

Transportation and Trade
Partnership

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**Percent Non-White or
Hispanic by Block Group**

■ 22.15 - 82 % (≥ 1.2 x PMSA Average) **Potential Area of Concern**

▢ 0 - 22.14 % (< PMSA Average)

▢ Census Blocks with population = 0

N

0   1   2   3   4   5 Miles

Vancouver
Lake

VANCOUVER

I-5

MAIN

500

ANDRESEN

FOURTH PLAIN

205

MILL PLAIN

14

Hayden Island

Columbia River

MARINE DR

COLUMBIA BLVD

PORTLAND

LOMBARD

Willamette River

PORTLAND

KILLINGSWORTH

PRESCOTT

FREMONT

SANDY

405

84

EPA Environmental Justice Guidelines recommend using the percent
minority population of a reference area plus 20% as a benchmark to identify
minority communities. This map shows 2000 Census block groups in the I-5
Corridor in North Portland and Clark County where the minority population
percent is above the Portland/Vancouver PMSA percent plus 20% (22.15%).