

AGENDA

DES MOINES CITY COUNCIL
ECONOMIC DEVELOPMENT
City Council Chambers
21630 11th Avenue S, Des Moines, Washington
Thursday, July 25, 2024 - 5:00 PM

Economic Development Committee: Chair Jeremy Nutting; Vice Chair Harry Steinmetz; Traci Buxton

CALL TO ORDER

AGENDA

- Item 1. APPROVAL OF JUNE 27, 2024 MINUTES
[Draft 06.27.24 ED Committee Minutes](#)
- Item 2. COMPREHENSIVE PLAN UPDATE (HEALTHY DES MOINES ELEMENT)
- Staff will provide an overview of Chapter 12 of the Des Moines Comprehensive Plan along with proposed amendments for discussion and input by the Committee.
- [072524 EDC CPU Memo Ch 12](#)
[CPU Attach 1 Ch 12 Healthy Des Moines Element](#)
- Item 3. MIDDLE HOUSING PROJECT INTRODUCTION AND BRIEFING
- Staff will provide an overview of the public engagement plan, policy research and mapping analysis work completed by the City's consultant.
- [072524 EDC Middle Housing Memo w header](#)
[MH Attach 1 Des Moines Public Engagement Plan](#)
[MH Attach 2 Des Moines Middle Housing Policies Memo](#)
[MH Attach 3 Des Moines GIS Mapping Analysis Memo](#)

ADJOURNMENT

DRAFT MINUTES

**Economic Development Committee Meeting
Thursday , June 27, 2024
5:00 p.m. – 5:50 p.m.
Council Chamber**

Council Members

Jeremy Nutting, Chair
Dep Mayor Harry Steinmetz, Vice Chair
Mayor Traci Buxton

City Staff

Tim George – Interim City Manager
Laura Techico – Planning and Development
Services Manager
Jason Woycke – Senior Planner
Peyton Murphy – Land Use Planner II
Alicia Jacobs – Land Use Planner
Dan Hopp – Building Official
Jamie Weigand – Asst Building Official
Scott Wilkins – Harbormaster
Jeff Friend – Finance Director
Tommy Owen – City Engineer
Matthew Hutchins – Interim City Attorney
Laura Hopp – Admin Coordinator I

Guests: Councilmembers Gene Achziger, Yoshiko Grace Matsui, Matt Mahoney
AHBL Consultant Wayne Carlson, Chuck Coleman

Meeting was called to order at 5:00 p.m.

1. Approval of April 25, 2024 Minutes
Minutes approved as submitted.

2. Comprehensive Plan Update – (Chapter 5: Capital Facilities, Utilities and Public Services, Chapter 6: Recreation and Open Space Elements)

Planning and Development Services Manager Laura Techico presented the update. Manager Techico provided a memo, mark-up pages of Chapters 5-6 (Item #2, Attachment #1), and also shared a Comprehensive Plan Update PowerPoint:

<https://desmoines.civicweb.net/document/341484/Comprehensive%20Plan%20Update%2006.27.2024.pdf?handle=882678EA2D124629869AB056F593BB3E>

Manager Techico explained that Community Development staff have been presenting these updates to the Comprehensive Plan to various council committees over the last few months. Chapter 5 helps determine the right facilities are in the right place to support the development that is planned in the Comprehensive Plan's Land Use Element.

The committee discussed:

- Coordination with utility service providers and capacity for growth

- Agency Comprehensive Plans are reviewed by City Council. The Council may provide feedback; however, each service provider is the final authority over their individual plan.
- The Growth Management Act and how it impacts development requirements
- Suggestion for creating a new category of Review Plans as it relates to Utilities and Public Services

Chapter 6 of the Comprehensive Plan is the City's 2022 Parks, Recreation and Senior Services Master Plan.

Committee updates will continue through the Summer/Fall of 2024.

3. Noise Code for New Construction

Interim City Manager Tim George and Building Official Dan Hopp provided a Memo (Item #3 Attachment) with the Subject: Adoption of Sound Requirement for New Buildings to Address Airport Noise. This item is in response to a question regarding the 2012 Council's decision to repeal the City's noise code for residential building. There has been a renewed concern about returning the noise code to DMMC. Reinstating the previous noise code is not as simple as it sounds. Building codes have been updated over the years to include more stringent requirements. Additionally, a recent Energy Code adoption may address some of the noise issues. The City hasn't yet received a permit application for residential building under the new Energy Code requirements and so can't quantify the changes at this time. The Committee requested staff continue research and review nearby airport impacted Municipalities' noise code for future committee consideration.

Adjourned at 5:44 p.m.

Respectfully submitted by, Jodi Grager, Public Works Administrative Coordinator

MEMO

To: City Council Economic Development Committee (EDC)

From: Laura Techico, AICP – Planning & Development Services Manager
Peyton Murphy, Land Use Planner II

CC: Tim George, Interim City Manager
Adrienne Johnson-Newman, Assistant City Manager
Planning & Development Services Staff

Date: July 25, 2024

Re: Comprehensive Plan Update – Healthy Des Moines Element

Background

The Des Moines Comprehensive Plan is a policy document that describes how the City will manage its growth and provide necessary services and facilities over a 20-year planning horizon (Year 2044). Des Moines is designated as a High Capacity Transit Community and needs to plan for an additional 3,800 housing units, 2,380 new jobs and 726 net new permanent Emergency Housing Units by 2044.

The comprehensive plan includes 12 elements that address community characteristics; land use; transportation; conservation and environment; capital facilities, utilities and public services; parks, recreation and open space; housing; economic development; neighborhoods (North Central, Marina District and Pacific Ridge); and health. Each element includes a general summary of existing conditions along with goals and policies, and implementation strategies that indicate how the city, programs, and priorities will implement the Plan’s goals and policies.

The periodic update requires a thorough review of each element of the Plan to ensure it reflects new laws and requirements, demonstrates capacity to meet our growth targets, responds to changing conditions within the community and addresses agency, tribal and community’s interests expressed via our public outreach efforts.

To help frame the scope of our update, our consultant AHBL completed a review of the existing comprehensive plan and development regulations for consistency with the Washington State Department of Commerce’s update checklists, legislative amendment to the Growth Management Act (GMA), Vision 2050 and Countywide Planning Policies (CPPs), and identified updates needed to comply with these requirements.

March 28, 2024 Council Economic Development Committee Meeting

Staff presented *Chapter 1: Introduction* and *Chapter 2: Land Use Element* to the Council EDC. Key policy direction provided by the committee related to adding a tribal acknowledgement to Chapter 1 and weaving goals, policies and implementation strategies throughout the plan versus adding a separate

Tribal Element. The other item related to the style of language (e.g., "our City" vs. "the City") and whether that should be maintained. The EDC saw rationale for both.

April 11, 2024 Council Environment Committee Meeting

Staff presented the Chapter 4: Conservation and Environment Element to the Committee. The Committee had questions related to HB 1181 (Climate Change bill), tree preservation and replacement ratios, tribal interests, bioswales, cross-jurisdictional coordination and overall timeline for planning.

April 25, 2024 Council Economic Development Committee Meeting

Staff presented proposed changes to Chapter 8: Economic Development Element, Chapter 9: North Central Neighborhood Element, Chapter 10: Marina District Element and Chapter 11: Pacific Ridge Element. The committee discussed the creation of an Economic Development Plan for the Marina District and whether Chapter 10 should be expanded, defining high impact and low impact uses with relation to the Innovation District Zone, high density and transit community zones in Pacific Ridge, and a suggestion for an Economic Development Plan to focus on the Pacific Ridge Zone and the Pacific Highway South corridor. Given the breadth of this information, follow-up discussion at future committee meetings may be required.

May 9, 2024 Council Transportation Committee Meeting

Staff presented an estimated timeline and framework for Chapter 3: Transportation Element with consultant assistance. The committee inquired about Metro's Last Mile Plan relating to the Link Light Rail Extension project. Director Owen stated that in his last meeting with Metro staff it was suggested constituents complete the South Link Connections survey which will be used for collecting data to plan Last Mile connectivity.

June 27, 2024 Council Economic Development Committee Meeting

Staff presented proposed changes to Chapter 5: Capital Facilities, Utilities and Public Services Element and Chapter 6: Parks, Recreation and Open Space Element. For Chapter 5, the committee recommended clearly distinguishing between those utility and service provider plans that are adopted by reference and those that the City reviews but does not formally adopt. For Chapter 6, the goals and policies in this element have been replaced with those in the 2022 Parks, Recreation, and Senior Services Master Plan.

Discussion

Tonight's discussion will focus on proposed changes to Chapter 12: Healthy Des Moines Element.

Framework

"VISION 2050 and the Regional Economic Strategy emphasize the interconnectedness of planning in our region – decisions made on land use, transportation, public services, housing, the environment, health, and other areas all play important roles in meeting the economic goals of the region and local communities." (PSRC, 2022) Comprehensive Plan elements also provide an opportunity to address racial disparities in the community and access to opportunity through education, economic health, housing and neighborhood quality, mobility and transportation, and health and environment.

In 2010, the City of Des Moines received a *Communities Putting Prevention to Work* (CPPW) grant from Public Health – Seattle & King County and the United States Department of Health and Human Services to develop a *Healthy Eating and Active Living* (HEAL) Initiative. The purpose of the initiative was to increase access to opportunities for physical activity and nutritious foods and beverages through policy, systems, and environments that make "the healthy choice the easy choice." As part of this work, updates were made to the Des Moines Comprehensive Plan in 2011 to amend Chapter 2: Land Use

Element, Chapter 3: Transportation Element and Chapter 6: Parks, Recreation and Open Space Element to incorporate relevant HEAL goals, policies and strategies. Additionally, a new chapter entitled “Healthy Des Moines Element” (Chapter 12) was established that incorporates background information and overarching goals/policies/strategies that span multiple disciplines.

Chapter 12: Healthy Des Moines Element (Attachment 1)

The Healthy Des Moines Element establishes goals, policies and strategies related to healthy food access, community gardens, nutrition standards for City programs, safe routes to school and complete streets.

Changes to this element include the addition of health data and funding opportunities, increased attention to addressing health disparities within underrepresented groups, and a discussion of health impacts related to SeaTac Airport.

Policy Questions:

1. Proposed edits add a significant amount of health data and funding opportunities. During the initial adoption of this element, Council recommended removal of a majority of the data. Is this level of detail supported by the Committee or should it be a higher level discussion and/or move this information to a separate appendix?
2. Is expanding the HDM element to include specific goals and policies on addressing health impacts related to SeaTac Airport in line with the Committee/Council’s vision/plans? How detailed should the goals and policies be to address this area?
3. Is expanding the HDM element to include specific goals and policies on addressing health disparities in line with the Committee/Council’s vision/plans? How detailed should the goals and policies be to address this area?

General Questions:

1. Does the Healthy Des Moines Element accurately capture Council’s goals and expectations?
2. Does the Committee have any recommended changes or additions to this element?

CHAPTER 12: Healthy Des Moines Element

BACKGROUND AND CONTEXT

In the past ~~decade~~^{two decades}, there has been an overall increase of obesity and chronic diseases in King County. Data show that people living in South King County bear a disproportionate burden of poor health and poverty compared to other parts of the County.¹

These health issues acutely impact youth. Fostering greater physical activity among youth has been the focus of recent efforts by the Washington State Recreation and Conservation Office (RCO). Using funding allocated by the state legislature, the RCO Assembled a physical Activities Task Force composed of representatives from across the state to investigate the inequities in physical activity experienced by youth in Washington, remove systemic barriers to physical activity, and encourage youth to be more physically active.²

The importance of physical activity for youth cannot be overemphasized. In a report published by the Physical Activities Task Force in 2022, it was found that the activity that youth engage in can be a predictor toward their long-term health and well-being. Furthermore, regular movement can “facilitate healing, promote resiliency, and mitigate the effects of trauma” as well as result in “better educational outcomes, longer attention spans...and improved behavior.”³ Consequently, fostering physical activity among youth can likely help form long term healthy habits and provide myriad physical and mental health benefits, too.

Unfortunately, data shows that youth across the state are not getting the recommended 60 minutes of daily physical activity as prescribed by the Centers for Disease Control and Prevention.⁴ This is chiefly due to a lack of accessible facilities, finances, transportation access, and safety barriers.⁵ Further compounding the issue is that access to recreational facilities and rates of physical activity differ based on income and ethnic background. The report found that low income and communities of color often having the “fewest accessible, safe, and well-maintained recreational facilities.”⁶ As a result, supporting policies, programs, and interventions in the built

“Des Moines is making a HUGE difference in helping its youth stay healthy – by making where they live, learn and play places that make the healthy choice the easy choice.”

James Krieger, MD, MPH
Public Health – Seattle & King County

¹Public Health – Seattle & King County website, Burien/Des Moines Health Planning Area data and maps available at: <http://www.kingcounty.gov/healthservices/health/partnerships/cppw/kcprofile.aspx> (last accessed 8/22/11)

² Washington State Recreation and Conservation Office. “Physical Activities Task Force Report.” Washington State Recreation and Conservation Office. 2022. <https://rco.wa.gov/wp-content/uploads/2022/02/PhysicalActivityTaskForceReport.pdf>, pgs. 3-4.

³ Ibid p. 14.

⁴ Ibid, p. 5.

⁵ Ibid p. 9

⁶ Ibid.

environment to foster greater rates of physical activity must remain a priority for Des Moines, with a particular focus on measures to improve outcomes for our community's youth in an equitable manner.

Commented [DL1]: Council removed most of the health data when we initially adopted this element. Suggest paring this down to be Des Moines specific.

In April 2024, the City of Des Moines proclaimed the week of April 15-19 as Black Wellness Week. The proclamation aimed to foster community empowerment by bringing awareness to health disparities as evidenced during the COVID-19 pandemic and aligning with broader universal health objectives, including highlighting systemic health barriers. This proclamation was the first of its kind in the City of Des Moines, and a step towards continuing to highlight health disparities within underrepresented groups within our community.

In 2010, the City of Des Moines received an 18-month Communities Putting Prevention to Work (CPPW) grant from the U.S. Centers for Disease Control and Prevention (CDC) and Public Health Seattle King County (PHSKC) to develop a new Healthy Eating and Active Living (HEAL) Initiative. The City partnered with the cities of Burien, SeaTac and Normandy Park, and the Highline School District, to form the Healthy Highline Communities Coalition (now Highline Community Coalition or HCC). The HCC coordinates healthy resources available in our communities to help our citizens take the necessary steps to become healthier by consuming more nutritious foods and engaging in more physical activity.

Commented [LT2]: Confirm status of program

In 2013, the City of Des Moines received a follow-on Community Transformation Grant (CTG) from the CDC in partnership with Seattle Children's Hospital and PHSKC to develop and implement standards to improve physical activity in City-run programs. The City collaborated with Highline School District to develop new Physical Activity Standards; a NEW Des Moines K-FIT program for the City's Club KHAOS (Kids Having an Outrageous School Year) and Camp KHAOS (Kids Having an Outrageous Summer) programs. These programs are aligned with Highline School District's Enhanced Physical Education Program and with Washington State health and National fitness standards for physical activity curricula.

Commented [NS3]: Discuss improvements, status and accomplishments – example: Midway Community Garden?

