

## **APPENDIX C4**

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### **Demographics and Environmental Justice**



# **Demographics and Environmental Justice Technical Memorandum**

in support of the Environmental Impact Statement

## **Logan Northern Canal Reconstruction Project**

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## 1.0 Introduction

This memorandum provides background information about the demographics of the study area and potential environmental justice populations.

## 2.0 Demographics

### 2.1.1 Demographics

This section describes the affected environment for population, race, ethnicity, age, limited English proficiency, and income in the study area. The demographic characteristics of the study area are described and compared to those in Logan, North Logan, and Cache County. The part of Hyde Park in the study area is not included in this discussion because it does not support a large part of the population in the study area. Figure 2-1, Project Study Area, shows the study area.

Because data from the 2010 U.S. Census were not available when this EIS was written, the demographic data presented in this section are from the 2000 U.S. Census and from more recent population estimates where available. Census data used to characterize demographics were collected at the block group and block levels based on what was readily available from the U.S. Census Bureau. There are 247 census blocks in the study area. Of these, 48 blocks did not have anyone living in them in 2000, and another 22 blocks had fewer than 20 residents.

#### 2.1.1.1 Population

Data from the 2000 U.S. Census were used along with estimates from the Cache Metropolitan Planning Organization (MPO) of population in 2004 and 2030 and population estimates from the U.S. Census Bureau's Population Estimates Program of population in 2009 (Table 2-1). Because they are closest to the current year (2010), the 2009 estimates were used to compare population changes in Cache County, Logan, and North Logan.

#### **What are census tracts, blocks, and block groups?**

Census data are reported for larger geographic areas called *census tracts* and smaller areas within the census tracts called *blocks*. A *block group* is a cluster of census blocks having the same first digit of their four-digit identifying numbers within a census tract. For example, block group 3 within a census tract includes all blocks numbered from 3000 to 3999.

**Table 2-1. Total Population in 2000 and Estimated Population in 2004 and 2009**

Year	Logan			North Logan			Cache County		
	Population	Total Growth	Annual Growth	Population	Total Growth	Annual Growth	Population	Total Growth	Annual Growth
2000	42,670	—	—	6,163	—	—	91,391	—	—
2004 <sup>a</sup>	45,513	6.7%	1.7%	7,076	14.8%	3.7%	— <sup>c</sup>	— <sup>c</sup>	— <sup>c</sup>
2009 <sup>b</sup>	49,549	16.1%	1.8%	8,500	37.9%	4.2%	115,269	26.1%	2.9%

Sources: U.S. Census Bureau 2000, 2010; Cache MPO 2007

<sup>a</sup> Cache MPO estimate.

<sup>b</sup> U.S. Census Bureau estimate; total growth estimate for 2009 is based on 2000 population.

<sup>c</sup> Data not available.

### Estimates from U.S. Census Bureau for 2009

The study area includes 10 census tracts, 19 block groups, and 247 blocks. A *block group* is a cluster of census blocks and generally contains 600 to 3,000 people. Because a block group is a small unit, it often provides an accurate representation of community components.

However, due to the rural nature of much of the study area, several of the block groups in the study area have populations that are much lower or do not have anyone living in them at all.

In 2000, the population for all block groups in the study area was 30,950. This figure includes parts of block groups that extend beyond the study area, since the block group boundaries are not the same as the study area boundary. In 2000, the populations in Logan and North Logan were 42,670 and 6,163, respectively. The population in Cache County was 91,391 (U.S. Census Bureau 2000).

Population estimates for 2009 were 49,549 for Logan and 8,500 for North Logan. The estimate for Cache County was 115,269 (U.S. Census Bureau 2010). Between 2000 and 2009, the population of Logan was estimated to have increased by 16.1%, the population of North Logan by 37.9%, and the population of Cache County by 26.1%.

### Estimates from Cache MPO for 2004

Every metropolitan area with a population of more than 50,000 people must have a designated MPO for transportation planning in order to qualify for Federal highway or transit assistance. The Cache MPO is the MPO for the Logan urbanized area that covers Smithfield, Hyde Park, North Logan, Logan, River Heights, Providence, Millville, and parts of Nibley and unincorporated areas of Cache County.

