Geographic Information Systems Housing Analysis in Albany, Oregon

Winter 2017 • GlScience 2

Paige Portwood • Community and Regional Planning

Dr. Nick Kohler • Senior Instructor • Geography
Acknowledgements

The author wishes to acknowledge and thank the City of Albany for the experience of collaborative and applied learning for university students. We would like to thank city staff who dedicated time to ensure the success of our projects.

Anne Catlin, Community Development Department, City of Albany
Bob Richardson, Community Development Department, City of Albany
Shawna Adams, Community Development Department, City of Albany
and additional City of Albany Community Development Department staff:
Jim Alexander
Melissa Anderson
Danya Arguedas
Anne Catlin
Mary Gaeta
Joel Heenan
Rachel Kutschera
Mike Leopard
David Martineau
Brian Smith
Jordan Sprague
Gary Stutzman
Karen Williams
City of Albany GIS Services, Office of Information Technology staff:
Pete Brandstetter
Dave Jacobus
Richard Montague
In addition, a special thanks to the following people for their constant guidance and support which made this report possible:
Dr. Nick Kohler, Ph.D, Senior Instructor
Mohammad Eshghi, Ph.D candidate, Geography; Graduate Teaching Fellow
About SCI

The Sustainable Cities Initiative (SCI) is a cross-disciplinary organization at the University of Oregon that promotes education, service, public outreach, and research on the design and development of sustainable cities. We are redefining higher education for the public good and catalyzing community change toward sustainability. Our work addresses sustainability at multiple scales and emerges from the conviction that creating the sustainable city cannot happen within any single discipline. SCI is grounded in cross-disciplinary engagement as the key strategy for improving community sustainability. Our work connects student energy, faculty experience, and community needs to produce innovative, tangible solutions for the creation of a sustainable society.

About SCYP

The Sustainable City Year Program (SCYP) is a year-long partnership between SCI and one city in Oregon, in which students and faculty in courses from across the university collaborate with the partner city on sustainability and livability projects. SCYP faculty and students work in collaboration with staff from the partner city through a variety of studio projects and service-learning courses to provide students with real-world projects to investigate. Students bring energy, enthusiasm, and innovative approaches to difficult, persistent problems. SCYP’s primary value derives from collaborations resulting in on-the-ground impact and expanded conversations for a community ready to transition to a more sustainable and livable future.

SCI Directors and Staff

Marc Schlossberg, SCI Co-Director, and Associate Professor of Planning, Public Policy, and Management, University of Oregon

Nico Larco, SCI Co-Director, and Associate Professor of Architecture, University of Oregon

Megan Banks, SCYP Manager, University of Oregon
About Albany, Oregon

The city now known as Albany has an established history as a central hub in the Willamette valley. Founded in 1848 and incorporated in 1864 the city has served as the Linn County seat since 1851. Albany’s unique place in Oregon’s history is exemplified in its dedication to historical preservation. Albany is often noted to have the most varied collection of historic buildings in Oregon. Its “four historic districts are listed in the National Register of Historic Places by the United States Department of the Interior.” This downtown core has served as the center of revitalization efforts since 2001.

Located on the Willamette and Calapooia rivers Albany spans both Linn and Benton counties. With a population of 51,720 people, Albany is Oregon’s 11th largest city and the second largest city in Benton County. Albany is administered under a home rule charter, adopted in 1957 establishing a Council and City Manager model. The city’s vision, to be a “vital and diverse community that promotes a high quality of life, great neighborhoods, balanced economic growth and quality public services,” is exemplified by its administration and government. Albany has a very active civic community with nearly 100 citizens serving on advisory commissions and committees dedicated to municipal issues.

Historically, Albany’s economy has relied on natural resources. As the self-styled “rare metals capital of the world,” Albany produces zirconium, hafnium and titanium. Major employment sectors include “wood products, food processing, and manufactured homes.” Because of its short, dry temperate growing season Albany farmers excel in producing specialized crops like grass flower and vegetable seeds, “tree fruits, nursery stock, nuts, berries, mint and grains.” Albany and the surrounding (Linn and Benton) counties are so agriculturally productive it is often called “The Grass Seed Capital of the World.”