Table 1 shows the household income, rates of disability, and mortality rates for census tracts that are partially or entirely within the City of Des Moines.⁷

Table 1: City of Des Moines Median Household Income, Disability Population, and Mortality Rate

| Census Tract | Median Household Income (\$) | Disabled Population (%) | Mortality Rate (per 100,000) |
|--------------|------------------------------|-------------------------|------------------------------|
| 287 | 98,301 | 8.9 | 714.19 |
| 288.01 | 66,822 | 14.8 | 1196.61 |
| 289.01 | 73,551 | 10.2 | 687.46 |
| 289.02 | 54,401 | 6.8 | 909.22 |
| 290.01 | 76,930 | 18.5 | 679.68 |
| 290.03 | 50,942 | 15.2 | 1031.18 |
| 300.03 | 71,973 | 10.3 | 850.29 |
| 301 | 88,576 | 12.9 | 756.82 |

⁷ Washington Recreation and Conservation Office. "Statewide Comprehensive Outdoor Recreation Plan (SCORP) Grant Application Tool." Washington RCO. 2022. <https://wa-rc0.maps.arcgis.com/apps/insant/minimalist/index.html?appid=bce5b3d8c691477a94801c271b97a6fa>

Projects within two census tracts in the City of Des Moines (Tracts 288.01 and 290.03) may be eligible for additional grant funding options because their median household incomes are below the state average of \$73,775, their disabled population percentage is above the state average of 12.7%, and their mortality rate is above the state average of 675.48 per 100,000 persons.

The City of Des Moines may be eligible to apply for Community Development Block Grants (CDBG) through its participation in the King County Consortium. Administered by the U.S. Department of Housing and Urban Development (HUD), CDBGs programs allocate funding to states, cities, and counties so that these entities can invest in urban community development and foster economic opportunity for low- and moderate-income persons in local communities.⁸ Funds are administered “based on the percentage of low-and-moderate-income populations” within two sub-regions of King County and whether they further the goals envisioned by both the federal government and Consortium.⁹ Thus, because of its membership within the King County Consortium, Des Moines could apply for a few CDBG opportunities in the near and long term. [A list of available funding opportunities can be viewed on the King County Consortium’s website here.](#)

Another funding opportunity available to the City of Des Moines is the Community Forestry Assistance Grant. Overseen by the Washington State Department of Natural Resources (DNR), the Community Forestry Assistance Grant makes \$7 million in funding available to address adverse environmental conditions impacting Washington on a local and regional level.¹⁰ To qualify for this grant, communities identified in the application must be within the geographic boundary of areas graded ‘disadvantaged’ by the Climate and Environmental Justice Screening Tool.¹¹ Within the city of Des Moines, Census Tracts 289.02 and 290.03 are listed as disadvantaged; and so projects within these census tracts would be eligible for the grant opportunity.

The DNR also created a UCF Project Prioritization Tool to assist applicants with locating projects for this grant opportunity.¹² The tool shows eligibility for state funding if a community census tract is designated as a highly impacted community. Highly impacted communities are those census tracts that receive an environmental health disparity score of 8 or higher.¹³ This project prioritization tool also shows status for federal funding based on whether a community census tract is designated a disadvantaged community census tract. Census tracts 289.92 and 290.03 are identified as highly impacted communities with environmental health disparity scores of 10 and 9, respectively. There are two parks located within census tract 289.02 – Midway Park and Kiddie/City Park where projects could be eligible for this funding opportunity and in census tract 290.03, Parkside Park could be eligible for grant funding, too.

⁸ U.S. Department of Housing and Urban Development. “Community Development Block Grant Program.” [hud.gov](https://www.hud.gov/program_offices/comm_planning/cdbg). US Dept of Housing and Urban Development. 22 December 2022. https://www.hud.gov/program_offices/comm_planning/cdbg

⁹ King County. “Consolidated Housing and Community Development Plan 2020-2024.” [kingcounty.gov](https://kingcounty.gov/~media/depts/community-human-services/housing-homelessness-community-development/2020-24-conplan/kc-consort-consolidatedplan2020-2024-final.ashx?la=en). King County Consortium. <https://kingcounty.gov/~media/depts/community-human-services/housing-homelessness-community-development/2020-24-conplan/kc-consort-consolidatedplan2020-2024-final.ashx?la=en>. Pgs. 2-3:104.

¹⁰ Washington State Department of Natural Resources. “2024 Community Forestry Assistance Grant: Request for Application.” [Dnr.wa.gov](https://www.dnr.wa.gov/urbanforestry). 2023. <https://www.dnr.wa.gov/urbanforestry> & https://www.dnr.wa.gov/publications/rp_urban_rfa_community_forestry_assistant_grant.pdf

¹¹ Council on Environmental Quality. “Climate and Economic Justice Screening Tool.” [Screeningtool.geoplatform.gov](https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5). U.S. White House. 22 November 2022. <https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5>

¹² Washington State Department of Natural Resources. “UCF Prioritization Tool.” WA DNR. N.d. https://wa-dnr-fr-data-team.shinyapps.io/DNR_UCF_Prioritization_Tool/ and https://www.dnr.wa.gov/sites/default/files/publications/rp_ucf_prioritization_slides_0923.pdf.

¹³ It is mandated by state law that 50% of grant money and services must be given to highly impacted communities. RCW 76.15.100 (6).

In addition, the Physical Activities Task Force was tasked with investigating how shared use agreements between parks and recreation agencies and other public and private partners could improve rates of physical activity for youth. Shared use agreements are agreements between schools, agencies, and other organizations that allow the community to use access to its facilities.¹⁴

DES MOINES HEALTHY COMMUNITY GAPS

Poor nutrition and lack of physical activity are primary risk factors for obesity and chronic diseases like diabetes, heart disease and certain cancers. While people's health is influenced by personal decisions, it is also shaped by how our community is designed and built, such as land use, the transportation systems, and the location of parks, recreation facilities, public buildings, and other services.

In 2022, the Washington State Department of Health published the Environmental Health Disparities Map to enable communities to map the various environmental and health burdens impacting census tracts across the state.¹⁵ It provides an overall environmental health disparity score by census tract, along with individual metrics that serve as indicators of overall environmental health. Based on the data collected for each indicator, census tracts are sorted and then ranked into ten percentile groups. This enables a census tract to view how it compares for a certain environmental health indicator and for environmental health overall against census tracts from across the state.¹⁶

There are a total of eight census tracts that are entirely or partially within the City of Des Moines' municipal boundaries. All eight census tracts in Des Moines are within the top third of census tracts statewide concerning overall environmental healthy disparity, three tracts are within the top fifth of tracts statewide for overall environmental health disparity, and two tracts within Des Moines fall within the highest overall environmental health disparity in Washington. This has severe implications for the quality of life and overall well-being of residents within Des Moines.

National research has shown that in communities where healthy-nutrient-dense food options like fresh fruits and vegetables are easily accessible available, residents have better diets and lower rates of obesity and diet-related chronic disease. Similarly, people tend to be more active when they can easily access walking and biking.

Assessment data show that Des Moines has an "unbalanced food environment" – that is, there are far more opportunities to buy processed or unhealthy junk foods and fast food than "healthy food."- From a public health perspective, this means that Des Moines residents have a higher exposure to unhealthy foods than to nutritious foods.¹⁷ In addition, there are low income areas that are not within reasonable walking distance (i.e., > one-half mile) of a grocery store or market that provides fresh food.- This is supported by data from the

¹⁴ Washington State Recreation and Conservation Office. "Physical Activities Task Force Report." Washington State Recreation and Conservation Office. 2022. <https://rco.wa.gov/wp-content/uploads/2022/02/PhysicalActivityTaskForceReport.pdf>, pg. 1.

¹⁵ Washington State Department of Health. "Washington Environmental Health Disparities Map." WA St. Department of Health. 2019. <https://doh.wa.gov/data-and-statistical-reports/washington-tracking-network-wtn/washington-environmental-health-disparities-map>

¹⁶ Washington State Department of Health. "Washington Environmental Health Disparities Map One Pager." WA St. Department of Health. 2022. https://doh.wa.gov/sites/default/files/2022-09/334-426%20EHD%20Map%20one-pager_2022-v2.pdf.

¹⁷ Martin, Kara E., et al., *The Food Landscape in Des Moines, Washington*. September 2011.

[Washington State Department of Health \(DOH\) Environmental Health Disparities Map](#) concerning access to healthy food in Des Moines. Six census tracts are ranked within the top half of tracts statewide that have limited access to healthy food; five tracts are within the top third, according to data drawn from the CDC's Modified Retail Environmental Index. This illustrates two key points. Firstly, that residents within the same city can have vastly different levels of access to healthy foods. This can exacerbate existing healthy disparities within Des Moines. ~~In addition, it~~ This also demonstrates that most of Des Moines' residents have limited access to healthy food. This can also create difficulties for planners and city officials in implementing a citywide strategy to address the issue; not all areas are created equal, and some areas may need a larger scale intervention than others.

Poor access to nutritious foods can have detrimental effects on overall weight gain and the overall mortality rate in an area. The Washington Recreation and Conservation Office (RCO)¹⁸ maintains a data tool on population demographics and health indicators to help cities and communities prepare grant applications to the agency. Two important metrics shown on this tool are the [Body Mass Index \(BMI\)](#) of youth ages 16-19 and mortality rate by census tract. These health indicators can capture a snapshot of overall community health. It is also useful to compare these metrics against the statewide averages to investigate whether a community's health is better or worse off than others in Washington. The average BMI for people ages 16-19 is 22.94 and the average statewide mortality rate is 675.48 per 100,000 people.

Five out of the eight census tracts in Des Moines WA have a BMI for ages 16-19 above the statewide average of 22.94, while three census tracts are below the statewide average for BMI of residents ages 16-19. All eight census tracts in Des Moines also have a mortality rate above the statewide average, which is 675.48 people per 100,000 people.

Table 2: City of Des Moines Census Tract BMI and Mortality Rate

| Census Tract | BMI Ages 16-19 | Mortality Rate (per 100,000) |
|--------------|----------------|------------------------------|
| 287 | 23.02 | 714.19 |
| 288.01 | 23.00 | 1196.61 |
| 289.01 | 23.00 | 687.46 |
| 289.02 | 24.23 | 909.22 |
| 290.01 | 22.84 | 679.68 |
| 290.03 | 23.69 | 1031.18 |
| 300.03 | 22.76 | 850.29 |
| 301 | 22.58 | 756.82 |

Source: Washington Recreation and Conservation Office. "Statewide Comprehensive Outdoor Recreation Plan (SCORP) Grant Application Tool." *Washington RCO*. 2022. <https://wa-rco.maps.arcgis.com/apps/instant/minimalist/index.html?appid=bce5b3d8c691477a94801c271b97a6fa>

According to the CDC, the leading cause of death and disability for Americans in 2022 were heart disease and cancer.¹⁹ Many cancers and cardiovascular diseases can stem from lifestyle choices, such as poor nutrition and

¹⁸ Washington Recreation and Conservation Office. "Statewide Comprehensive Outdoor Recreation Plan (SCORP) Grant Application Tool." *Washington RCO*. 2022. <https://wa-rco.maps.arcgis.com/apps/instant/minimalist/index.html?appid=bce5b3d8c691477a94801c271b97a6fa>

¹⁹ Centers for Disease Control and Prevention. "Chronic Diseases in America." *Centers for Disease Control and Prevention*. US Dept of Health and Human Services. 13 December 2022. <https://www.cdc.gov/chronicdisease/resources/infographic/chronic-diseases.htm>

lack of physical activity. The DOH's Environmental Health Disparities Map shows that the City of Des Moines fares poorly regarding these health outcomes in comparison to Washington State. Seven out of eight census tracts in Des Moines are within the top third of all tracts regarding total cancer deaths; two tracts are within the group of communities with the highest total cancer death toll statewide. Similarly, all eight census tracts in Des Moines are within the top half of all tracts within the state for deaths from cardiovascular disease per 100,000. Relatedly, environmental risk factors can lead to premature death. Premature mortality is measured as the "number of years of potential life lost relative to age 65 and calculates a rate per 100,000" (EHD Map). Only two census tracts did not rank in the top half of the state for premature deaths. In addition, census tracts 289.01, 288.01, and 289.02 ranked 8th, 9th, and 10th respectively, indicating that some areas are experiencing drastically higher rates of premature death than other areas within the city.

This data shows how health related outcomes are not just the result of personal choice but can also be impacted by how cities are built, what industries are located within cities, and what modes of transportation are readily available. In many cities, the quickest way to get to one's destination is by driving. However, driving cars can have a host of negative health effects. In a study published by the National Library of Medicine, authors found that longer drive times are associated with higher odds for "insufficient physical activity, short sleep, obesity, and worse physical and mental health."²⁰ Compared to the entire state, the rates of driving alone for census tracts within the city of Des Moines rank in the middle. However, in the lowest ranked census tract, over half of commuters drive alone to work; in most census tracts in Des Moines, between two thirds and three quarters of commuters drive alone. This highlights the importance of supporting investment in active modes of transportation. Active transportation, which can include cycling and walking, can have several key health benefits. By building in exercise to one's daily commute, active transportation can reduce obesity and lower risks for chronic diseases such as cardiovascular disease and diabetes.²¹ (<https://www.transportation.gov/mission/health/active-transportation>). Safe Routes to School (SRTS) is an example of a nationwide effort to encourage students to use active mode of transportation to get to school through education, incentives, and improvements to the built environment²².

A current conditions assessment for Safe Routes to School near Des Moines' elementary schools (Midway, Des Moines, North Hill, Woodmont, and Parkside) was performed in 2011 showing shows that some improvements along the roadside, such as sidewalks or even widened shoulders are needed to make it easier and more comfortable for children and their families to safely walk and bike to school.²³ [WSDOT included the North Hill Elementary Walkway Improvements project within their SRTS Prioritized Project List for 2023-2025.](#)

[Health Impacts of SeaTac International Airport](#)

[Seattle-Tacoma International Airport is the major aviation hub connecting the Puget Sound region to cities across the globe. Fueled largely by rapid population growth in the Puget Sound region, passenger traffic at](#)

²⁰ Ding et. al. *Driving: A Road to Unhealthy Lifestyles and Poor Health Outcomes*. National Library of Medicine, 9 June 2014.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4049576/>

²¹ US Department of Transportation. "Active Transportation" *transportation.gov*. 24 August 2015. <https://www.transportation.gov/mission/health/active-transportation>.

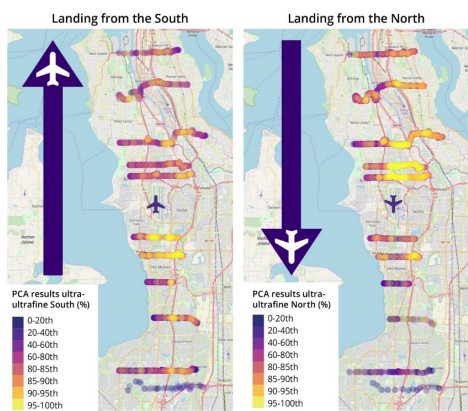
²² US Department of Transportation. "Safe Routes to School Programs" *transportation.gov*. 24 August 2015.

<https://www.transportation.gov/mission/health/Safe-Routes-to-School-Programs>

²³ SvR Design Company and Alta Planning and Design, *Safe Routes to School Project Lists/Communities Putting Prevention to Work* August 2011.