The transportation planning process requires accurate estimating of population, households, and employment. The Cache MPO 2030 Regional Transportation Plan (RTP) contains recent information about population. Estimates presented in the RTP differ from census data

because they are based on traffic analysis zones rather than census tracts, block groups, or blocks.

Table 2-1 summarizes the Logan and North Logan 2004 population estimates used in the RTP. The annual rate of change for the two cities between 2000 and 2004 is similar to that calculated using the 2000 and 2009 Census Bureau information (U.S. Census Bureau 2000, 2010).

### **2.1.1.2 Race and Ethnicity**

The 2009 census data do not include information about the race and ethnicity of people living in the cities in the study area or for Cache County, so race and ethnicity were analyzed using data from the 2000 U.S. Census. Overall, the proportion of minorities (non-white persons and white persons who are Hispanic) living in the study area is similar to that in Logan, North Logan, and Cache County (Table 2-2). About 9.8% of the people living in the study area are minorities.

**Table 2-2. Race and Ethnicity of the Study Area Population**

Race and Ethnicity <sup>a</sup>	Study Area		Logan		North Logan		Cache County	
	Population	Percent	Population	Percent	Population	Percent	Population	Percent
<b>White</b>								
Not Hispanic	21,575	90.2	36,458	85	5,706	93	81,989	90
Hispanic	486	2.0	1,489	3	109	2	2,297	3
Total	22,061	92.0	37,947	88	5,815	95	84,286	93
<b>Black</b>								
Not Hispanic	146	0.6	253	1	30	0	319	0
Hispanic	11	0.0	19	0	0	0	29	0
Total	157	0.7	272	1	30	0	348	0
<b>American Indian/Alaskan Native</b>								
Not Hispanic	99	0.4	327	1	16	0	466	1
Hispanic	14	0.1	34	0	1	0	63	0
Total	113	0.5	361	1	17	0	529	1
<b>Asian</b>								
Not Hispanic	925	3.9	1,528	4	124	2	1,803	2
Hispanic	9	0.0	9	0	0	0	11	0
Total	934	3.9	1,537	4	124	2	1,814	2
<b>Hawaiian or Other Pacific Islander</b>								
Not Hispanic	76	0.3	123	0	8	0	178	0
Hispanic	2	0.0	2	0	0	0	3	0
Total	78	0.3	125	0	8	0	181	0
<b>Some Other Race</b>								
Not Hispanic	13	0.1	26	0	3	0	53	0
Hispanic	284	1.2	1,714	4	82	1	2,973	3
Total	297	1.2	1,740	4	85	1	3,026	3
<b>Two or More Races</b>								
Not Hispanic	198	0.8	446	1	54	1	797	1
Hispanic	87	0.4	242	1	30	0	410	0
Total	285	1.2	688	2	84	1	1,207	1
<b>Total population</b>	23,925	—	42,670	—	6,163	—	91,391	—
<b>Total minority<sup>b</sup></b>	2,350	<b>9.8</b>	6,212	<b>14.6</b>	457	<b>7.4</b>	9,402	<b>10.3</b>
<b>Hispanic (any race)</b>	893	<b>3.7</b>	3,509	<b>8.2</b>	222	<b>3.6</b>	5,786	<b>6.3</b>

Source: U.S. Census Bureau 2000

<sup>a</sup> *Ethnicity* refers to a group of people who share a common and distinctive culture, religion, language, or similar attribute. The primary ethnicity measured by the U.S. Census Bureau is Hispanic; persons of any race can be Hispanic.

<sup>b</sup> Minorities are all non-white persons and white persons who are Hispanic.

### 2.1.1.3 Age

The block-level data from the 2000 U.S. Census for age show that about 19.9% of people living in the study area are younger than 18 years old, 73.2% are between 18 and 64 years old, and 6.9% are 65 years old or older. In Logan and North Logan and in Cache County, the majority of the population is between 18 and 64 years old, and this group makes up 56.9% to 69.5% of the population. Population under 18 years of age is the second-largest age group and makes up 23.4% to 37.4% of the population. The remainder of the population, 65 years old or older, makes up 5.7% to 7.2% of the population. The age distribution in the study area is similar to that in Cache County, Logan, and North Logan (U.S. Census Bureau 2000).