Albany’s central location and mild climate has made it a popular destination for a variety of outdoor and leisure activities. Located in the heart of Oregon’s most populous region with the Pacific coast to the west and the Cascade Range to its east, Albany is connected to the wider state by Interstate 5, Oregon Routes 99E and 34, and US Route 20. The city is also served by Amtrak, a municipal airport, and a local and regional bus network.
Course Participants

Syler Behrens, Geography Graduate
Hayley Branaugh, Geography Undergraduate
Colin Brand, Anthropology Graduate
Madeline Cowen, Environmental Studies Undergraduate
Emily Dewar, Geography Undergraduate
Greg FitzGerald, Computer and Information Science Undergraduate
Hailey Gilliland, Environmental Science Undergraduate
Martin Harris, Geological Sciences Undergraduate
Josie Imrie, Geography Undergraduate
Hayden Jacobson, Geological Sciences Undergraduate
Kate Jaffe, Biology Undergraduate
Orion Jaramillo, Geological Sciences Undergraduate
Geoffrey Johnson, Environmental Science, Studies & Policy Graduate
Brogan Kellermann, Geological Sciences Undergraduate
Allie Kirsch, Environmental Science Undergraduate
Lin Kusnerus, Geography Undergraduate
Alec Malnati, Italian Undergraduate
Noel March, Geological Sciences Undergraduate
Connor Matthews, Geography Undergraduate
Tim McGinn, Pre-Business Administration Undergraduate
Kymm Meyers, Geography Undergraduate
Emily Miley, International Studies Undergraduate
John Leonard, General Social Science Undergraduate
Justin Peterson, Community and Regional Planning Graduate
Paige Portwood, Community and Regional Planning Graduate
Derek Robinson, Geography Undergraduate
Ariel Roddy, Economics Graduate
Magnus Ruben, Geography Undergraduate
Nick Scrivens, Environmental Science Undergraduate
Dan Shtob, Environmental Science, Studies & Policy Graduate
Zech Small, Geography Undergraduate
Olivia Somhegyi, Environmental Science Undergraduate
Mikayla Steele, Geography Undergraduate
Blair Toy, Environmental Science Undergraduate

This report represents original student work and recommendations prepared by students in the University of Oregon's Sustainable City Year Program for the City of Albany. Text and images contained in this report may not be used without permission from the University of Oregon.
# Table of Contents

- Executive Summary 7
- Introduction 8
- Housing Patterns and Needs 9
- Access to Opportunities 16
- Segregation and Integration of Racial/Ethnic Minorities 20
- Publicly Supported Housing Analysis 24
- Disability and Access Analysis 30
- Conclusion 33
Executive Summary

The University of Oregon's GiScience 2 students collaborated with the City of Albany, Oregon, to gather, organize, synthesize, and map geospatial information. Albany is interested in better understanding the segregation patterns of underrepresented demographic populations like racial/ethnic minority groups, low income individuals or families, people with disabilities, and seniors. GIS students used these potential segregation factors and compared them to access or availability of amenities and services. The students were divided into five groups to cover a greater variance of findings: Housing Patterns and Needs, Access to Opportunity, Segregation/Integration of Racial/Ethnic Minority Groups, Publicly Supported Housing Analysis, and Disability and Access Analysis.

City of Albany staff will be able to utilize this report to visualize spatial patterns of segregation, areas of concentrated populations, and potentially use this information as a reference in the future to promote greater integration.
Introduction

During the winter term 2017, undergraduate and graduate students taking GIScience 2 in the University of Oregon’s Geography Department conducted an analysis of fair housing factors in Albany.

The Assessment of Fair Housing is an approach to complying with the newly adopted Affirmatively Furthering Fair Housing Rule and the Fair Housing Act of 1968, which prohibits “discrimination in the sale, rental and financing of dwellings based on race, color, religion, sex or national origin.” Using the Assessment of Fair Housing Tool as a reference ensured all student work fell within the project scope to analyze either patterns of segregation related to housing, concentrations of community opportunity, or identify opportunities to promote community integration.