SeaTac has been increasing in recent decades. This has strained the airport's ability to handle its current capacity of flights and passengers and rate of growth.²⁴ To ensure that the airport has capacity to meet the region's transportation and economic needs into the future, the Puget Sound Regional Council (PSRC) has published multiple long-range planning documents to forecast how growth at the airport is expected to impact the region and guide that growth through policy. According to Regional Transportation Plan, [Vision VISION 2050](#), and a Regional Aviation Baseline study conducted by the PSRC in 2018, it is imperative for the Port of Seattle to find ways to address capacity needs and accommodate growing demand for air travel at SeaTac in the future.²⁵

A major consequence of the growth at SeaTac airport are the negative health impacts on Des Moines' residents. Residents in Des Moines and surrounding communities face disproportionate impacts from operations at the airport, including air and noise pollution.²⁶ Like cars, trucks, and boats, airplanes also contribute to air pollution and can worsen air quality. What is unique is that the pollution emitted from aircraft is often even smaller than pollutants emitted from roadways. Researchers at the University of Washington found a "distinct type of ultrafine particle pollution" often between "0.01 and 0.02 microns in diameter," at higher levels immediately surrounding SeaTac Airport.²⁷ As seen in the diagram below, the City of Des Moines is located underneath the flight path of SeaTac airport when planes take off or land from the south.



The health impacts of pollutants from various transportation sources have been well documented in²⁸ academic literature. Whereas the body has a greater ability to filter out larger particles, smaller pollution

²⁴ Pina, Matt and Matthias, Michael. "Vision 2050 Scoping" Memo. *City of Des Moines, WA*. 19 March 2018.

²⁵ Pina, Matt "Regional Transportation Plan Comments on the Regional Transportation Plan" Memo. *City of Des Moines, WA*. 30 January 2018.

²⁶ Pina, Matt and Matthias, Michael. "Regional Aviation Baseline Study" Memo. *City of Des Moines, WA*. 7 October 2020.

²⁷ Fisher, Brooke. "Clearing the Air." *Ce.washington.edu*. UW Civil and Environmental Engineering. 15 June 2021.

<https://www.ce.washington.edu/news/article/2021-06-15/clearing-air>.

²⁸ U.S. Department of Transportation. "Transportation Noise Map." *Maps.dot.gov*. US DOT. 2020.

<https://maps.dot.gov/BTS/NationalTransportationNoiseMap/>

particles can filter into the body with greater ease, and cause health issues for vulnerable populations include pregnant women and youth.²⁹ Also concerning is that ultrafine particles, such as those emitted by aircraft, are not monitored or regulated by the EPA.³⁰ Thus, the impacts of air pollution as outlined in the study will likely worsen as passenger traffic increases at the airport.

Another impact stemming from Des Moines' proximity to SeaTac is noise pollution. As SeaTac's capacity has increased so have the frequency of flights departing and landing from the airport. According to the U.S. Department of Transportation's Noise Mapping Tool, much of the city of Des Moines experiences noise pollution in excess of 55 to 65 decibels as a result of its proximity to SeaTac airport. Because Des Moines is located underneath the flight path leading to and from SeaTac airport, planes are usually flying relatively lower over the community, amplifying the impacts of noise. Excessive noise can have physical and mental health effects, impact sleep, contribute to stress and even lead to cognitive impairment in children.³¹

BRIDGING THE GAPS THROUGH POLICY, SYSTEMS AND ENVIRONMENT CHANGES

The City of Des Moines' policies relating to land use, food access, and the transportation system have a strong influence on people's lifestyles and in promoting a healthy community. Goals, policies and strategies within the Healthy Des Moines Element as well as those within Chapter 2 – Land Use Element, Chapter 3 – Transportation Element, and Chapter 6: Parks, Recreation, and Open Space Element provide a framework and identify the actions ~~for-needed-making-the-necessary-changes~~ to build a healthy, vibrant Des Moines that fosters an environment for healthy eating and active living within our community. Through the Healthy Des Moines Initiative, the City of Des Moines created the *Outcomes and Partners Report*, *Nutritional Standards Implementation Guide*, *Physical Activity Standards Implementation Guide*, and the *K-FIT Program* as tools to ensure success and sustainability for healthy living in our community.

GOALS

Goal HD 1 ~~Participate in the Healthy Highline Communities Coalition to~~ Coordinate with surrounding communities to improve access to physical activity and healthy foods, ~~and~~ Facilitate the long-term implementation of the Healthy Des Moines Initiative.

Goal HD 2 Develop public, private and non-profit partnerships to support the goals of and sustain the Healthy Des Moines Initiative.

Goal HD-3 ~~Support the efforts of the Port of Seattle to study the impacts of noise and air pollution from SeaTac Airport on surrounding communities.~~

Commented [LT4]: Update to reference Chapter 12 – Healthy Des Moines Element

²⁹ Fisher, Brooke. "Clearing the Air." *Ce.washington.edu*. UW Civil and Environmental Engineering. 15 June 2021.

<https://www.ce.washington.edu/news/article/2021-06-15/clearing-air>.

³⁰ Fisher, Brooke. "Clearing the Air." *Ce.washington.edu*. UW Civil and Environmental Engineering. 15 June 2021.

<https://www.ce.washington.edu/news/article/2021-06-15/clearing-air>.

³¹ European Environment Agency. "Health impacts of exposure to noise from transport." *Eee.europa.edu*. EEA. N.d.

<https://www.eea.europa.eu/en/analysis/indicators/health-impacts-of-exposure>

[Goal HD-4](#) Support implementation of the recommendations from the [State RCO Physical Activity Task Force Report](#).

[Goal HD 5](#) Identify and facilitate opportunities to support wellness initiatives for the diverse Des Moines community.

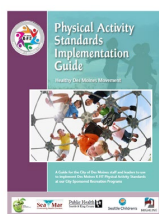
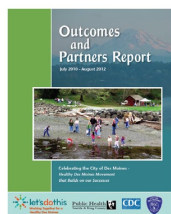
Commented [PM5]: Placeholder goal language, we should include a goal that specifically points to the City's commitment to promote wellness within our underrepresented groups/ identify and work to alleviate health disparities in our underrepresented groups

POLICIES AND IMPLEMENTATION STRATEGIES

HD 1.1 Support policy, systems, and environmental changes that result in increased access to healthy foods and beverages and opportunities for physical activity, with an emphasis on school-age children.

HD 1.1.1 Adopt a **Healthy Food Resolution** and create a long-term action plan.

Commented [NS6]: Was this done?



HD 1.1.2 Continue to support the Des Moines Food Bank, Farmers Market and other organizations that help provide food assistance to low-income residents so that all families, seniors, schools, and community-based organizations are able to access, purchase, and increase intake of fresh fruits, vegetables, and other non-processed food.

HD 1.2 Provide healthy food and beverages in City-sponsored meetings and programs and at City facilities to promote balanced food choices.

HD 1.2.1 ~~Continue to implement~~ **Implement** nutritional standards and healthy food procurement policies in City owned and operated facilities and across departments.

HD 1.3 Sustain the Des Moines K-FIT program that teaches fitness, nutrition, and health to youth in City-sponsored early childhood and school-age clubs and camps.

HD 1.3.1 Continue to implement Des Moines K-FIT Physical Activity Standards at City-sponsored recreation programs.

HD 1.3.2 Provide ongoing training, support and resources for K-FIT Activity Leaders so they can competently facilitate youth health and fitness education and activities.

HD 2.1 Work with public, private and non-profit partnerships such as the Public Health Seattle & King County, School Districts, Seattle Children’s Hospital, HealthPoint and Sea Mar Community Health Center to advocate the goals and outcomes Healthy Des Moines Initiative.

HD 2.1.1 Collaborate with schools and community partners to identify and implement best practices to achieve a reduction in childhood obesity.

HD 2.1.2 Continue to work with the Federal Way and Highline School Districts to align programs and share spaces and resources to support youth health and learning.

HD 3.1 Collaborate with educational institutions to conduct a study on the impacts of noise and ultrafine air pollution on the health of City of Des Moines residents.

Commented [LT7]: Update per UW study

HD 3.1.1 Advocate on behalf of the community to require SeaTac Airport to implement stricter noise reduction policies on aircraft flying through the airport.

HD 3.1.2 Support the efforts of the Port of Seattle to find cleaner alternatives to traditional jet fuels that emit fewer pollutants.

HD 4.2 Advocate for a statewide study to investigate the decline and existing gaps of youth physical activity (Recommendation 6 from the Physical Activity Task Force Report).

HD 4.2.1 Utilize the Athletic Fields and Facilities Inventory tool to inform park and recreation needs within the City of Des Moines.

Commented [PM8]: Should this be in the Parks Element?

HD 5.1 Add implementation strategies to address health/wellness disparities in underrepresented groups

Commented [PM9]: Again, placeholder policy/strategy to go with HD 5 above

MEMO

To: City Council Economic Development Committee (EDC)

From: Laura Techico, AICP – Planning & Development Services Manager
Alicia Jacobs, Land Use Planner I

CC: Tim George, Interim City Manager
Adrienne Johnson-Newman, Assistant City Manager
Planning & Development Services Staff

Date: July 25, 2024

Re: Middle Housing Briefing

Background

The City of Des Moines is working on implementing State House Bill E2SHB 1110 related to Middle Housing. The purpose of HB 1110 is to create more homes for Washington by increasing middle housing in areas traditionally dedicated to single-family detached housing

Middle housing is defined as buildings that are compatible in scale, form, and character with single-family houses and contain two or more dwelling units. Middle housing types can include duplexes, townhouses, cottage housing and others. Depending on the proximity to transit, between two and six housing units per lot would be allowed, provided development standards such as yard setbacks and lot coverage are met.

The City is currently working on the periodic review and update to our comprehensive plan that is due by December 31, 2024. The initial work on the Middle Housing Grant project will run concurrently with the comprehensive plan update and will inform potential policy updates for the Housing Element as well as the Land Use, Transportation and Capital Facilities, Utilities and Public Services Elements of the Comprehensive Plan. The review and adoption of the development regulations to implement HB 1110 will occur between January and June 2025.

City staff are working with consultants from AHBL for this work. Contract tasks include:

1. Preparation of a Public Engagement Plan (PEP);
2. Preparation of station area influence mapping, including identification of existing land uses, impervious surface coverage, critical areas, and high-capacity transit stations. The purpose of the maps will be to establish land capacity for the construction of middle housing units and areas that will require additional infrastructure support;
3. Preparation of a memorandum that identifies the menu of choices that City decision-makers can use to evaluate options for the production of middle housing in Des Moines;
4. Preparation of draft middle housing development regulation amendments; and
5. Assistance related to the adoption of middle housing development regulations and comprehensive plan updates.

-

Discussion

Tonight's discussion will introduce the Public Engagement Plan (Attachment 1) and two of the recent project memos prepared by AHBL: the June 4, 2024 Middle Housing Policies Memo (HB 1110) (Attachment 2), and the June 11, 2024 Middle Housing Capacity Analysis – Mapping (Attachment 3).

-

Middle Housing Regulations Public Engagement Plan



Prepared for:
City of Des Moines

Prepared by:
AHBL, Inc.
1200 6th Avenue
Suite 1620
Seattle, Washington 98101 www.ahbl.com



1.0 – INTRODUCTION

This Public Engagement Plan describes how the City of Des Moines' Community Development Department, supported by contracted consultants, will conduct public outreach associated with integrating Middle Housing into the City's policies and regulatory structure. This will occur concurrent with and in addition to the City's ongoing public engagement efforts for the periodic update to its Comprehensive Plan which is presently underway.

In 2023 the Washington State legislature passed Engrossed Substitute House Bill (E2SHB) 1110 (chapter 332, Laws of 2023) related to middle housing. **Middle housing is defined as “buildings that are compatible in scale, form, and character with single-family houses and contain two or more attached, stacked, or clustered homes including duplexes, triplexes, fourplexes, fiveplexes, sixplexes, townhouses, stacked flats, courtyard apartments, and cottage housing”.** The state of Washington is facing a housing crisis for its current population and a lack of housing choices, that will continue to affect future populations as well. Due to this, the state has found it critical to its future to encourage the provision a variety of housing options that are more affordable to various income levels and allow people to live nearby where they work. The city of Des Moines is categorized as a Tier 2 city, which applies to cities with a population of at least 25,000 but fewer than 75,000 persons.

In 2024, the Washington State Legislature passed a trailer bill to HB 1110. Engrossed Substitute House Bill (ESHB) 2321 modified several requirements specified in the initial middle housing bill passed last year. Notably, HB 2321 removes the requirement of including six of nine types of middle housing types for Tier 3 cities. This will not impact Des Moines, as a Tier 2 city.

The city of Des Moines adopted a Housing Action Plan (HAP) on June 8, 2023, pursuant to the Revised Code of Washington 36.70A.600. This plan was created to identify the current housing available in town and determine the future housing needs of the community. A Housing Needs Assessment (HNA) was completed as well. The HNA supplies data and analysis on the housing needs of the city and its residents. The analysis incorporated data about population and household characteristics, income and employment, and housing costs and affordability in order to provide a clear picture of the state of housing in the city. The HNA served as a foundation for the HAP. The HAP includes policy recommendations and implementation measures and was created with a thorough public engagement process using various methods to reach residents and stakeholders such as establishing the website at www.DesMoinesHAP.com as an information resource, conducting a community survey, engaging in stakeholder interviews, and hosting several events to understand the community's vision and housing needs. The HAP provides clear actions for the City to implement to help diversify the types of housing and create more affordable options for residents with all types of incomes. The work done for the HNA and HAP will be beneficial to the City as it provides important background information for the future middle housing work, including the following strategies:

- Strategy 3. Amend the development code to support housing options
- Strategy 4. Remove regulatory barriers to support the development of a variety of housing types
- Strategy 5. Reduce development costs for affordable housing

The City has grant funding from Department of Commerce to defray the costs of this work. The City intends to engage the public, community groups, local builders, realtors, nonprofit housing advocates and religious groups in the preparation of a Middle Housing Ordinance (referred to as “Middle Housing Regulations”). The City and consultant team will identify groups that should be included in the engagement and conduct community outreach.

2.0 – PUBLIC ENGAGEMENT TECHNIQUES

The City of Des Moines will use the following methods for engaging with the public on the Middle Housing development regulations.

2.1 – WEBSITE & SOCIAL MEDIA

The City will update its website regularly as it relates to the Middle Housing development regulations. AHBL will prepare website content, media/social media publications, and digital versions of meeting materials such as posters/boards, PowerPoint presentations, handouts, surveys, project icon, and/or project logo, etc.. to be shared online for interested parties. The online and social media content that is created will support an overarching branding effort for the update to Des Moines' Middle Housing regulations. City staff will arrange to post updates on the City's social media platforms to promote the Middle Housing Regulations project steps and advertise for related events where the public can learn more about the update and how to be involved.

2.2 – STAKEHOLDER ENGAGEMENT/NOTIFICATION

Stakeholders of the City's Middle Housing Ordinance include those outlined in the Public Participation Plan prepared for the City's Comprehensive Plan Periodic Update project. Other important stakeholders include developers, property owners, groups have financial interests, and utility providers for City residents. Water utility providers include Highline Water District, Lakehaven Water District, and King County Water District 54. Sewer utility providers include Southwest Suburban Sewer District, Midway Sewer District, and Lakehaven Utility District. School districts include Highline School District and Federal Way Public schools. The City of Des Moines is also situated within South King County Fire and Rescue's District. City staff and the consultant team intend to notify stakeholders of the Middle Housing development regulations through the City's website, social media channels, posters, and flyers at various locations throughout the City, and targeted email outreach to specific organizations. Any events held as a part of this project can also be publicized on the City's website, the City's social media sites, event posters, and posts in a local newspaper and blog as needed.

AHBL and the City of Des Moines have a bank of email addresses that were collected from earlier projects (many interested people gave their email addresses to sign up for HAP or Comprehensive Plan project updates) that can be use for the update to the City's middle housing regulations.