### 2.1.1.4 Limited English Proficiency (LEP)

Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, requires Federal agencies to examine the services they provide and identify any need for services to those with limited English proficiency. The Executive Order requires Federal agencies to work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries. Failure to ensure that LEP persons can effectively participate in or benefit from Federally assisted programs and activities can violate the provision under Title VI of the Civil Rights Restoration Act of 1987, 42 USC 2000d, and Title VI regulations against national origin discrimination.

LEP populations in the study area were identified using block-group-level data from the 2000 U.S. Census. For the population 5 years old or older, persons who speak a language other than English or who speak English either “not well” or “not at all” are considered LEP populations.

Within the study area, 88.6% of the population speaks only English (Table 2-3). Of those who speak a language other than English, 15.7% speak English “not well” or “not at all” and, therefore, are considered to have limited English proficiency. Of those who speak a language other than English, the largest proportion speaks Spanish (45.7%); others speak Asian and Pacific languages (29.7%), other Indo-European languages (19.3%), and other languages (5.4%).

**Table 2-3. Ability of the Study Area Population To Speak English**

Area	Total Sample (5 Years Old or Older)	Speaks Only English		Speaks a Language Other than English			
				Speaks English “Very Well” or “Well”		Speaks English “Not Well” or “Not at All”	
		Number	Percent	Number	Percent	Number	Percent
Study area	28,562	25,305	88.6	2,745	84.3	512	15.7
Logan	38,703	33,097	85.5	4,311	76.9	1,295	23.1
North Logan	5,490	4,981	90.7	399	78.4	110	21.6
Cache County	82,241	73,418	89.1	6,986	77.6	2,017	22.4

Source: U.S. Census Bureau 2000

The percentage of people in the study area who speak only English is similar to that in Cache County, Logan, and North Logan. However, more people speak English “very well” or “well” in the study area compared to the county and cities. Therefore, a smaller percentage of people in the study area are considered to have limited English proficiency than in Cache County, Logan, and North Logan.

Based on the data presented in Table 2-3, a portion of the population in the study area has limited English proficiency, but this segment of the population is not higher than the LEP populations in Logan, North Logan, and Cache County.

### 2.1.1.5 Income

The median household income for people living in the study area was analyzed using income data from the U.S. Census Bureau for 1999 (U.S. Census Bureau 2000). In 1999, median household income levels for census block groups in the study area ranged from a low of \$15,954 to a high of \$78,170. During the same period, the Cache County median household income was \$39,730. Table 2-4 summarizes the median household income in 1999.

**Table 2-4. Median Household Income in 1999**

Location	Median Income
<i>Area</i>	
Cache County	\$39,730
Logan	\$30,778
North Logan	\$49,154
<i>Block Group</i>	
Census tract 4.02, block group 1	\$65,882
Census tract 7.01, block group 1	\$78,170
Census tract 7.01, block group 2	\$45,347
Census tract 7.01, block group 3	\$41,420
Census tract 7.02, block group 1	\$15,954
Census tract 7.02, block group 2	\$25,833
Census tract 6, block group 1	\$39,750
Census tract 6, block group 2	\$26,087
Census tract 6, block group 4	\$22,246
Census tract 9, block group 1	\$29,413
Census tract 16, block group 1	\$42,500

Source: U.S. Census Bureau 2000

## **3.0 Environmental Justice**

### **3.1 Potential Environmental Justice Populations in the Study Area**

This section describes the minority and low-income populations that live in the study area.