Students were divided into five groups and focused on different areas of fair housing: Housing Patterns and Needs, Disparities in Access to Opportunity, Segregation/Integration of Racial/Ethnic Minority Groups, Publicly Supported Housing Analysis, and Disability and Access Analysis. Within these categories, each student chose a specific topic to focus on; individually, students compiled data, conducted spatial analyses, and created a map(s). In collaboration with City of Albany staff, students used existing city data, plans, market strategies, and maps as frameworks to create quality maps using Geographic Information System (GIS).

The fair housing group concentrations are defined as:

1. Housing Patterns and Needs based on disproportionate opportunities for population or household characteristics such as tenure availability, race/ethnicity, income, family status, or housing age.
2. Disparities in Access to Opportunity measures the accessibility of certain population groups to living amenities such as transit, parks, schools, or grocery stores.
3. Segregation and Integration of Racial/Ethnic Minority Groups displays how racial/ethnic groups are dispersed or concentrated, while also identifying racial/ethnic groups that may experience the highest level of segregation.
4. Publicly Supported Housing Analysis seeks to identify demographic patterns of residents who live in public housing or in surrounding areas.
5. Disability and Access Analysis is a spatial analysis showing where persons with disabilities are geographically dispersed or concentrated and what services are accessible, or within close proximity to where they live.
Housing Patterns and Needs

Overview

Group 1 assessed various topics to identify housing patterns for Albany. The students specifically focused on disproportionate housing needs by conducting spatial analyses of factors such as owner and renter occupied units by race/ethnicity, the availability of housing, and median income compared to the distribution of Hispanic populations, as well as the percentage of cost burdened households for persons of color and family households.

While some students chose to broadly analyze persons of color, recently Albany has specifically seen a significant increase in Hispanic residents. From 2000 to 2010, the city’s Hispanic population nearly doubled. This demographic trend influenced Group 1 students to focus specifically on the potential housing needs of Hispanic residents, considered the largest minority group in Albany.
This study analyzes homeowners and renters compared to the spatial distribution of four race/ethnic groups (two blue maps). Because Albany’s population is nearly all Caucasians, it was more efficient to showcase this race as a base layer, rather than dot density. Hispanic, African American, and Asian populations are the three minority race/ethnic groups depicted and are associated with the dots of different colors. The Tenants by Race map shows block groups with higher percentages of Caucasian residents have fewer to no Hispanic, African American, or Asian residents. This is seen most predominately in the southern part of Albany. The same pattern is indicated in the Owners by Race map. Further, the Owners by Race map shows there are fewer Hispanic, African American, and Asian populations that own houses than rent.

Then, the study compares the units for rent to the median cost of rent and also compares houses for sale compared to the median house value (two green maps). The largest trend determined from the Units Available for Rent map is central block groups identified by the Tenants by Race map have a concentrated Hispanic population and the least renter availability, while also being areas with the lowest median cost of rent. Further, block groups with higher percentages of Caucasian residents have more rental availability, but at a higher median cost of rent. The second Houses for Sale map conveyed a trend that block groups with higher concentrations of Hispanic renters have more available housing for sale. Additionally, in block groups where minority race/ethnic groups own housing there are significantly fewer houses for sale (east Albany).
The figure above first identifies the relationship between Albany’s Hispanic population and homeownership rates between 2000 and 2015. This is indicated by the first two maps, which show a clear disparity in access to homeownership clustered in the center block groups of Albany. Congruent with this trend, the same area has high portions of Hispanic residents. Therefore, the data suggests a concentration of Hispanic populations in areas of low access to homeownership. An example is block group 2, census tract 201, in Linn County with a 15.7% decrease in homeownership and a 39.8% increase in percent Hispanic population.