It is essential that outreach to stakeholders is started early, to ensure that the City can reach a diverse subset of impacted groups and individuals. AHBL proposes that online stakeholder engagement begins in May 2024 and continues through September 2024. In person engagement events such as workshops will be hosted between September 2024 through January 2025.

2.3 – PUBLIC OPEN HOUSE

The project team will host an open house to ask for input from the general public on the draft Middle Housing development regulations prior to adoption and invite the public to respond to the draft. The open house will be held at the onset of the public participation process to provide engagement opportunities, solicit input, and summarize the related work previously completed such as the HAP and HNA. The consultant team will prepare materials for the open house (tentatively planned for June 2024).

2.4 – COMMUNITY WORKSHOPS AND ROUNDTABLES

The project team will host Middle Housing Ordinance information at community workshops and/or roundtables. This will provide an opportunity to engage with the public in discussions about the Middle Housing Ordinance, share project materials, and answer any questions the public may have. AHBL will create and distribute a middle housing handout to stakeholders and attendees at public engagement. This flyer will describe what middle housing is (and is not) and include photos that illustrate the different types of middle housing to help stakeholders and community members visualize what middle housing may look like in their neighborhoods. Additionally, previous work products and information from AHBL's work on the City's HAP and related HNA may be presented at public engagement meetings.

2.5 – CITY STAFF CONTACT

The primary staff contact for the City is:

Laura Techico, Planning and Development Services Manager
City of Des Moines
21639 11th Avenue South
Des Moines, WA 98198
ltechico@desmoineswa.gov

2.6 – CONSULTANT

AHBL will develop the Middle Housing Ordinance according to Commerce guidance and direction provided by City staff. ECONorthwest will be a subconsultant for the Middle Housing Regulations update project and will help AHBL in the efforts listed within this section. Under the oversight of City staff, AHBL will design and execute the public engagement plan, including facilitating a public open house. AHBL will assist with communication materials, develop presentations, and lead stakeholder meetings and the open house with the help of City staff. AHBL will also assist the City with the transmittal of the draft Middle Housing Ordinance to the Washington State Department of Commerce in January 2025 for review. Furthermore, as listed in the project scope, AHBL will develop with City staff all of the major documents comprising the middle housing deliverables.

2.7 – CITY COUNCIL

The City Council will review the proposed Middle Housing development regulations and make the final decision on the adoption. Consequently, AHBL proposes hosting two briefing sessions with City Council about the update to the Des Moines Municipal Code regulations: one in Spring/ Summer 2024 and the other in April/May 2025. As set in state law, the City Council will review the draft Middle Housing Ordinance, solicit public input, make changes as desired, and locally adopt the final ordinance. The City Council is the legislative body with the final local decision-making authority for the local adoption of the proposed Middle Housing code amendments. Adoption of the Middle Housing regulations must take place before June 30, 2025.

3.0 – PUBLIC ENGAGEMENT TIMELINE (APPROXIMATE)

The following timeline is approximate and subject to change.

| May 2024 | Summer 2024 | September 2024 | January 2025 | April/ May 2025 | May /June 2025 |
|---|--|--|---|---|-----------------------|
| City Council Economic Development Briefing/Study Session #1 | | | | City Council Economic Development Briefing/Study Session #2 | CC Hearing (adoption) |
| | Open House to review Draft Regulations | | | | |
| | | In-Person workshops and/or roundtables | | | |
| Ongoing Online Public Engagement | | | | | |
| | | | AHBL will assist the city in transmitting draft Middle Housing regulations to the Department of Commerce for State agency review (RCW 36.70A.106) | | |



PROJECT MEMO

TO: Laura Techico
FROM: Nicole Stickney, AICP
 Seattle - (206) 267-2425
DATE: June 4, 2024
PROJECT NO.: 2230834.30
PROJECT NAME: Des Moines Middle Housing
SUBJECT: Middle Housing Policies Memo (HB 1110)

PART 1: BACKGROUND ON MIDDLE HOUSING LEGISLATION AND NEEDS

In 2023 the Washington State Legislature passed [E2SHB 1110 \("HB 1110"\)](#) which amended the Growth Management Act (GMA) and requires cities make it easier to build middle housing. Middle housing is an umbrella term that refers to buildings or groupings of buildings that are similar in size and style to single-family homes but include multiple units on one lot.

HB 1110 defines "Middle housing" as:

"buildings that are compatible in scale, form, and character with single-family houses and contain two or more attached, stacked, or clustered homes including duplexes, triplexes, fourplexes, fiveplexes, sixplexes, townhouses, stacked flats, courtyard apartments, and cottage housing."

Cities subject to HB 1110 are required to implement the requirements no later than 6 months following the next periodic Comprehensive Plan update due date. For the City of Des Moines, compliance with HB 1110 will be required by June 30, 2025.

Under HB 1110, Des Moines is considered a "Tier 2" city, which are cities with a population between 25,000 and 75,000 residents (HB 1110, Sec. 3(1)(c)). As a Tier 2 city, the City must allow for a minimum of two middle housing units per lot on all lots that are zoned predominantly for residential use. In the City of Des Moines, this is likely to apply to all the RS zones (RS-15000, RS-9600, RS-8400, RS-7200, RS-4000), the Residential: Suburban Estate Zone (R-SE zone), the RA-3600 zone, the RM zones (RM-2400, RM-1800, RM-900, RM-900A, RM-900B) the Residential: Suburban Residential Zone (R-SR zone) and the Pacific Ridge Residential zone (PR-R zone).

To accommodate the density of middle housing and account for the differences between it and single-family homes, the City may establish objective design and development standards that differ from those for single-family homes. However, these standards cannot be more restrictive than those for single-family homes. Alternatively, the City may employ an administrative design review process to apply these design standards.

The City of Des Moines received a grant from the Department of Commerce to help cover the costs associated with adopting regulations to plan for and accommodate middle housing.

Understanding Middle Housing

Washington State faces a significant housing crisis due to its growing population and deficit of housing stock. To combat this, the State estimates 1.1 million new homes need to be constructed over the next 20 years. According to the Department of Commerce, over half of these homes will need to be affordable to low-income households (those who earn below 50% of the area median income, or "AMI"). Another 25% of the new homes will need to be affordable to those who make between 50% to 120% AMI. Continuing to build new single-family homes would not satisfy these needs. Instead, building middle housing at higher densities can help accommodate this need by providing more affordable homes as well as providing diverse housing types that meet the needs of different family sizes and income levels.



Middle housing is a category of housing types that are designed to be compatible in scale and form with single-family houses. These types offer a variety of attached, stacked, or clustered homes and are intended to bridge the gap between single-family homes and mid-rise apartment buildings.



Source: Opticos Design, Inc

Middle housing comes in different shapes and sizes. "Small" middle housing types are equal to or similar in size to a typical single-family house footprint. They include duplexes (two units), triplexes/fourplexes (3-4 units), and cottage housing (3-10 units).



Duplex Stacked
2 units



Duplex Side-by-Side
2 units



Cottage Housing
3-10 units



Triplex/Fourplex
3-4 units

Source: Washington State Department of Commerce, Opticos Design, Inc.

"Medium" middle housing types are slightly larger than "small" types but still similar to a typical house in building footprint size, and they have heights up to 2.5 stories. These include medium multiplexes (5-10 units), courtyard apartments (6-16 units), and townhouses (multi-story units with shared walls).



Multiplex Medium
5-10 units



Courtyard Medium
6-16 units



Townhouse Medium
1 unit

Source: Washington State Department of Commerce, Opticos Design, Inc.

"Large" middle housing types are taller (3-4 stories) and slightly wider and deeper than "small" and "medium" types, but they can still fit on the typical lot sizes found in residential neighborhoods. These include large multiplexes (7-18 units), large courtyard apartments (20-28 units), and large townhouse developments. However, "large" middle housing types require more care to ensure that they are articulated and fit with the scale of surrounding smaller-scale residential buildings.



Multiplex Large
7-18 units



Courtyard Large
20-28 units



Townhouse Large
1 unit

Source: Washington State Department of Commerce

What About Accessory Dwelling Units?

In addition to passing HB 1110 last year, the Washington State Legislature also passed HB 1337 which focuses on ADUs. HB 1337 requires cities and counties within urban growth areas to allow at least two ADUs on all lots zoned for single-family homes.

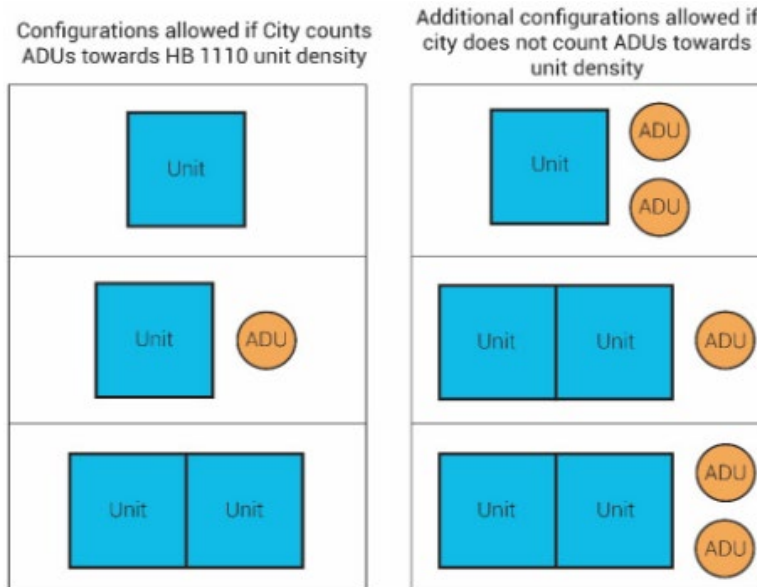
To meet the requirements of both laws, the City must allow up to two ADUs on all lots zoned for single-family homes. Additionally, the City must allow middle housing to achieve the required unit count. ADUs may help to achieve the required unit count, but they alone cannot be used to meet the requirements of HB 1110 (meaning the City must allow middle housing but can satisfy the unit count with ADUs).

Because the City is only required to allow two units per lot, if the City chooses to count ADUs towards the unit count, it could result in a situation where ADUs were not permitted on a lot that already includes two units of



middle housing. This could conflict with the requirements in HB 1337. **The City should consider carefully if it would like to count ADUs towards the unit count and consult with the City Attorney to make sure the City’s middle housing regulations comply with HB 1337.**

Furthermore, RCW 36.70A.681(2)(b)(ii) appears to indicate that that the requirements imposed by HB 1337 are not applicable to the portion of the City of Des Moines that lies within a mile radius of SeaTac Airport.



Configurations allowed in the Model Ordinances where the base unit density is two units on lots zoned predominantly for residential use. Source: MAKERS

Source: MAKERS

Benefits of Middle Housing

Currently, the City’s housing supply is comprised primarily of single-family homes, though this is changing. According to the OFM Postcensal Estimate of Housing Units (2023), approximately 58% of the City’s housing supply is single-family housing¹.

Middle housing (particularly if it is built with affordability in mind) can provide more options for low-income earners who face limited availability due to the market being geared towards higher-cost, detached homes. By offering a variety of housing types, Des Moines can attract and retain a diverse population, including professionals who may work in industries with comparatively lower incomes but are essential to the community, such as teachers, police officers, firefighters, and others.

¹ OFM indicates a 2023 postcensal estimate of 13,485 housing units and 7,843 of those units are one-unit housing



Meeting the City's Growth Targets

Des Moines is expected to plan for an increase of 3,800 housing units by 2044, as per the King County Countywide Planning Policies (CPPs). The CPPs assign population and housing growth targets to the City, based on population projections provided by Puget Sound Regional Council (PSRC), which are further broken down to identify housing unit needs by income level.

| | Jurisdictional Net New Permanent Housing Units Needed, 2019-2044 | | | | | | | Jurisdictional Net New Emergency Housing Needs | |
|------------|--|-----------|-----|-------------|-------------|--------------|---------------|--|-------|
| | Total | 0 to ≤30% | | >30 to ≤50% | >50 to ≤80% | >80 to ≤100% | >100 to ≤120% | | >120% |
| | | Non-PSH | PSH | | | | | | |
| Des Moines | 3,800 | 790 | 415 | 231 | 227 | 281 | 318 | 1,538 | 726 |

Further analysis is necessary (and is forthcoming from AHBL) to assess if the City of Des Moines may face challenges in providing enough affordable housing to meet the needs of individuals from different income groups. Addressing middle housing may help to meet the needs of those who make less than the income required to afford traditional single-family homes without being cost-burdened.

PART 2: COMPREHENSIVE PLAN POLICIES

In this part, we will provide an assessment of the city's existing Comprehensive Plan policies pertaining to middle housing and provide some general recommendations. Our objective is to review the Land Use, Housing, and Capital Facilities and Utilities elements of the City's draft Comprehensive Plan to explore opportunities to remove impediments and incentivize the production of middle housing units within the City of Des Moines by proposing changes which may include removing, editing, or adding goals and policies.

In the following chart we list selected policies which relate either directly or indirectly to middle housing and note the ways in which each policy may be supportive of middle housing development or a barrier to it. (Please note that we have not indicated if policies are existing, proposed new, or proposed to be amended.)

For each policy we have indicated if the policy appears to be very supportive, supportive, or neutral for middle housing (with color coding) and flagged policies which, as written, could present potential barriers.



| GOAL/ POLICY IDENTIFIER | STATEMENT | ASSESSMENT |
|-------------------------|---|---|
| LU 1.1.1 | Plan for and regulate development to enhance the quality and maintain the unique character of Des Moines' neighborhoods and business districts. | <p>Potential Barrier – Requirements to “maintain the unique character” of neighborhoods could lead to a non-objective process being used and prevent middle housing projects from being built affordably or at all. Community character provisions could potentially be leveraged as a way to block middle housing.</p> <p><i>How this policy could be improved:</i> Consider removing this policy or amending it to be more direct. For example, ensuring landscape standards that to foster quality residential developments, no matter the number of units.</p> |
| LU 1.1.2 | Establish and equitably enforce development standards that are clear and predictable, that simplify the review process and adapt to varied site conditions ² . | <p>Supportive – This policy may boost the potential for middle housing development.</p> |
| Goal LU 1.2 | Manage community growth to ensure that overall public benefits exceed public cost and that adequate public facilities and services are available or can be provided concurrently with new development. | <p>Supportive – This policy may boost the potential for middle housing development.</p> |
| LU 1.2.1 | Evaluate all capital improvement proposals for consistency with the Comprehensive Plan. | <p>Supportive – This policy may boost the potential for middle housing development.</p> |
| LU 1.2.2 | Establish standards for new development to provide on- and off-site roadways, utilities and other public facilities as necessary to serve the additional demand generated by the development. | <p>Potential Barrier – Requiring public facilities for new development can add to project cost</p> <p><i>How this policy could be improved:</i> Consider amending the policy to be flexible for low-income or middle housing if the costs of the improvements don't produce corresponding benefit or relief from the impacts of the development.</p> |

² LU 1.1.2 and (former) LU.1.1.3 are combined and streamlined in our latest draft.