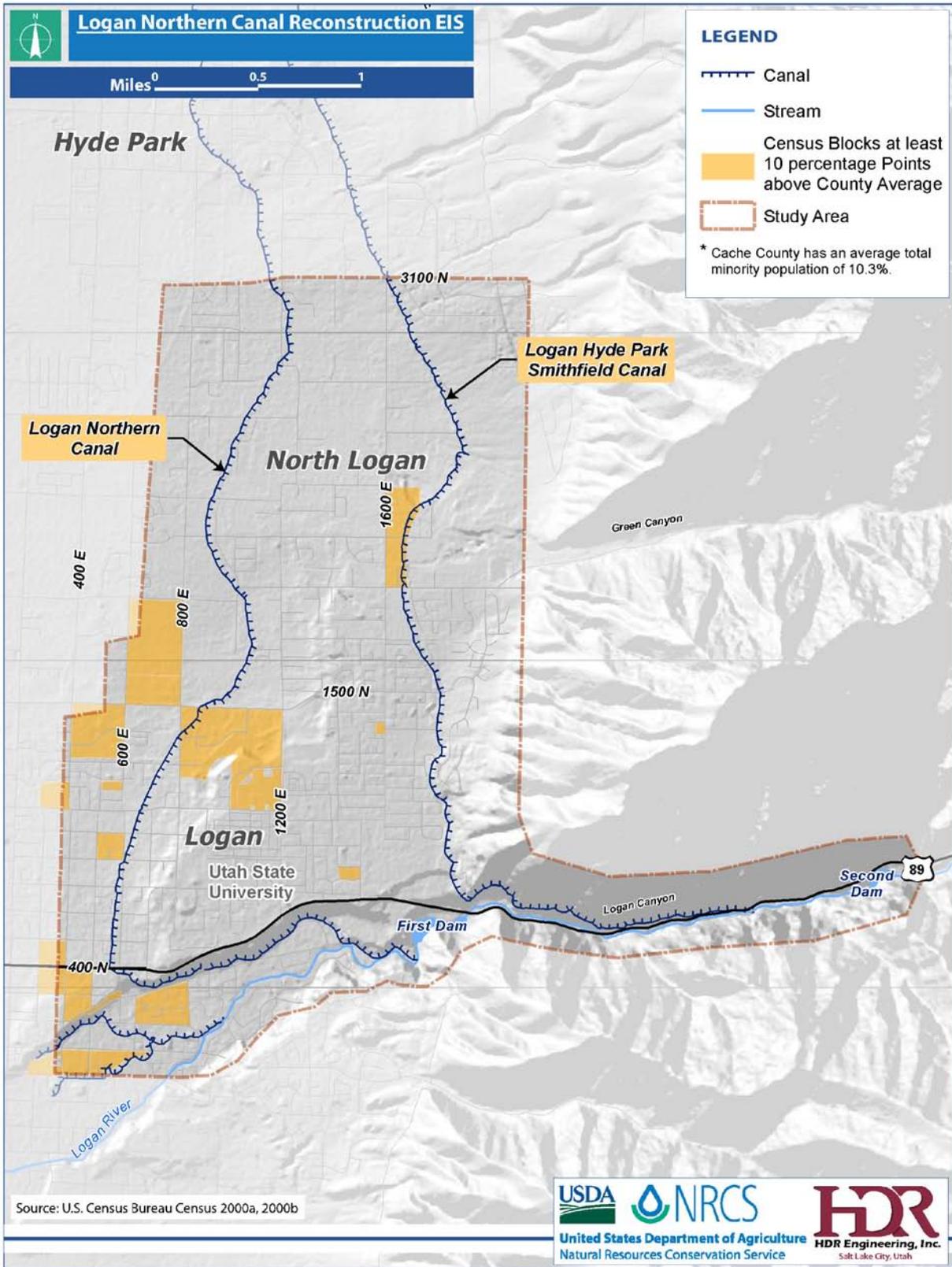
#### **3.1.1 Minority Populations**

The minority population of the study area is about 9.8%, which is lower than the county minority population percentage (10.3%) (Section 2.1.1.2, Race and Ethnicity). The population in the study area is predominantly white and not Hispanic.

A review of block-level data shows that 62 blocks have a higher percentage of minorities than the county percentage. The minority population of these blocks represents about 7% of the total study area population. Blocks with percentages of minorities higher than the county average are concentrated in the area west of 1200 East and south of Green Canyon Drive/1800 North (Figure 3-1). Twenty-two blocks have populations of minorities that are at least 10 percentage points higher than the county average, although three of these blocks have fewer than 10 people and show a very high minority percentage as a result. Detailed information about the blocks is contained in Appendix D1, U.S. Census Bureau Information, of the Logan Northern Canal Reconstruction project EIS.

In summary, the overall study area has a lower percentage of minorities than the county as a whole. Areas having a proportion of minorities of at least 10 percentage points higher than the county average are concentrated primarily in the area west of 1200 East and south of Green Canyon Drive/1900 North.