The third map displays areas of high concentrations of homeownership and the relation to new residential permits. It is clear that the new residential units were generally located in the already dense homeownership areas. In contrast, low income housing is provided in areas with lower homeownership. Future research could compare the number of rentals versus homeowner dwellings for new residential units, but also the amount of new residential units that are considered low income housing.
The significance of the maps above is to first identify where Albany’s second largest ethnic group, Hispanics, are living. Then, to analyze whether they are disproportionately dependent on certain forms of housing compared to Caucasians, Albany’s largest ethnic group. These maps show that areas with a high proportion of Hispanics are dominated by both lower costs of rent and lower incomes. Conversely, in areas with small proportions of Hispanics the median income and rental cost are much higher. In block groups where the proportion of Hispanics is 20% or greater, the average median rental cost per block group was $698 in 2015. Outside of this area (i.e. all other block groups), the average median rental cost was $821. For median income, Hispanic block groups (20% or higher) had an average median income of $33,365, while other block groups have an average median income of $55,449.
This study illustrates the relationship between percentages of households identified as “cost burdened” households and the percentages of persons of color and family households containing children under 18 years old. Cost burdened households are defined as households that spend 30 percent or more of their income on housing. This comparison will provide insight to whether or not minority groups and families live in affordable housing. Both maps indicate that block group 1, Census Tract 208.02, Linn County, is identified with the highest percentage of cost burdened households, highest percentage population of persons of color, and highest percentages of families with children. Overall, the first map concludes Albany does not have an overwhelming trend of cost burdened households in areas of higher racial diversity. There is, however, a closer relationship between cost burdened households and families with children. There are only two block groups in Albany that have low percentages of cost burdened households (18% or under of housing stock) and low to medium percentages with families (27% to 34% of the block group population). Therefore, the second map presents a pattern illustrating that there is a higher likelihood for houses with families containing children to be cost burdened.
Key Concepts

- Racial/ethnic minority groups are more concentrated in block groups with lower median rents
- A majority of Albany’s Hispanic population lives in rental housing and are not homeowners
- All but two block groups indicate that block groups of higher percentages of families with children are also areas of high percentage of cost burdened households
Access to Opportunities

Overview

Group 2 examined the level of access that Albany residents have to amenities or essential services. Through their comparative analysis, the students defined such amenities and services by studying locations of bus stops, parks, and grocery stores.

The goal of this analysis is to measure Albany residents' access to public transportation and recreation. Further, it compares the access to these amenities among racial/ethnic populations. The three maps to the left identify the spatial distribution of racial/ethnic groups. The center map combines accessibility to bus stops, bus routes, public parks. The data sets were aggregated to rate the level of access residents have to those factors, measured on a scale from good to poor. Access to each amenity is presented in the far right maps.
This project focuses on access to grocery stores by racial/ethnic populations for the City of Albany. It aims to look at current grocery stores in the City of Albany, and how many people have easy access (walking) to these facilities. The majority of the population is located within Classes 1 and 2, areas in green and yellow. (Class distances are defined in the figure.) There is only a small percentage, 6.45%, within the 3rd distance class. Access to grocery stores is of greatest concern in Class 2. A little less than half of the population lives in this class, yet there is no grocery store in the class area. Additionally, there is moderate, but primarily poor access to a grocery store in southwest Albany, which illustrates the discrepancies between blocks with some of the highest population percentages of racial/ethnic minorities.

### Access to Grocery Stores by Ethnic Populations for Albany, OR

<table>
<thead>
<tr>
<th>Class</th>
<th>% of Albany pop.</th>
<th>% of White pop.</th>
<th>Total White pop.</th>
<th>Total percent in each class</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50.07%</td>
<td>46.27%</td>
<td>51.9%</td>
<td>20.05%</td>
</tr>
<tr>
<td>2</td>
<td>43.48%</td>
<td>37.48%</td>
<td>31.5%</td>
<td>19.11%</td>
</tr>
<tr>
<td>3</td>
<td>6.45%</td>
<td>5.59%</td>
<td>4.4%</td>
<td>29.29%</td>
</tr>
</tbody>
</table>