| GOAL/ POLICY IDENTIFIER | STATEMENT | ASSESSMENT |
|-------------------------|---|---|
| LU 1.4.2 | Encourage and solicit the input of stakeholders, including residents; property and business owners; non-motorized transportation advocates; environmental preservation organizations; and transit, affordable housing, and public health agencies. | <p>Neutral - We don't recommend any changes to this policy as public involvement is an essential cornerstone to good planning, and Public Participation is a GMA goal.</p> <p>However, we note that time added to the planning segment of a project incurs costs that may affect the affordability of potential units.</p> |
| Goal LU 1.5 | Seek a harmonious blend of living, working, shopping, recreational and cultural land uses. | <p>Supportive – This policy may boost the potential for middle housing development.</p> <p>By minimizing distances to service, there is a reduction in transportation costs (and perhaps the cost to construct and maintain parking space), which can support the affordability of housing units.</p> |
| LU 1.5.2 | Require that new development maintain and enhance on-site open spaces, and provide on-site recreation facilities in new subdivisions and multifamily developments or pay appropriate in-lieu fees as required by the Des Moines Municipal Code (DMMC). | <p>Potential Barrier – Requiring added facilities for new development can add to project cost</p> <p><i>How this policy could be improved:</i> Consider amending the policy to be flexible for low-income or middle housing if adequate recreational / open spaces are already in place.</p> |
| LU 1.5.3 | Apply development standards and strategies that address land use transitions in order to manage impacts on residents and businesses, including but not limited to the following: site access and circulation; structure height, bulk, and scale; separation of buildings; landscaping; density; and noise buffering. | <p>Potential Barrier – “Development standards” can add to a project’s cost and slow down permitting time.</p> <p><i>How this policy could be improved:</i> Consider removing development standards that are particularly focused on height, bulk, and density to align with Middle Housing goals.</p> |
| LU 1.5.4 | Regulate the siting of incompatible uses adjacent to the Sea-Tac Airport, as defined in Federal Regulation 49 CFR Part 77 that establishes standards and notification requirements for objects affecting navigable airspace; RCW 36.70.547; the Washington State Department of Transportation’s Airports and Compatible Land Use Guidebook, M 3074.00 (January 2011); and PSRC’s Airport Compatible Land Use Program (December 2011). | <p>Barrier – Limiting development of high density housing near the SeaTac airport is an appropriate barrier.</p> <p><i>How this policy could be improved:</i> We do not recommend any change and the aspect of land use compatibility should be carefully considered.</p> |



| GOAL/ POLICY IDENTIFIER | STATEMENT | ASSESSMENT |
|-------------------------|--|--|
| Goal LU 1.7 | Balance the expansion of housing options with the preservation of existing neighborhoods. Preserve the integrity of existing single family neighborhoods. ³ | Supportive – This policy may boost the potential for middle housing development. |
| LU 1.7.1 | <p>Maintain a balance between different types of dwellings and preserve neighborhood character.</p> <p>1. Future multifamily development should be limited to areas where the pattern of existing multifamily development and zoning is predominant.</p> <p>2. <u>Residential zones should be reevaluated for opportunities to allow for missing middle housing.</u></p> <p>3. Multifamily dwellings should also be permitted in conjunction with commercial developments within the Marina District, provided that such dwellings are designed to provide a quality residential environment while enhancing the appearance and commercial function of the business district.</p> | <p>Potential Barrier – This policy could lead to zoning restrictions.</p> <p>*Consider expanding the definition of multifamily to include some missing middle housing and expand the areas where this type of housing is allowed. Consider removing or revising subsection 1.</p> |
| LU 1.8.2 | Create consistency between the uses designated in the City of Des Moines Comprehensive Plan Future Land Use Map with those designated on the City of Des Moines Zoning Map. The zoning map shall officially designate land use and density in the City. | Supportive – This policy may boost the potential for middle housing development, particularly in cases where the prevailing document allows for greater density. |
| HOU 1.1.1 | Continue to provide opportunities and incentives through the Planned Unit Development (PUD) process for a variety of housing types and site planning techniques that can achieve the maximum housing potential of the site. | Supportive – This policy may boost the potential for middle housing development. |
| HOU 1.1.2 | Promote and foster, where appropriate, innovative and non-traditional housing types such as live/work housing and attached and detached accessory dwelling units, as alternative means of accommodating residential growth and providing affordable housing options. | Supportive – This policy may boost the potential for middle housing development. |

³ Updated in our draft per state/ regional/ county requirements; the original policy did not comply with CPP H-27 in accordance with RCW 36.70A.210 (NEW requirements)



| GOAL/ POLICY IDENTIFIER | STATEMENT | ASSESSMENT |
|-------------------------|--|--|
| HOU 1.1.3 | Encourage infill development on vacant or underutilized sites. | Supportive – This policy may boost the potential for middle housing development. |
| HOU 1.2.3 | Consider mandating an affordability component in light rail station areas or other transit-oriented communities. | Supportive – This policy may boost the potential for middle housing development. |
| HOU 1.2.4 | Support programs and strategies aimed at providing housing that is affordable to all income groups, such as regional, state and federal housing programs, housing trust fund, inclusionary zoning, development incentives, fee waivers, fast-track processing or assistance to housing agencies. | Very Supportive – This policy directly supports the production of middle housing. |
| HOU 1.2.5 | Review all requirements related to construction of single family homes to identify where the cost of construction may be reduced, in an effort to make housing more affordable. | Potential Barrier – Reducing the costs of exclusively single family home could incentive the construction of those types of units <i>How this policy could be improved:</i> consider broadening the policy to include missing middle housing types, particularly those that directly reflect single family building types. |
| HOU 2.2.1 | Promote compatible residential development that is affordable to all economic segments of the Des Moines community. Ensure City codes and development regulations do not create unnecessary barriers to affordable housing. | Very Supportive – This policy directly supports the production of middle housing. |
| HOU 2.2.2 | Encourage the development of mixed-income projects and communities. | Very Supportive – This policy directly supports the production of middle housing. |
| Goal HOU 4.1 | Promote consistency with the Land Use Element’s residential policies regarding density, population, housing mix, and siting criteria. | Supportive – This policy may boost the potential for middle housing development. |
| HOU 4.1.1 | Implement the residential policies of the Land Use Element regarding dispersion of housing types, unit mix, and future population. | Supportive – This policy may boost the potential for middle housing development provided that the Land Use Element addresses middle housing. It would be important to review the Land Use map and ensure there are adequate lands designated to accommodate middle housing. |



| GOAL/ POLICY IDENTIFIER | STATEMENT | ASSESSMENT |
|-------------------------|--|---|
| HOU 4.1.3 | Consider regulations that would allow cottage housing in single family and multifamily zones when appropriate criteria can be met. | <p>Supportive – This policy may boost the potential for middle housing development.</p> <p>Consider amending the policy to provide a framework and a basis for Common Open Space requirements (development regulations) for Cottage Housing. By its very nature Cottage Housing emphasizes shared outdoor areas, and the city can codify requirements for what must be provided within the framework of HB 1110.</p> |
| HOU 4.1.4 | Allow mobile/manufactured and modular homes within Des Moines when such structures satisfy all applicable health and safety codes. | <p>Supportive – This policy may boost the potential for middle housing development.</p> |
| HOU 4.1.5 | Continue to allow accessory housing units within single-family neighborhoods in a way that protects residential character, maintains specific design standards, and complies with all applicable laws. | <p>Potential Barrier – Design standards can result in features which add to a project’s cost and slow down the permitting time.</p> <p><i>How this policy could be improved:</i> Remove specific design standards and “residential character” requirements, or be more specific on how they do/ don’t apply.</p> |
| Goal HOU 4.2 | Initiate and encourage equitable and inclusive community involvement that fosters civic pride and positive neighborhood image. | <p>Supportive – This policy may boost the potential for middle housing development.</p> |
| HOU 4.2.1 | Establish regulations and procedures that provide a high degree of certainty and predictability to applicants and the community at-large and minimize unnecessary time delays in the review of residential permit applications, while still maintaining opportunities for public involvement and review. | <p>Supportive – This policy may boost the potential for middle housing development.</p> |
| Goal HOU 4.3 | Integrate and coordinate construction of public infrastructure with private development to minimize housing costs wherever possible or practicable. | <p>Supportive – This policy may boost the potential for middle housing development.</p> |
| HOU 4.3.2 | Continue to require on-site recreation areas within new single family subdivisions and multifamily developments. | <p>Potential Barrier – This requirement could lead to increased project costs, potentially preventing affordable housing from being built or implemented as a segment of a larger development.</p> |



| GOAL/ POLICY IDENTIFIER | STATEMENT | ASSESSMENT |
|-------------------------|--|--|
| | | <i>How this policy could be improved:</i> Consider amending this to remove the requirement or provide a high threshold for cost sharing. |
| Goal HOU 4.4 | Provide design guidelines⁴ that encourage flexibility in housing types while ensuring compatibility of housing with the surrounding neighborhood. | Potential Barrier – Design guidelines can result in policies that could delay or hinder the construction of middle housing. <i>How this policy could be improved:</i> Remove “design guidelines” or be specific on how they do/ don’t apply. |
| HOU 4.4.1 | Encourage site and building designs that promote the safety and security of residents, and visitors and create effective transitions between substantially different land uses and densities | Potential Barrier – Design guidelines can result in policies that could delay or hinder the construction of middle housing. <i>How this policy could be improved:</i> Remove “design guidelines” or be specific on how they do/ don’t apply. |
| HOU 4.4.2 | Use design guidelines to ensure that new and infill developments have aesthetic appeal and minimize impacts on surrounding development. | Potential Barrier – Design guidelines can result in policies that could delay or hinder the construction of middle housing. <i>How this policy could be improved:</i> Remove “design guidelines” or be specific on how they do/ don’t apply. |
| HOU 4.4.3 | Encourage accessible design that provides seniors the opportunity to remain in their own neighborhood as their housing needs change. | Potential Barrier – Design guidelines can result in policies that could delay or hinder the construction of middle housing. <i>How this policy could be improved:</i> Although accessibility is important, accessible design could hamper the construction of total units ⁵ . According to State department of Commerce, older demographics want smaller units and less yard maintenance, which would be a bi-product of middle housing construction. |

⁴ Note: HB 1110 has narrow provisions for design review, and the process for reviewing compliance with middle housing design standards is limited to an administrative, objective process.

⁵ Commerce notes, “fourplexes and courtyard apartments may provide more opportunities for accessible housing than stacked flats and townhouses. However, the provision of accessible housing should not be viewed competitively... [provide] more choice of housing for people at all stages of life and at different points on the spectrum of physical mobility...”



Additional notes on Table 1:

1. When we scanned for policies to list in the above chart, we took care to look for policies that would relate to parking, lot size standards, requirements for driveways, landscaping, and so forth that could lead to potential barriers, but we found that the Comprehensive Plan (appropriately) does not go into these types of details.
2. The City's Comprehensive Plan does not set out maximum density provisions/ limitations, which could have presented a problem or barrier for Middle Housing implementation.

We have also reviewed the User Guide for Middle Housing Model Ordinances as provided by the State Department of Commerce (dated January 26, 2024) in hopes that we could find recommended policy language. Instead, the document remains focused on development regulations. Nonetheless, in carefully reviewing the "Discussion" section we generated the following ideas:



Consider adding a policy that requires design standards for middle housing to address compatibility with single-family homes, which can be done "even if there are no design standards for single-family houses in place" in order to ensure that the middle housing structures are "buildings that are compatible in scale, form, and character with single-family houses..." as stated in RCW 36.70A.030.

RCW 36.70A.635(6)(a) sets out the administrative design review process, which the city can use to apply objective design standards.



A policy to balance the "practical need for vehicular access while prohibiting designs that are dominated by multiple garages and driveways along a street, which can have significant impacts on the walkability and visual character of residential neighborhoods" could be introduced.



The International Building Code (IBC) pertains to structures with three or more units and the IRC standards are more extensive and costly than the International Residential Code (IRC). The IRC applies to buildings with one or two dwelling units and to townhouses that not more than three stories above grade and with a separate means of egress.

The City could determine that it wants to increase flexibility and could update the locally adopted version of the IRC and IBC to allow structures with up to six units to be built under the IRC. Consider adding a policy that says, "Study the potential benefits and drawbacks of modifying the locally adopted version of the IRC to allow structures with up to six units to be built under that code."



PART THREE: REVIEW THE CITY'S HOUSING ACTION PLAN

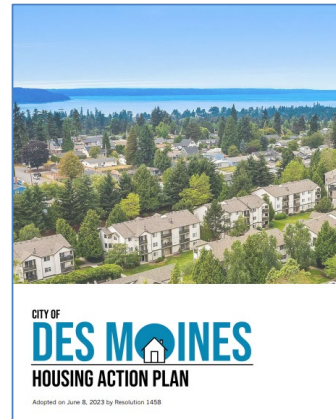
Strategy 3 of the City's Housing Action Plan (HAP) calls for the City to "Amend the development code to support housing options." and this project will accomplish that. Further, Strategy 4 says to "Remove regulatory barriers to support the development of a variety of housing types."

Building upon these strategies, along with their corresponding implementation actions and listed considerations, is crucial for advancing this work. This will not only allow us to capitalize on previous city initiatives aimed at addressing the housing "crunch" but also ensure alignment with the community engagement process previously employed.

Additionally, leveraging the Housing Action Plan (HAP) can serve as a foundational framework for streamlining these endeavors, enhancing their efficacy and impact.

NS/ac

c: Wayne Carlson, FAICP and Allison Conley - AHBL
Jason Woycke, Peyton Murphy, Alicia Jacobs – City of Des Moines



\\ahbl.com\data\Projects\2023\2230834\30_PLN\Deliverables_By_Date\20240604_DM_Middle_Housing_Policies_Memo_2230834.docx

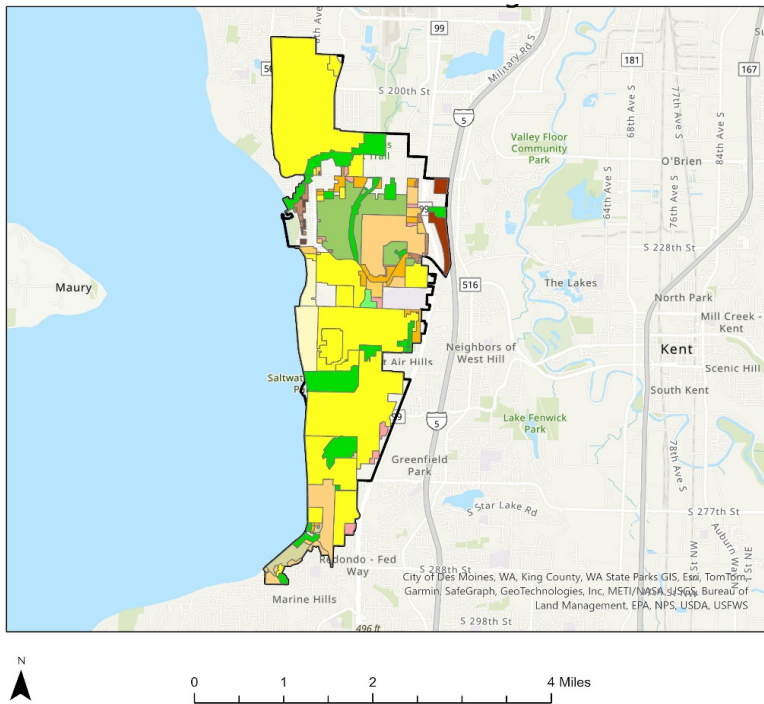


PROJECT MEMO

TO: Laura Techico
FROM: Nicole Stickney
 Tri-Cities - (509) 380-5883
DATE: June 11, 2024
PROJECT NO.: 2230834.30
PROJECT NAME: Des Moines Middle Housing Policy and Regulations Update
SUBJECT: Middle Housing Capacity Analysis - Mapping

As part of Task 2: Station Area Influence Mapping for the Middle Housing Regulations project (related to HB 1110), AHBL has prepared a series of maps to aid our group as we ascertain the likely land capacity for the construction of middle housing units, and identify areas that may require additional infrastructure support. The maps identify a variety of themes including land uses, impervious surface coverage, critical areas, as well as utilities. In addition, we have prepared a map depicting the locations of existing or planned high-capacity transit stations to show how these stations may influence the establishment of middle housing within the City.