Figure 3-1. Minority Distribution in the Study Area



### 3.1.2 Low-Income Populations

A *low-income household* is one that has a median household income at or below the U.S. Department of Health and Human Services (HHS) poverty guideline. In 1999, the HHS poverty guideline for a family of three was \$13,880 (*Federal Register*, Volume 64, Number 52, March 18, 1999, pages 13428–13430). The poverty guideline for a three-person household was used because the average household size in the study area was 2.49 in 2000, while in Logan and North Logan it was 2.92 and 3.56, respectively. The average household size in Cache County was 3.24 (U.S. Census Bureau 2000).

All census block groups had a median household income above the HHS 1999 poverty guideline for a three-person household. However, some block groups in the study area have an overall median income that is lower than the county average (Section 2.1.1.5, Income). In general, these areas are concentrated around USU.

The 2000 U.S. Census data were also used to determine poverty status. For the purpose of this EIS, the Cache County 1999 poverty percentage of 13.5% is used as a comparator. The census data show that the study area population of persons for whom poverty status was determined and that were living below the poverty level in 1999 was 23.5%. This overall rate is 10 percentage points higher than the county average.

Poverty information is available at the block-group level (Table 3-1). Because some of the block groups that are included in the analysis are very large and cover areas far outside the study area, the census information should be used only as a reference. When the census information is reviewed on a map (Figure 3-2), it appears that the block groups with a percentage of persons living in poverty that is at least 10 percentage points higher than the county average are concentrated west of 1200 East and south of 1400 North in Logan. Much of this area is student housing for USU.

**Table 3-1. Poverty Status in the Study Area in 1999**

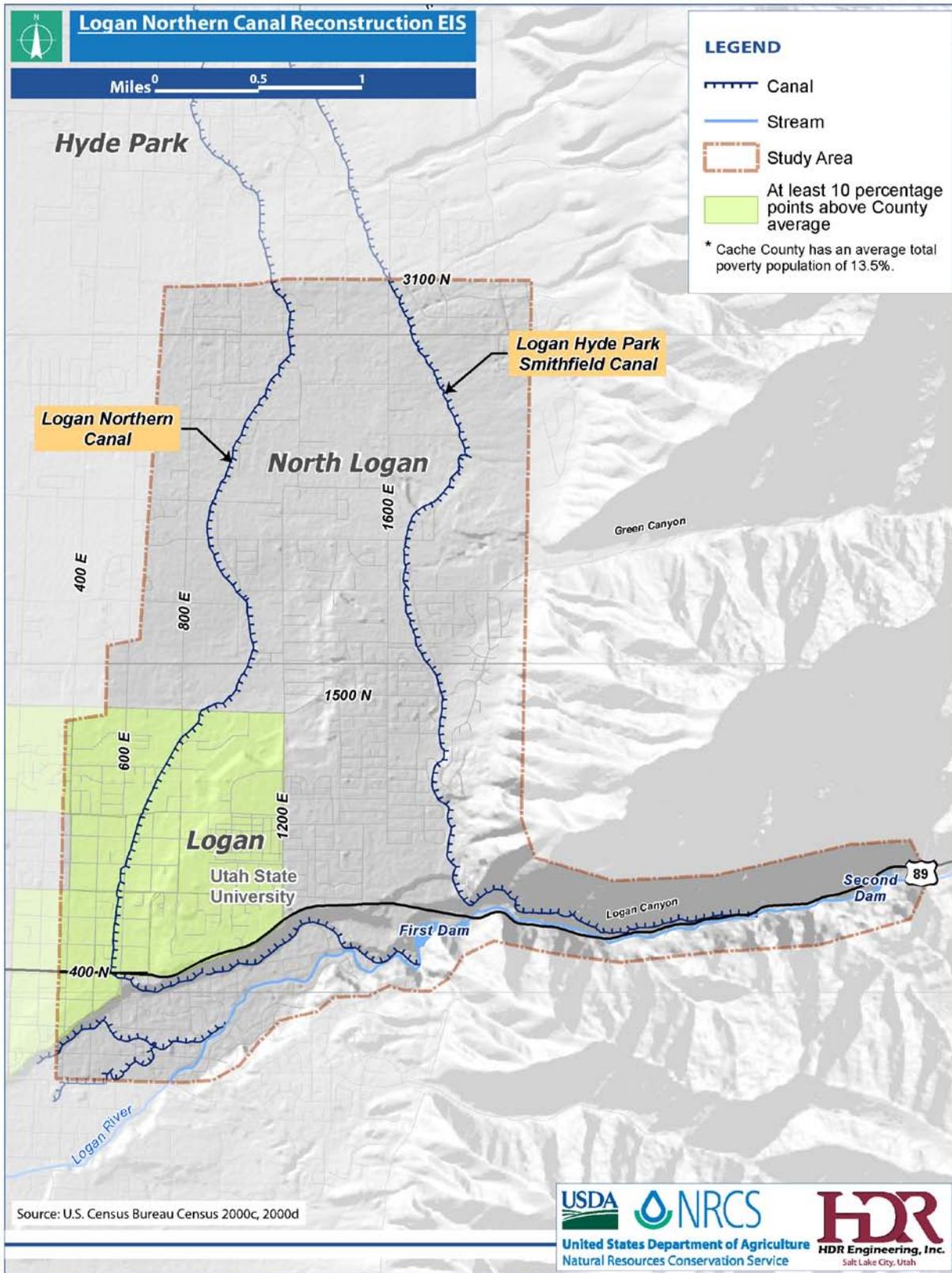
Block Group <sup>a</sup>	Population for Which Poverty Status Is Determined	Number of Persons Living in Poverty	Percent of Persons Living in Poverty
Census tract 4.01, block group 1	1,201	187	15.6
Census tract 4.01, block group 2	1,113	72	6.5
Census tract 4.02, block group 1	2,443	119	4.9
Census tract 4.03, block group 2	2,199	12	0.5
Census tract 6, block group 1	2,342	893	38.1
Census tract 6, block group 2	1,433	388	27.1
Census tract 6, block group 3	627	52	8.3
Census tract 6, block group 4	2,914	1,622	55.7
Census tract 7.01, block group 1	1,542	40	2.6
Census tract 7.01, block group 2	1,883	241	12.8
Census tract 7.01, block group 3	659	32	4.9
Census tract 7.02, block group 1	1,817	802	44.1
Census tract 7.02, block group 2	537	417	77.7
Census tract 8, block group 1	1,495	615	41.1
Census tract 8, block group 2	1,116	396	35.5
Census tract 8, block group 4	1,391	541	38.9
Census tract 9, block group 1	1,616	337	20.9
Census tract 11.02, block group 1	2,852	84	2.9
Census tract 16, block group 1	17	3	17.6