Normalized Ethnic Census Data

- Grocery stores
- Blocks
- Percent of Ethnicity
  - 0: 0.0 - 6.82
  - 1: 6.82 - 11.8
  - 2: 11.8 - 18.0
  - 3: 18.2 - 26.4
  - 4: 26.4 - 100

The classified distances represent distances of 0 - 1 mile, 1 - 2.5 miles, and 2.5 - 4.48 miles, respectively. The data table represents the percent of the Albany population within each distance class, the percent of the total ethnic population within each class, and the percent of the total white population within each class. It also shows the population for the ethics and whites in each class.
The goal of this project is to analyze disparities in access to food in Albany for differently abled people, defined as those who are employed, but living under the poverty line. It measures access to food facilities such as grocers and convenience stores. General patterns show that a higher number of differently abled people live in east Albany, represented by the dark shades of blue.
Key Concepts

- Central Albany has good accessibility to public transportation and places of public recreation.
- There is a lack of grocery stores in south Albany, where a higher percentage of racial/ethnic minority populations live.
- SNAP-accepting grocers are generally located by areas with higher numbers of differently abled people.
  - None of them are located within a comfortable walking distance (located 0.5 miles away or greater from populations with greatest access).
  - The locations of the SNAP-accepting grocers are inaccessible for poverty-level residents of Albany living in southwest or east Albany.
Segregation and Integration of Racial/Ethnic Minorities

Overview

Group 3 measured the segregation and integration of minority groups. Students in this group focused on how racial/ethnic groups are dispersed or concentrated within the city, determined segregation levels in the city and the region, and also indicated population groups that may experience the highest levels of segregation.
The maps on the previous page investigate whether racial/ethnic groups, specifically those in minority populations, are living in regions with more exposure to both poverty and police activity. The purpose of this study is to examine the relation of poverty and police activity to the limitation of opportunity for minority communities.

The map “Percent Poverty by Group Block” displays the percentage of the population (by block group) with incomes below the poverty line in 2015. The “Demographics by Race/Ethnicity” map shows a similar shading pattern, but with the percentage of people of color in the total population. Overlaid on the base ethnicity map are pie charts summarizing this demographic information by tract. The lower map, “Police Incident Density”, displays how the density of police incidents and location of police stations might be related to concentrations of poverty.

The spatial analysis indicates residents in the center of Albany are more likely to have an income below the poverty line. Additionally, the demographics map shows an overlap between areas of highest police activity and regions of highest poverty in Albany. Although the demographics of Albany are predominantly white, we can see that the three areas where the percentage of residents in poverty is the highest have three of the highest percentages of Hispanic individuals by population. Additionally, both a police station and jail are in close proximity to these low income communities.

This is a 2010 census block data analysis of racial/ethnic percent diversity in Albany compared to access to proficient education. The data used was the census block level population not identifying as non-Hispanic and white. In areas with greater than 20% racial diversity, the HUD proficiency index was linked to show areas of higher density of color and lower proficiency. School indexes. Then, a network analysis displays which low index high percent diversity areas lie outside a 1 mile road network zone. All of the data is shown within the Albany Urban Growth Boundary, and the other school ratings are shown in a faded red-green color scheme and in the map to the right of the upper legend. Elementary schools are represented in a light grey school symbol.

To the right is a map displaying racial diversity in Albany showing an equal interval classified by ethno-racial percent diversity in the UGB. To the right, a graph compares these total numbers to the school index data. This shows the densities of ethno-racial diversity percent compared to low and high school proficiency.
The figure above analyzes and compares racial/ethnic data to HUD school proficiency ratings for the Greater Albany Public Schools at the high school and middle school level. In areas with greater than 20% racial diversity, the HUD proficiency index was linked to show areas of higher density of non-white residents and lower proficiency school indexes. The maps patterns generally show that high density racial/ethnic minorities are linked to poor school proficiency ratings, which is demonstrated by highly saturated dark red or orange areas.