Map 1: Residential Zoning in Des Moines



Residential Zones

- R-SE
- R-SR
- RS-15000
- RS-9600
- RS-8400
- RS-7200
- RS-4000
- RA-3600
- RM-2400
- RM-1800
- RM-900
- RM-900A
- RM-900B
- PR-R

Des Moines City Limits

There are a total of 4,340 acres of land in Des Moines. A total of 3,557 acres, or 82% of all land in Des Moines is zoned for residential uses.

The zoning map is useful in determining which areas of the City are permitted to build middle housing and which areas could potentially permit the construction of middle housing in the future.

Currently, the DMMC permits Duplexes and Townhouses in Zones RA-3600, RM-2400, and RM-1800 with limitations; duplexes are permitted outright in Zone RM-900.

The rules promulgated by HB 1110 set out that “Tier 2” cities (which includes Des Moines) must allow at least two units per lot on all lots zoned predominantly for residential use (unless higher densities and intensities apply). In Des Moines this applies to the following zones, as shown in Map 1:

- R-SE
- R-SR
- RS-15000, RS-9600, RS-8400, RS-7200 and RS-4000
- RA-3600
- RM-2400, RM-1800, RM-900, RM-900A and RM-900B
- PR-R

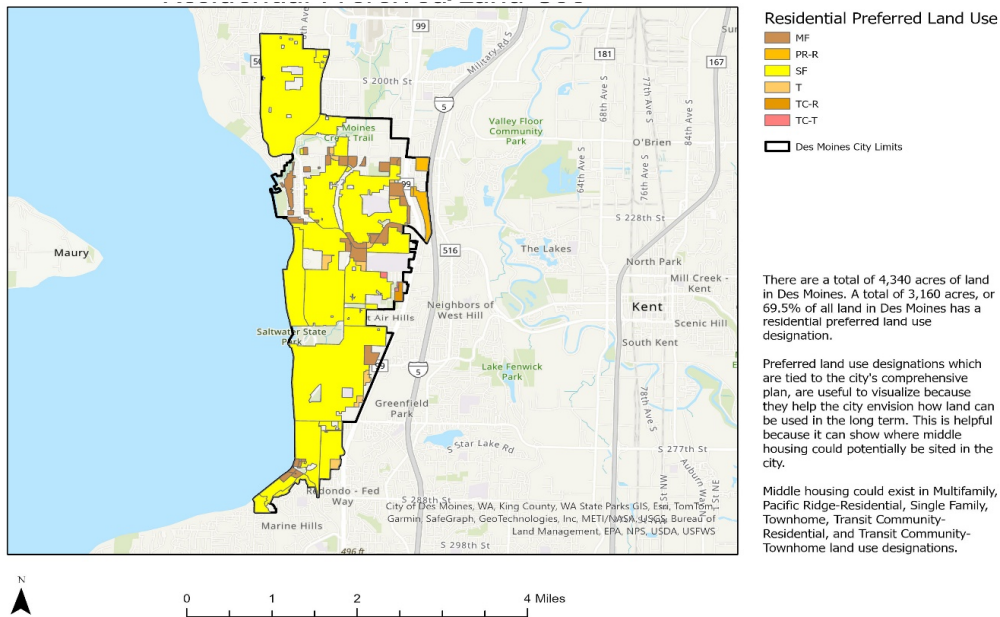


The total land area of Des Moines is approximately 4,340 acres and approximately 3,557 acres (82%) of land is zoned with one of these 14 residential zones. The City of Des Moines must allow certain types of middle housing within these zones. Certain zones already allow the construction of townhomes, such as RA-3600, while others permit the construction of duplexes (PR-R). However, most zones within the DMMC do not currently permit the construction of many types of middle housing: duplexes, triplexes, cottage housing, and courtyard housing.

The city contains many areas where it not only can, *but also must*, include amendments to its code to permit at least two units on each lot for different forms of missing middle housing. Presumably, the City should target areas zoned residential that are close to Highway 99, to Highline College, and at the Marina District/Civic Centers areas because these areas likely can additionally support greater amounts of density and are already zoned for multifamily residential uses. Furthermore, HB 1110 prescribes that the City must permit at least *four* units per lot within one-quarter mile of major transit stops. There also could be capacity in the Redondo Neighborhood, which has several multifamily zones that could support middle housing.

The Residential Suburban Estates (R-SE) zone is also included on this map. The R-SE zones requires a minimum lot size of 35,000 SF (0.8 acres). While R-SE is a residential zoning category, the zoning designation is assigned to many locations that feature many parks and open spaces.

Map 2: Residential Preferred Land Use Map



The City's comprehensive plan map classifies land throughout the city into categories of *preferred land uses*. The map is a policy document and guides how land can be used in the long term. In general, the zoning map and the Preferred Land Use map will typically correspond to one another, in terms of distinguishing between residential and non-residential, however there can be exceptions. Map 2 shows several residential preferred land uses that could potentially permit missing middle housing:

- SF: Single Family
- MF: Multifamily
- T: Townhome
- PR-R: Pacific Ridge Residential

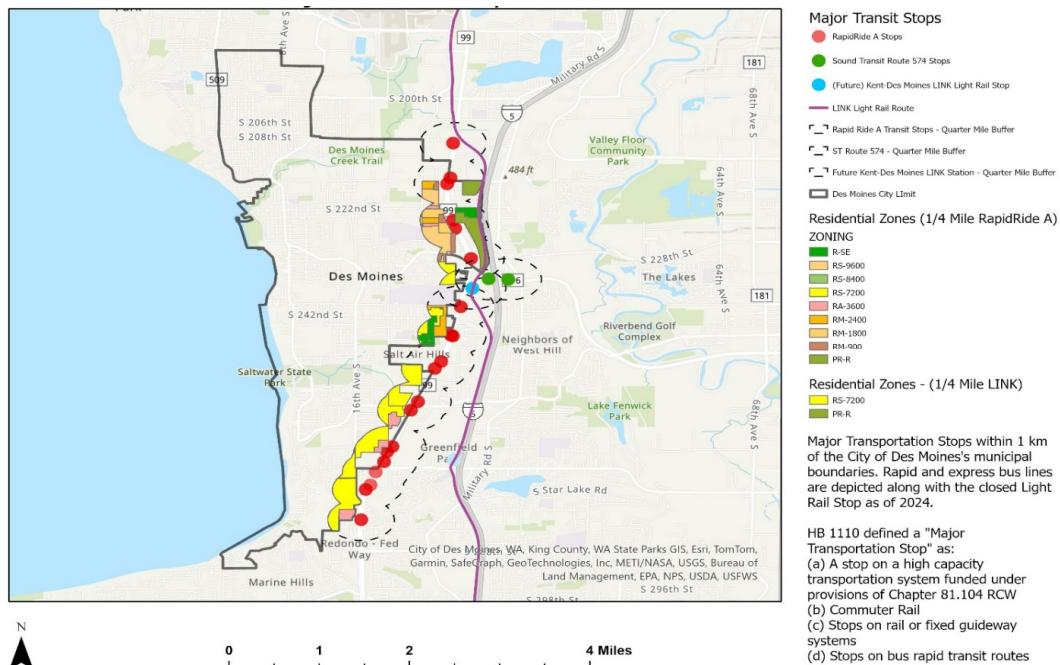


- TC-R: Transit Community Residential
- TC-T: Transit Community Townhome

Out of a total of 4,340 acres of land within the City of Des Moines, approximately 3,016 acres, (69.5%) of land in has a residential preferred land use designation. A majority (around 61%) of the land in Des Moines has been further designated for Single-Family use. There are several areas where the construction of middle housing could make sense due to the prevailing development in the areas.

Firstly, the area in the Pacific Ridge, South Des Moines, and Woodmont neighborhoods, which are close to Highway 99. Several land uses – including multifamily, Pacific Ridge-Residential, Townhome, Transit-Community-Residential, and Transit Community-Townhome, all would be close to major transit stops and could support multiple types of missing middle housing. In addition, there are Transit Community Townhome, Transit Community Residential, and Townhome land uses close to Highline College. These areas could potentially support the construction of middle housing and could open new housing opportunities for college students. Thirdly, there are townhome-designated areas near the Civic Center and the Marina District. The Marina Business District supports both commercial and residential uses. Constructing middle housing nearby could create additional density and attract additional visitors. Finally, there are multi-family areas in the Redondo Neighborhood in the southern part of the city that could potentially support middle housing, too.

Map 3: Major Transit Stops



HB-

1110 specifies that Tier 2 cities must amend their zoning regulations to allow at least four units per lot on all lots zoned predominantly for residential use that are within one-quarter mile walking distance of a major transit stop. The legislation further defines a 'major transit stop' as a stop for high-capacity transit, such as light rail or bus rapid transit.



As shown on Map 3, there are four 'major transit stops' within the City's boundaries, which are along the King County Metro RapidRide A route. Additionally, there are transit stops located outside of the City's borders that fall within the requisite quarter-mile walkshed as stipulated in House Bill-1110. In total, there are 20 transit stops along the RapidRide A Line and two transit stops along Sound Transit Express Route 574 situated within a quarter mile of Des Moines's municipal boundary. Notably, the Kent/Des Moines LINK Light Rail station (slated to open in 2026) is also within one-quarter mile of Des Moines's boundary. These transit stops are primarily along the eastern boundary of Des Moines, along and adjacent to Highway 99.

The map shows that there are both current and proposed major transit stops located within a quarter mile to several residential zones, including zones that are primarily for both single-family and multi-family residential development. These zones include:

- R-SE
- RS-9600, RS-8400 and RS-7200
- RA-3600
- RM-2400, RM-1800, and RM-900
- PR-R

Out of a total of 3,557 acres of residentially zoned land in the City of Des Moines, approximately 400 acres (11%) of residentially zoned land is located a quarter mile from a major transit stop, including the future Kent-Des Moines LINK Light Rail Stop.

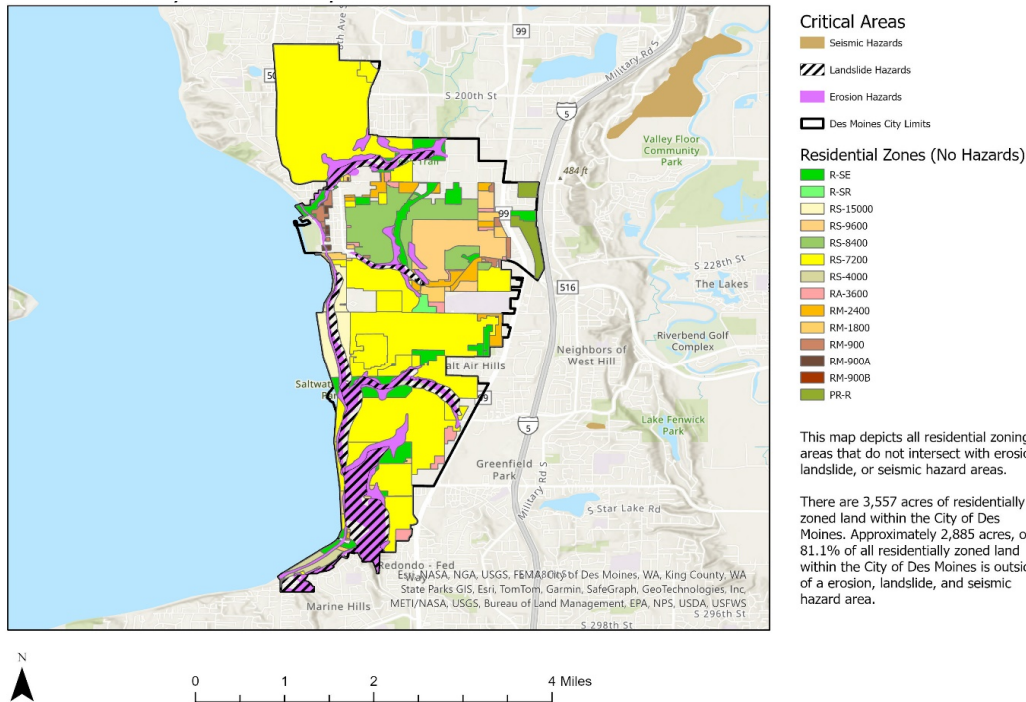
Currently, the Des Moines Municipal Code (DMMC) does not permit any types of middle housing (as listed in HB-1110) to be built within Single-Family residential zones. Only the Pacific Ridge-Residential and RM-900 Zones outright permit the building of duplexes, while duplexes are allowed with special limitations in the RA-3600, RM-2400, and RM-1800 zones. Similarly, only the RA-3600, RM-2,400, RM-1800, and RM-900 all permit the construction of townhouses with special limitations. Duplexes and townhouses are the only two types of missing middle housing outlined in the DMMC. Thus, the DMMC must be amended to allow certain types of middle housing within its residential and single-family zones.

An update to the DMMC thus has the potential to expand upon the housing types offered in both the single-family residential and multi-family residential zones lying within a quarter mile of a major transit stop. Thus, this map can help the City of Des Moines visualize which areas and which zones those areas fall within, could be good candidates for the construction of middle housing. Relatedly, it also helps prioritize which Titles of the DMMC should be updated to permit different types of middle housing.

Mixed-use development is additionally permitted within the T-C and W-C zones, which are also located within a quarter mile of a major transit stop. However, these are primarily commercial zones and therefore we didn't review them in the way that the residential zoning districts were analyzed, consistent with the state's requirements.



Map 4: Critical Areas – Erosion, Landslide, and Seismic Hazards



Map 4 shows all residential zoning areas that lie outside of erosion, landslide, or seismic hazard areas. A total of 2,885 acres of land, or 82% of residentially zoned land within the City of Des Moines does not intersect with a geologic hazard area.

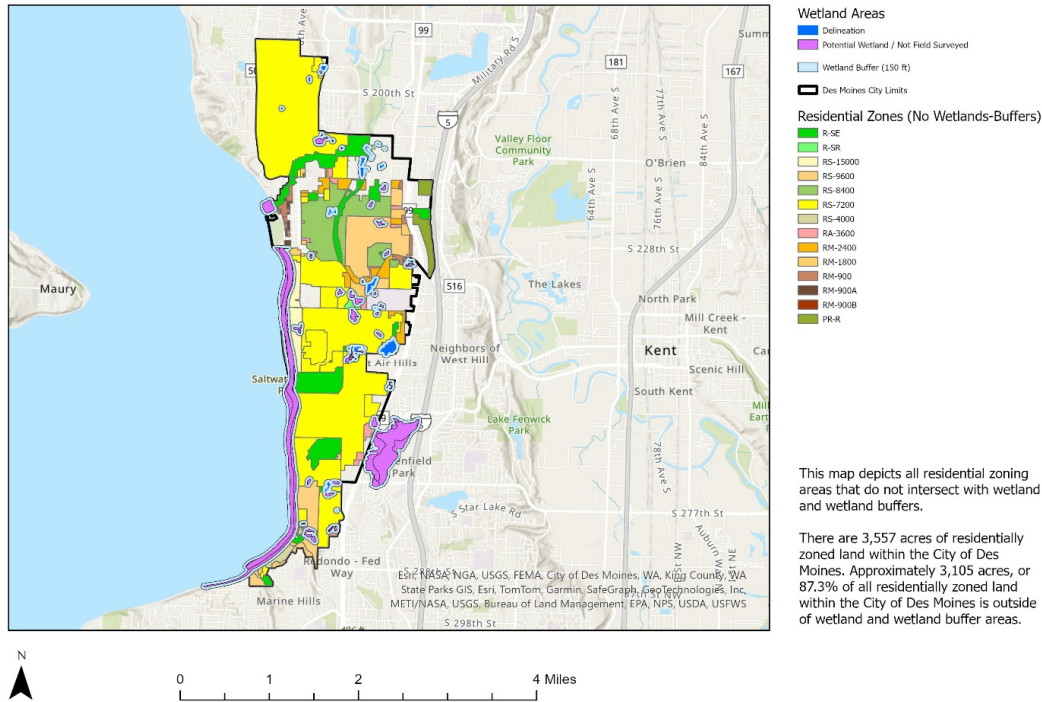
There are erosion hazard areas and landslide hazard areas in a few portions of the city, primarily along the sound and within the North Hill, Redondo, Woodmont, and Zenith Neighborhoods. There are no seismic hazard areas located within the City of Des Moines, however, there are seismic hazard areas located within 1 mile of the city limits.