Source: U.S. Census Bureau 2000

<sup>a</sup> Only four block groups (Tract 7.01, block groups 2 and 3, and Tract 7.02, block groups 1 and 2) are entirely within the study area. All other block groups are only partially within the study area.

In summary, all census block groups had a median household income above the HHS 1999 poverty guideline for a three-person household. However, the overall study area has a higher percentage of people living in poverty than Cache County as a whole. Areas having a proportion of people living in poverty that is at least 10 percentage points higher than the county average are concentrated west of 1200 East and south of 1400 North in Logan. The block groups in this area include areas outside the study area and student housing associated with USU.

**Figure 3-2. Poverty Status of the Study Area**



## 3.2 Environmental Consequences

The project team used demographic and income information presented in Section 2.1.1, Demographics, and Section 3.1, Potential Environmental Justice Populations in the Study Area, to identify potential environmental justice populations (either low-income or minority populations) in the study area. For the purpose of this EIS, *environmental justice populations* are census blocks or block groups having a proportion of people living in poverty or a proportion of minorities that is at least 10 percentage points higher than the county average.

As described in Section 3.1, eight block groups had poverty levels that were at least 10 percentage points higher than the county average of 13.5%, while 22 blocks had a population comprised of at least 20.3% minority persons, which is 10 percentage points higher than the county average (Figure 4-2, Minority Distribution in the Study Area, and Figure 4.3, Poverty Status of the Study Area).

All low-income and most minority populations are concentrated west of 1200 East and south of 1400 North in Logan. In addition, some minority populations are west of 800 East and south of 1800 North, east of 1600 East and south of 1900 North, west of 1600 East and south of 1500 North, and east of 1200 East and north of US 89. Much of the area where low-income and minority populations are located is student housing for USU.