The goal of this study is to raise awareness of potential environmental injustices throughout Albany, in relation to toxic release of pollutants and race/ethnic minorities. The results indicate that areas with higher proportions of persons of color, live within closer proximity to facilities with increased toxic release. The three block groups with the highest proportion of minorities are all exposed to toxic release, which is presented in the magnified map to the right. These census block groups also have a generally higher percentage of the population than the outer parts of Albany.
The final project in Group 3 assessed the environmental suitability of public parks in regards to air pollution, while also assessing the location of parks in regards to the location of racial/ethnic populations in Albany. The study shows the highest areas of point source pollution (red) reside in the city center, and dissipate as distance increases from the city center. Congruently, a majority of public parks in the City of Albany are located near the city center, thus very few parks were found to be in “low air pollution areas.” There may be further correlation between providing access to public parks, but higher concentrations of people could naturally lead to higher pollution.

Key Concepts

- Highest census tracts of police activity correlate with areas of highest poverty in central Albany.
- A police station and jail are in closer proximity to these low income communities than middle to high income communities.
- Timber Ridge Middle School has the lowest middle school ranking and the highest percentage of racial/ethnic diversity.
- Three block groups near downtown Albany with industries or facilities that emit higher toxins are also areas with higher racial/ethnic minority populations.
Publicly Supported Housing Analysis

Group 4 assessed the patterns of public supported housing through first analyzing the growing need for additional publicly supported housing, the geographic locations of various publicly support housing (sorted by program), and also how the housing locations correlate to the residents’ access to opportunity or exposure to various zoning categories and certain socioeconomic neighborhoods.

Overview

The charts that follow show basic statistics about public housing in Albany such as rent cost per month, waiting period before move-in, types of housing, and changes in city-wide racial demographics. According to city staff, Albany is facing high demand and long waiting time for public housing. This is supported by the data because the top chart indicates a nearly 100% occupancy rate for all Albany public housing. The other bottom chart shows the changes in racial demographics from 2000 to 2010. The general trend is a decrease in the white population and significant increases in Hispanic, Asian, African American, and “Other than specified” minority populations. Additional analysis is needed, however, to assess the racial demographics of publicly supported housing in order to statistically determine if there is a significant correlation between the two factors.
Albany: Average Cost, Waiting Period and Occupancy Rate of Public Housing
Source: HUD (2010 Census Geographics)

Racial Demographics and Percent Change from 2000 to 2010 in Albany, Oregon
(U.S. Census Bureau)

Sources: American Community Survey, 2009-2013
U.S. Census Bureau, 2000-2010
U.S. Department of Housing and Urban Development (HUD)
The goal of the maps above is to identify patterns and trends of disparities in access to opportunity for residents living in publicly supported housing. The map to the left illustrates that Publicly Supported Housing units are primarily situated in the center of the city and tend to be in census tracts where 20-30% of the population consists of people of color. The Service Areas, constituted as a half mile distance, shows the dense accessibility to the northern downtown area for Public Supported Housing residents.

The map to the right has a shading pattern that depicts the percentage of residents under the poverty level in darker brown. It is important to note the concentration of the publicly supported housing units that fall inside two neighborhoods (indicated by the red borders) in the second map. One of these neighborhoods has a population with 40%-50% of residents below poverty level; the other neighborhood has a population with 30%-40% of residents below poverty level. In addition, every area where there is a public housing unit, with one exception (the western area of the UGB), is an area that is above 30% below the poverty level.
Median Household Value and Public Housing Locations 2015

Map 2: Albany Median Household Value and Public Housing Sites

- Less than $75k
- $75k - $150k
- $150k - $225k
- $225k - $300k
- Greater than $300k

- Albany Partnership for Housing and Community Development (APHCD)
- HOME Rental Assistance Program
- Low Income Housing Tax Credit (LIHTC)
- Other HUD Assisted Developments
- Section 8 Housing
The two maps look at Public Supported Housing locations and their distribution compared to surrounding household values and city zoning. According to the Albany Zoning and Publicly Supported Housing sites map, many locations are in residential areas, yet are within close proximity to commercial or industrial areas. The second map, Albany Median Household Value, shows public housing is generally in census tracts where houses are of moderate value, $75,000 to $125,000. There are a few publicly supported housing units located in tracts with $150,000 to $225,000 values, but
none in areas with value exceeding $225,000. Of note, there are no opportunities for publicly supported housing in the southern census tract with the lowest house values. This could be due to the limited access to services that would be available to residents when compared to locations closer to the center of Albany.