The North Hill, Pacific Ridge, and South Des Moines neighborhoods near Highline College and along Highway 99 are least impacted by these geologic hazard zones. There are large single-family zones (such as RS-9600 and RS-7200) and smaller sized multifamily residential zones (such as RM-2400 and RM-900) in these areas. Moreover, the area is proximate to the RapidRide A bus route, Sound Transit Route 574, and future LINK Light Rail stations. Other areas having sufficient zoning capacity to support middle housing include the areas surrounding City Hall (zoned as RA-3600, RM-2400, and R-SE), area and the North Hill Neighborhood (zoned RS-7200).

One limitation of this map is that pursuant to DMMC 16.10.250, landslide hazard areas have buffers which must be accounted for during permitting. However, due to data limitations we did account for buffers in this analysis.



Map 5: Critical Areas - Wetlands and Wetland Buffers



Map 5 depicts lands which are residentially zoned and lying outside a mapped wetland area or its assumed buffer¹. A total of 3,105 acres (87%) of residentially zoned land does not intersect with a wetland or wetland buffer. Wetlands, both delineated and potential, are primarily located along the coast adjacent to Puget Sound; smaller wetlands are found in many neighborhoods throughout the city.

These areas are primarily located in areas that are well built-out in the city; the North Hill, Marina District, Pacific Ridge, Central Des Moines, South Des Moines, Woodmont, and Redondo Neighborhoods. For example, in the Marina District, zones R-SE, RM-900, and RM-900A are already designated as multifamily zones, meaning they are meant to support greater densities as compared to the various single-family zones in Des Moines. The area in the Pacific Ridge Neighborhood along Highway 99 is proximate to current and future major transit stops. Zones in this area include PR-R, R-SE, RM-2400, RM-1800, RM-900, and RS-9600; a mix of multifamily and single-family zones can support middle housing of various densities.

South Des Moines and Central Des Moines, including the Civic Center, contain several single family and multi-family zones; these areas proximity to services in the City also make them good candidates for future middle housing. It should be noted that areas with significant single-family housing, including the North Hill, Woodmont, and Zenith neighborhoods, must abide by the lot counts specified in HB-1110. While development can occur in

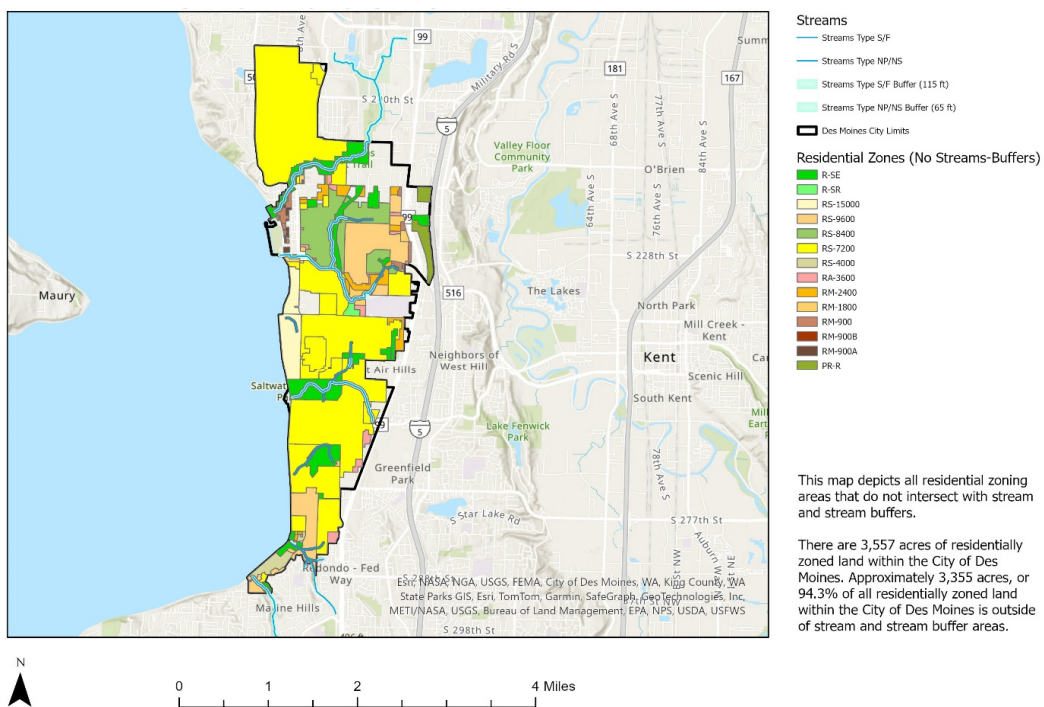
¹ Wetland buffer widths vary and are determined after field investigation; for the purposes of this analysis we assume a 150 foot buffer which we would expect to represent about the average



zones that are near wetlands, it is important that buffers, as specified in DMMC 16.10.120, are considered during permitting.

Map 6: Critical Areas - Streams and Stream Buffer

Map 6 shows all lands zoned residential lying outside a stream or stream buffer (see Attachment A for an explanation of our approach to stream buffers). A total of 3,355 acres (94%) of residentially zoned land within the City of Des Moines did not intersect with a stream or stream buffer. Many of the streams align with areas that are



designated as parks within the City. Adopting regulations to allow more middle housing could result in greater densities and it would be best to site middle housing away from existing critical areas.

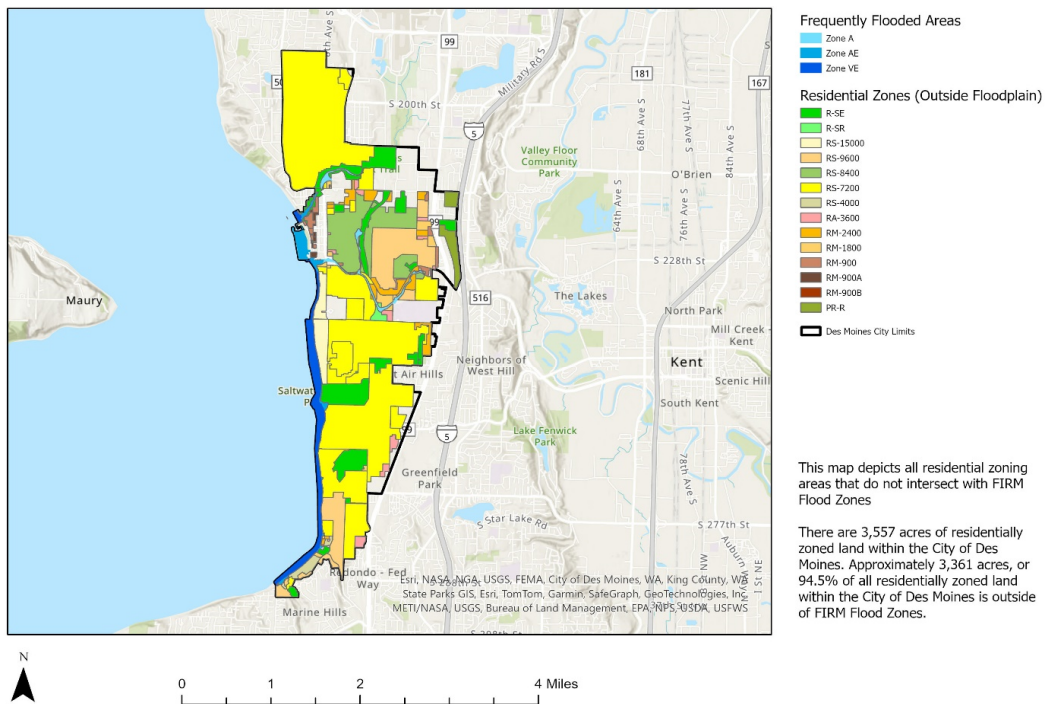
There are many areas within the North Hill, Marina District, Central Des Moines, Pacific Ridge, Zenith, South Des Moines, Woodmont, and Redondo Neighborhoods featuring residentially zoned land that does not intersect streams or buffers. This includes both single-family and multi-family residential zones. Similar to the other maps depicting critical areas in this memo, areas with multi-family residential zones, including the Marina District, Central Des Moines, and Redondo Neighborhoods would have capacity for supporting middle housing. Similarly, neighborhoods along Highway 99, including Pacific Ridge, South Des Moines, and Woodmont, are mostly located outside of streams and stream buffers and located close to major transit stops. Areas with significant single-family housing, including the North Hill, Central Des Moines, Zenith, Woodmont, and Redondo neighborhoods, must abide by the lot counts specified in HB-1110. This map shows that there is ample capacity within most of the city



to permit the construction of missing middle housing of various sizes. It is important that stream buffers, as specified in DMMC 16.10.170, are observed.

Map 7: Flood Risk/Frequently Flooded Areas

Map 7 shows all lands located throughout the city that are residentially zoned and not within a 100-year floodplain. A total of 3,361 acres of land (95%) of residentially zoned land within the City of Des Moines did not intersect with a 100-year floodplain.

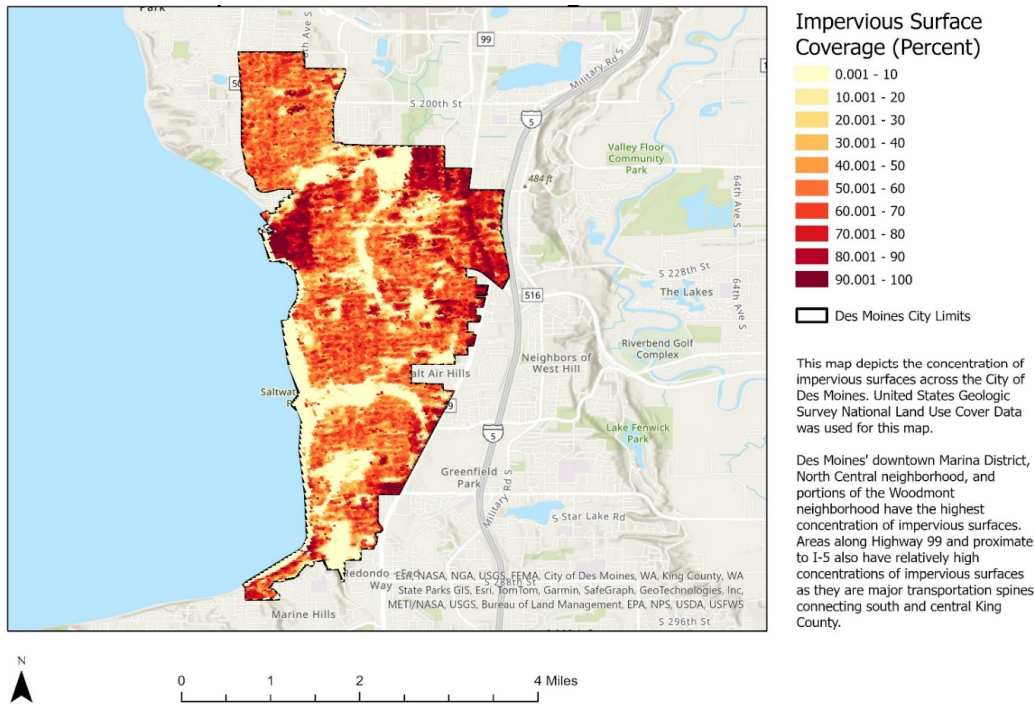


Most of the land in Des Moines within the 100-year floodplain is along the coast, in the Marina District, Zenith, Woodmont, and Redondo Neighborhoods. Other areas that are within the 100-year floodplain are near Barnes Creek and Massey Creek.

Based on this analysis, there is ample area in both single-family and multifamily residential zones located outside of the 100-year floodplain for missing middle housing. Specifically, in the North Hill, Central Des Moines, Pacific Ridge Neighborhoods, along with the portions of South Des Moines, Zenith, Woodmont, and Redondo Neighborhoods that are further away from the floodplain.



Map 8: Impervious Surface Coverage



Map 8 depicts impervious surface coverage within Des Moines shows which areas have the most built infrastructure. HB-1110 is requiring cities to accommodate more units on every lot, especially near major transit stops. As a result, more built infrastructure is needed to support greater density.

There are several areas within Des Moines that have high percentages of impervious surface coverages: the Marina District, the North Central Neighborhood, the Pacific Ridge Neighborhood, Redondo Neighborhood, and portions of South Des Moines and Woodmont near Highway 99 have extensive impervious surface coverage.

The zones within the Marina District include D-C, RM-900, and RM-900A. D-C is primarily a commercial zone (and therefore not included within the scope of this analysis), while RM-900 and RM-900A are residential zones. Currently, Duplexes are permitted outright in the RM-900 Zone and townhouses are permitted with limitations. Per DMMC 18.52.010A, no more than one townhouse dwelling unit is allowed per lot. Moreover, townhouses are not currently a permitted use within the RM-900A zone. Therefore, due to the areas high impervious surface coverage and proximity to services, the Marina District could support higher densities of housing and multiple middle housing types because HB-1110 requires that all residential zones to accommodate at least 2 units per lot.

The portion of the North Central Neighborhood that has a high degree of impervious surface coverage is due to the presence of several warehouse and distribution facilities owned by companies like Amazon and Bartell Drugs. This area is zoned as Business Park. Though some of these facilities are located within a quarter mile of high-capacity transit stops, this would not be a good place to construct middle housing due to the presence of businesses.



The Pacific Ridge Neighborhood contains several zones that could allow missing middle housing. This neighborhood is zoned PR-R, RM-1800, and RM-900. The PR-R and RM-900 zones already permit the construction of duplexes, while the RM-1800 neighborhood permits duplexes with limitations. Similarly, no zone permits townhouses outright, however, the RM-1800 and RM-900 zones permit townhouse development with limitations: no more than one townhouse dwelling per lot. This appears to conflict with the provisions of HB-1110 which specifies that areas within a quarter mile of major transit stops must permit at least four units per lot. This is a provision within the DMMC that should be reviewed to see if it needs to be amended (it is possible that zero-lot-line development is the standard for this type of construction, but we haven't yet taken a close look into this topic).

We can conclude that these areas, which immediately surround Highway 99 and are close to major transit stops, are suitable locations to permit the construction of a greater number and type of middle housing. However, the bulk of the areas with the highest percentage of impervious surface coverage in the Pacific Ridge's neighborhood center around Highway 99 and are zoned as Pacific Ridge Commercial.