As explained in Section 2.1.1.4, Limited English Proficiency (LEP), some of the population in the study area has limited English proficiency. Spanish is the most spoken language among people who speak a language other than English. In order to comply with Executive Order 12898, Federal Actions To Address Environmental Justice in Minority and Low-Income Populations, and USDA Departmental Regulation (DR) 5600-2, Environmental Justice, reasonable measures should be taken during public involvement to ensure that this part of the population has meaningful access to meetings and information regarding this project.

### 3.2.1 Laws, Policies, and Direction

Executive Order 12898 and DR 5600-2 require impacts to low-income, minority, and tribal populations as a result of a project to be evaluated. If these populations are near or within the study area, they have to be provided the opportunity to comment before decisions are rendered on, allowed to share in the benefits of, not excluded from, and not affected in a disproportionately high and adverse manner by government programs and activities affecting human health or the environment. Therefore, Executive Order 12898 and DR 5600-2 were considered during the analysis of impacts to environmental justice populations in the study area as a result of each alternative.

### 3.2.2 No-Action Alternative

Under the No-Action Alternative, no low-income or minority populations would be affected by construction activities or changes to the irrigation system. Therefore, there would be no disproportionately high and adverse environmental or human health impacts to low-income

and minority populations in the study area as a result of the No-Action Alternative. In addition, no measures would be taken in regard to populations with limited English proficiency.

### 3.2.3 Action Alternatives

#### 3.2.3.1 Long-Term Effects

Operation of the modified LHPS and/or LN Canals would not result in disproportionately adverse effects to the quality of life, environment, or mobility of low-income or minority populations. All people would experience the same effects described in Chapter 5, Environmental Consequences, of the EIS regardless of race, ethnicity, or income.

#### 3.2.3.2 Construction Effects

##### Purple Alternative

Construction associated with the Purple Alternative could temporarily affect four block groups of low-income populations and three blocks of minority populations due to their proximity to the proposed canal alignment. Table 3-2 lists these block groups and blocks in which the percentage of persons living in poverty and the percentage of minorities is at least 10 percentage points higher than the Cache County averages. The population within these blocks is small (between 34 and 107 residents per block).

**Table 3-2. Low-Income and Minority Populations Affected by the Purple Alternative**

Block Group	Low-Income Populations		Block	Minority Populations	
	Number of Persons in Poverty	Percent of Persons in Poverty		Number of Minority Persons	Percent of Minority Persons
Census tract 6.00, block group 1	893	38.1	Census tract 6.00, block group 4, block 4005	22	20.6
Census tract 6.00, block group 4	1,622	55.7	Census tract 7.01, block group 2, block 2004	9	26.5
Census tract 7.02, block group 1	802	44.1	Census tract 7.02, block group 1, block 1000	27	29.3
Census tract 8.00, block group 1	615	41.1			

Source: U.S. Census Bureau 2000

The populations listed in this table have a percentage of persons either living in poverty or considered minority that is at least 10 percentage points higher than the Cache County averages of 23.5% and 20.3%, respectively.

Under the Purple Alternative, only construction impacts are anticipated to low-income or minority populations. The construction activities that could affect the areas where low-income or minority populations live adjacent or close to the canal alignments are summarized below.

- A water-control structure at Lundstrom Park to transition the canal water from a box culvert to an open channel and a headgate to allow LN Canal water to be diverted into a new pipe system. Building these structures would cause temporary noise impacts associated with the use of construction equipment.
- A pressure pipe to convey LN Canal water from the LHPS Canal to the LN Canal. The pipe would be routed under city streets and through and under a field for about 1.2 miles to connect to the LN Canal at about 1500 North. Constructing this pipeline would cause temporary noise impacts associated with the use of construction equipment and temporary traffic impacts on streets in the work area.
- A pressure pipe from 1500 North to 400 North installed in the existing canal access road. Constructing this pipeline would cause temporary noise impacts associated with the use of construction equipment. Construction between 400 North and 800 North might also cause nuisance impacts due to the general inaccessibility of the existing canal (that is, workers might need to take equipment through private property to access the canal during construction).

These construction activities would have temporary and minor effects on populations living near the Purple Alternative. Construction would affect all populations in the area in the same manner and magnitude regardless of their race, ethnicity, and income level. Therefore, low-income and minority populations near the Purple Alternative would not be affected in a disproportionately high and adverse manner.