Key Concepts

- Currently all publicly supported housing has a combined occupancy of nearly 100%.
- Publicly supported housing is concentrated in the center of Albany, where greater percentages of racial/ethnic minority groups live.
- Publicly support housing is also concentrated in areas with higher percentages of residents below the poverty level.
- A majority of publicly supported housing units are in residential zones, but on sites within close proximity to commercial and/or industrial zones.
- Publicly supported housing is concentrated in neighborhoods with lower moderate housing values (below $125,000).
Disability and Access Analysis

Overview

The map above analyzes the distribution of persons with disabilities throughout Albany. It segments those below or above the poverty line to examine if they experience different levels of discrimination or lack of accessibility to opportunities not only because of their disability needs but also their financial situation. For 2015, the highest concentration of persons with disabilities for both socioeconomic groups is in central Albany. Those below the poverty line in particular are highly concentrated in this area while those above the poverty line are more distributed throughout all regions of the city.
This maps above evaluate the accessibility to disability services for disabled residents who have fallen below the poverty line in the last 12 months. Disability services offer a variety of resources valuable to persons with disabilities that include but are not limited to those with developmental or learning disabilities, hearing impairments, or the elderly. The first observation is that people with a disability who are also below the poverty line are predominantly concentrated in or within close proximity to the center of the city, as represented by the yellow dots. Disability services for disabled persons seem adequately accessible, which is determined by the facilities’ location, within a quarter mile, to bus routes as shown in teal. Some disability services, however, are more remote, such as Aging and Disability Resource Connection (ADRC), Linn County Department of Health Services, and Samaritan Health Services. These services do not have adequate accessibility because their half mile service area does not encompass a large portion of where disabled persons live, as illustrated in the right map. This analysis carries additional weight because it measures the accessibility for disabled persons who do not use the bus.

Note: The above maps do not include Cascades West Council of Governments Senior and Disability Services data.
Overall, this map displays the growing percentage of persons with disabilities who fell below the poverty level within the past 12 months. Additionally, it highlights that the locations of the darkest green block groups, indicating the highest percent change increase, are not block groups that are located near disability services.

Key Concepts

- Disability Services are accessible by transit for Albany disabled residents.
- There are a few services like the Aging and Disability Resource Center, Linn County Department of Health Services, and Samaritan Health Services where people with disabilities cannot access them without using transit due to their distance of over 0.5 miles.
- Albany has a growing population of disabled residents who fall below the poverty level.
- Block groups with the highest percent change of persons with disabilities below the poverty line are in areas further from disability services.
Conclusion

This report includes five components of HUD’s fair housing standards: Housing patterns and needs, access to opportunity, segregation/integration of racial/ethnic minority groups, publicly supported housing analysis, and a disabilities and access analysis. GIScience 2 students collaborated in teams, based on the five components to conduct multiple robust spatial analyses. Consistent and/or significant trends include:

• The majority of Albany’s population is Caucasian, but Albany has experienced a significant increase in its Hispanic population within the last decade.

• A majority of households of racial/ethnic minorities are renters and they are concentrated in block groups with low median rent.

• A majority of Albany households, particularly households with families, are housing cost burdened.

• There is a lack of grocery stores in south Albany, where a higher percentage of racial/ethnic minority populations live.

• Three block groups near downtown Albany are in close proximity to facilities that emit higher toxins; these areas also have a higher concentration of racial/ethnic minority populations.

• All public housing has a combined occupancy of nearly 100%, and is located on sites within close proximity to commercial or industrial zones, especially when compared to other housing options.

• Albany has a growing population of disabled residents who fall below the poverty level. The highest increase of persons with disabilities below the poverty line has been in areas further from disability services.