### **Orange Alternative**

Construction associated with the Orange Alternative could temporarily affect the same four block groups of low-income populations identified for the Purple Alternative and four blocks of minority populations, which include the three blocks identified for the Purple Alternative. Table 3-3 lists these block groups and blocks in which the percentage of persons living in poverty and the percentage of minorities is at least 10 percentage points higher than the Cache County averages. Between 26 and 107 residents live in the blocks with the highest percentage of minority persons in the study area.

**Table 3-3. Low-Income and Minority Populations Affected by the Orange Alternative**

Low-Income Populations			Minority Populations		
Block Group	Number of Persons in Poverty	Percent of Persons in Poverty	Block	Number of Minority Persons	Percent of Minority Persons
Census tract 6.00, block group 1	893	38.1	Census tract 4.02, block group 1, block 1021	6	23.1
Census tract 6.00, block group 4	1,622	55.7	Census tract 4.02, block group 1, block 1023	9	21.4
Census tract 7.02, block group 1	802	44.1	Census tract 6.00, block group 4, block 4005	22	20.6
Census tract 8.00, block group 1	615	41.1	Census tract 7.02, block group 1, block 1000	27	29.3

Source: U.S. Census Bureau 2000

The populations listed in this table have a percentage of persons either living in poverty or considered minority that is at least 10 percentage points higher than the Cache County averages of 23.5% and 20.3%, respectively.

Under the Orange Alternative, only construction impacts are anticipated to low-income or minority populations. The construction activities that could affect the areas where low-income and minority populations live adjacent to the canal alignments are summarized below.

- A box culvert between the LHPS Canal POD and 2900 North or 3100 North. Constructing this box culvert would cause temporary noise impacts associated with the use of construction equipment and temporary traffic impacts to streets that cross over the canal in the work area.
- A pressure pipe from 1500 North to 400 North installed in the existing canal access road. Constructing this pipeline would cause temporary noise impacts associated with the use of construction equipment. Construction between 400 North and 800 North might also cause nuisance impacts due to the general inaccessibility of the existing canal (that is, workers might need to take equipment through private property to access the canal during construction).

These construction activities would have temporary and minor effects on populations living near the Orange Alternative. Construction would affect all populations in the area in the same manner and magnitude regardless of their race, ethnicity, and income level. Therefore, low-income and minority populations near the Orange Alternative would not be affected in a disproportionately high and adverse manner.

## Blue Alternative

Construction of the Blue Alternative could affect one block group that supports a low-income population (census tract 8.00, block group 1). The Blue Alternative touches the corner of this block group, which is located just north and south of US 89 in the southwestern end of the study area. There are 615 persons living in poverty in this block group, which is 41.1% of the population, as shown in Table 3-2 and Table 3-3. No minority populations are near the Blue Alternative.

As with the Purple and Orange Alternatives, only construction impacts are anticipated to low-income or minority populations under the Blue Alternative.

The area along the Logan Bluff that has historically been subject to landslides does not include census tract 8.00, block group 1. The construction activities that could affect the area where this low-income population lives close to the canal alignment are summarized below.

- Demolition of the existing canal conveyance structure from the LN Canal POD to 400 North/600 East. Demolition would cause temporary noise impacts and could cause temporary air quality impacts.
- A gravity pipeline in the existing LN Canal alignment to convey water from the LN Canal POD to 400 North/600 East. Construction would cause temporary noise impacts associated with the use of construction equipment.
- A drainage channel to convey stormwater and water from seeps and springs from the upslope hillside. This channel would eventually discharge into the existing irrigation canal at 400 North/600 East. Constructing this channel would cause temporary noise impacts associated with the use of construction equipment.

These construction activities could have temporary and minor effects on people living near the Blue Alternative. Construction would affect all populations in the area in the same manner and magnitude regardless of their race, ethnicity, and income level. Therefore, no disproportionately high and adverse impacts to minority populations near the Blue Alternative are anticipated under this alternative.

### 3.2.4 Summary of Impacts and Mitigation

Because none of the action alternatives would cause short-term, disproportionately high and adverse impacts to environmental justice populations, no mitigation is proposed.

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