The Redondo Neighborhood has many types of residential zones that also overlap with areas, within lands zoned RM-900, RM-2400, and RS-4000. These zones mainly fall in the heart of the Redondo Neighborhood and are close to many services nearby. Currently, duplexes and townhouses are permitted with limitations in the RM-2400 zone while no types of missing middle housing are allowed to be built in single-family zones. Though contained to a relatively small area, the area's proximity to the beach and to nearby services could make this area a good candidate to allow missing middle housing.

Finally, there is one area in the Woodmont Neighborhood that has a high percentage of impervious surface coverage. This is primarily due to the presence of Evergreen Lutheran High School and a Community Church. This area is zoned RA-3600, which allows the construction of duplexes and townhouses with special limitations, currently. The special limitation, as explained above, mandates that only one townhouse unit per lot is allowed. This area is also located within a quarter mile of major transit stops along the RapidRide A line. Thus, if capacity exists, several types of missing middle housing could fit well into this pocket of the Woodmont Neighborhood

Utilities

In this section we describe areas within the City that may face barriers in supporting middle housing due to utility issues. Several different utility companies oversee sanitary sewers for the City of Des Moines. However, several areas in the city remain on septic systems. Septic systems in certain areas of the City present barriers for the siting of middle housing because middle housing requires a greater density of units. Moreover, septic systems can cause environmental hazards when they fail.

The North Hill Neighborhood, which is primarily zoned as RS-7200, has a high percentage of lots that remain on old Septic Systems (as overseen by King County Public Health). Septic systems can fail and release biosolids. This can then infiltrate into the area's porous soil and potentially impact groundwater in the area, creating potentially health hazards.

City of Des Moines staff also report that the areas around Kent-Des Moines Road (SR-516) also have limited access to sanitary sewer. Zones in this area include RS-15000, RS-9600, RS-8400, and RS-7200. These areas, which have the largest lot sizes in the City, may not have the sewer capacity to support the construction of middle housing.

NLS/NE

c: Wayne Carlson, Nick Edman - AHBL
[Name - Company]

Q:\2023\2230834\30_PLN\Working_Files\Middle Housing Mapping Memo\20240607 Middle Housing Grant GIS Mapping Analysis Memo 2230834.docx

Attachment A: Methods

In this attachment we document the methods we used to create the maps for the analysis.

Residential Zones

Two datasets were used to create this map:

1. City of Des Moines Zoning
2. Incorporated Areas of King County

First, the **Incorporated Areas of King** County layer was added to the map. This map shows all cities within King County. A *select by attributes* was done to ensure that only the City of Des Moines was selected from the **Incorporated Areas of King County**. A new layer, entitled **Des Moines City Limits**, was created from this selection. *This step was repeated with all subsequent maps that utilize the **Incorporated Areas of King County** layer described below.*

The **City of Des Moines Zoning** dataset was then added to the map. An aspect that needed to be 'cleaned up' with this map was the fact that zoning areas extended too far into Puget Sound. This would impact the calculation of land that had a preferred land use designation in the city. To remedy this, a *pairwise clip* was conducted to ensure that only those portions of zones that fell within the **Des Moines City Limits** layer. A new layer was then created. *This step was repeated with all subsequent maps that utilize the **City of Des Moines Zoning** layer described below.*

After this step, the primary task was to organize and make the zoning data easier to visualize. First, this involved organizing the symbology for the zoning data. When the data was imported, all areas for the zoning use map utilized a single symbology. This was changed by navigating to the symbology tab, clicking the primary symbology drop down and selecting *unique values*. This resulted in each separate zoning category being shown with a separate color.

The zoning map classifies zoning uses into two categories: residential and commercial. However, the provisions in HB-1110 cover areas zoned primarily for residential use. A *select by attributes* was conducted to ensure that only residential zones were depicted on the map. A new layer was made from this selection. *This step was repeated with all subsequent maps that utilize the **City of Des Moines Zoning** layer as described below.*

Next, the total area of land that is residentially zoned within Des Moines was calculated to determine the amount of land within the City where middle housing could be constructed. The values for this calculation were obtained using the attribute table, right clicking on the SHAPE_Area field, and selecting 'statistics.' The statistics provided included the sum of all the areas within the SHAPE_Area field. The area sums were found for both the **Residential Zones** layer and the **City of Des Moines Zoning** layers. The units attached to this sum were in square feet and were converted to acres. Then, to determine what percentage of land was residentially zoned in Des Moines, the total amount of land contained in residential zones in Des Moines was divided by the total amount of land in Des Moines to obtain a percent value.

The symbology of each zoning category was then re-ordered and re-colored in the symbology tab so that it matched the coloring convention used by the City of Des Moines official zoning map. *This step was repeated with all subsequent maps that utilize the **City of Des Moines Zoning** layer described below.*

Finally, a North Arrow, Scale Bar, and Legend were added along with a Title and small description in Layout. The map was then exported as a JPEG. *This step was repeated with all subsequent maps described below.*

Residential Preferred Land Use

Two datasets were used to create this map:

1. City of Des Moines Preferred Land Use
2. Incorporated Areas of King County

The creation of the preferred land use map followed the same work pattern as the zoning map.



The Preferred Land Use dataset was then added to the map. An aspect that needed to be 'cleaned up' with this map was the fact that the preferred land use areas extended too far into Puget Sound. This would impact the calculation of land that had a preferred land use designation in the city. To remedy this issue, a *pairwise clip* was utilized to ensure that only zones that fell within the Des Moines City Limits layer were included. Thereafter, a *select by attributes* was utilized to ensure only residential land use designations were depicted. A new layer was then created.

After this step, the primary task was to organize and make the preferred land use data easier to visualize. First, this involved organizing the symbology for the preferred land use data. When the data is imported, all areas for the preferred land use map utilize a single symbology. This can be changed by navigating to the symbology tab, clicking the primary symbology drop down and selecting *unique values*. This will show each separate land use category with a separate color.

The preferred land use map classifies preferred land uses into two categories: residential and commercial. However, the provisions in HB-1110 cover areas utilized primarily for residential use. A *select by attributes* was conducted to ensure that only residential land use designations were depicted on the map. A new layer was made from this selection.

Next, the total area of land that had a residential preferred land use designation within Des Moines was calculated to determine the amount of land within the City where middle housing could be constructed. The values for this calculation were obtained using the attribute table, right clicking on the SHAPE Area field, and selecting 'statistics.' The statistics provided included the sum of all the areas within the SHAPE Area field. The area sums were found for both the **Residential Preferred Land Use** layer and the **City of Des Moines Preferred Land Use** layers. The units attached to this sum were in square feet and were converted to acres. Then, to determine what percentage of land had a residential preferred land use designation in Des Moines, the total amount of land containing a residential preferred land use designation in Des Moines was divided by the total amount of land in Des Moines to obtain a percent value.

The symbology of each land use category was then re-ordered and re-colored in the symbology tab so that it matched the coloring convention used by the City of Des Moines official Preferred Land Use Map. Finally, a North Arrow, Scale Bar, and Legend were added along with a Title and small description in Layout. The map was then exported as a JPEG.

Major Transit Stops

Six datasets were used to create this map:

1. City of Des Moines Zoning
2. Incorporated Areas of King County
3. King County Metro Transit Stops
4. Sound Transit Express Transit Stops
5. LINK Stations
6. LINK Line

The four transit datasets were added to the map. These datasets showed *all King County Metro Transit Stops, all LINK Stations, and all Sound Transit Express Stops* within King and Pierce Counties. The focus of this map is to only depict *major transit stops*, as defined by HB-1110, that are within the City of Des Moines or a quarter-mile of the city's border. This was done using a *select by location*. Each layer - the **King County Metro Transit Stops** layer, the **Sound Transit Express Transit Stops** layer, and the **Link Stations** layer – were the input features and the **Des Moines City Limit** layer was the selecting feature. After each *select by location* (3 total) were completed, each selection was made into a new layer.



The only **King County Metro Transit Stops** located within or within a quarter mile of Des Moines were along the RapidRide A line, following Highway 99. Two stops on the Sound Transit Express Route 574 were along I-5. No current LINK Light Rail stations are within a quarter mile of Des Moines; however, the proposed Kent-Des Moines LINK Station, which is expected to open in 2026, does meet this parameter.

Once all major transit stops along the RapidRide A, Sound Transit Express Route 574, and LINK Light Rail located within one-quarter mile of Des Moines's boundary were selected, a one quarter mile buffer was created around each transit stop. This was completed by navigating to the toolbar, selecting *analysis*, and the selecting the *pairwise buffer tool*. The pairwise buffer tool was used three times – once for each layer that was created as described in paragraph 1. Once this step has been completed for all transit stops, each major transit stop had a 1/4 mile circle around it that intersected with the city limits of Des Moines.

Next, the Des Moines Zoning Map was added to this map. Once the Des Moines Zoning Map had been overlaid onto the Transit Stops Map, the next step was to determine which zones (and portions of zones) were within one-quarter mile of major transit stops. Zones were selected based on whether they intersected with the one-quarter mile buffers surrounding major transit stops using a *select by location*. The selected features were then made into a new lawyer. This new layer contained all residential zones that intersected with the one-quarter mile buffer.

The next step was to ensure that only the portions of these residential zones that were within the quarter mile buffer for major transit stops were shown. To do this, a *pairwise clip* function was utilized using the quarter-mile buffer as the clipping feature. The *pairwise clip* was used twice – once for the layer containing the **RapidRide A transit stops** and another for the **Future Kent-Des Moines LINK Station** layer. The quarter mile buffer for the **Sound Transit Express Route 574** layer did not intersect a portion of a residential zoning category that was not already covered by the other two layers. What resulted was a map that showed which areas of Des Moines are within one quarter mile of a major transit stop. These zones must allow four units per lot according to HB-1110.

It is important to note that because a *clip* tool was utilized, the total area of residentially zoned parcels that intersect with the quarter mile buffer needed to be recalculated using *calculate geometry*. The first step is to select 'Add field' so that a new field is added to the existing attribute table. It is important to ensure that the correct data type ('double') and the correct number format ('numeric') are selected. The field was saved and added to the attribute table. On the column header for the new field, right click and select 'Calculate Geometry.' This allows you to calculate the area of the new field you created. Ensure that the correct units (acres) are selected).

With the area field correctly recalculated, the total area of residentially zoned land within a quarter mile of a major transit stop was calculated to determine the capacity for middle housing close to major transit stops. The values for this calculation were obtained using the attribute table, right clicking on the SHAPE_Area field, and selecting 'statistics.' The statistics provided included the sum of all the areas within the SHAPE_Area field. The area sums were found for the **Residential Zones (1/4 Mile RapidRide A)**, **Residential Zones (1/4 Mile LINK)** layers, and the **Residential Zones** layer, which depicts all residentially zoned land in Des Moines. The units attached to the **Residential Zones** layer were in square feet and were converted to acres. Then, to determine what percentage of residentially zoned land located within a quarter mile of a major transit stop, the total amount of residentially zoned land within a quarter mile of a major transit stop was divided by the total amount of residentially zoned land in Des Moines to obtain a percent value.

Critical Areas - Erosion, Landslide, and Seismic Hazard Areas

Five datasets were used to create this map:

1. City of Des Moines Zoning
2. Incorporated Areas of King County
3. Erosion Hazards
4. Landslide Hazards



5. Seismic Hazards

Once the datasets were added to the map, the first task was to ensure that critical areas data was only shown for the City of Des Moines. The **Erosion**, **Landslide**, and **Seismic Hazard** layers showed data for the entirety of King County. A *pairwise clip* tool was utilized twice to clip the **Erosion Hazards** and then **Landslide Hazards** to the **Des Moines City Limit** layer to ensure that only critical areas touching or within the border of Des Moines were shown. It should be noted that a *select by location* function, would also accomplish this step. A new layer was created after each pairwise clip. According to the data, there are no **Seismic Hazards** located within the City of Des Moines. Instead, a *select by location* was utilized to select only seismic hazard areas that were located within 1 mile of the City of Des Moines. A new layer was then created from this selection.

Unlike the transit stops map, where we were selecting zones that intersected with a specified buffer, the next steps involved selecting zones that *did not intersect* with **Erosion**, **Landslide**, and **Seismic Hazards** areas. The process for doing this involved several steps.

To remove portions of zones that intersected with critical areas, a *batch pairwise erase* was used. A batch tool, similar to a regular *pairwise erase*, means that more than two layers can be used as inputs or erasing features. The option for multiple erase features was selected. The input feature was the **Residential Zoning** layer, the batch erase features were the **Erosion Hazards** and the **Landslide Hazards** layer. Once this tool was run, two new layers were created: one that showed residential zones with erosion hazards removed and another that showed residential zones with landslide hazard removed.

However, for clarity, it is better to show one single residential zoning layer with all *hazards* (erosion, landslide, and seismic) removed. To accomplish this, a regular *pairwise erase* tool was used. The input feature was the **Residential Zoning** layer with erosion hazards erased and the erase feature was the **Landslide Hazards** layer. Once this erase tool was run, a new layer was created that depicted all residential zoning areas (and portions of zones) with erosion and landslide hazard areas removed. This step did not need to be done with the **Seismic Hazards** layer because all seismic hazard areas are outside of Des Moines's boundary.

It is important to note that because an *erase* tool was utilized, the total area of residentially zoned parcels that do not intersect with erosion and landslide hazards needed to be recalculated using *calculate geometry*. The first step is to select 'Add field' so that a new field is added to the existing attribute table. It is important to ensure that the correct data type ('double') and the correct number format ('numeric') are selected. The field was saved and added to the attribute table. On the column header for the new field, right click and select 'Calculate Geometry.' This allows you to calculate the area of the new field you created. Ensure that the correct units (acres) are selected).

With the area field correctly recalculated, the total area of residentially zoned land that did not intersect with an erosion or landslide hazard area was calculated to determine capacity for middle housing in Des Moines. The values for this calculation were obtained using the attribute table, right clicking on the SHAPE_Area field, and selecting 'statistics.' The statistics provided included the sum of all the areas within the SHAPE_Area field. The area sums were found for the **Residential Zones (No Hazards)** and the **Residential Zones** layer, which depicts all residentially zoned land in Des Moines. The units attached to this sum for the **Residential Zones** layer were in square feet and were converted to acres. Then, to determine what percentage of residentially zoned land did not intersect with hazard areas, the total amount of residentially zoned land not intersecting any hazard areas was divided by the total amount of residentially zoned land in Des Moines to obtain a percent value.

Critical Areas – Wetlands and Buffers

Three datasets were used to create this map:

1. City of Des Moines Zoning

Project Memo
Des Moines Middle Housing Policy and Regulations Update
2230834.30
June 11, 2024

Attachment A





2. Incorporated Areas of King County
3. Wetlands

Once the datasets were added to the map, the first task was to add buffers to the **Wetlands** layers. The DMMC specifies different wetland buffers based on the wetland category and habitat function. However, the information provided in the attribute table did provide details on each wetland's category and level of habitat function. The attribute table was reviewed to determine the largest wetland buffer, specified. That buffer, 150 feet, was applied to all delineated (and non-surveyed wetlands) using a *pairwise buffer* tool.

The next steps involved selecting zones that *did not intersect* with **Wetlands** and **Wetland Buffer** areas. The process for doing this involved several steps.

To remove portions of zones that intersected with **Wetland Buffers** a *pairwise erase* was used. The input feature was the **Residential Zoning** layer, and the erase feature was the **Wetland Buffer** layer. Once this erase tool was run, a new layer was created that depicted all residential zoning areas (and portions of zones) with wetlands and wetland buffers removed. This step did not need to be done with the **Wetlands** layer because the areas of the **Wetland Buffers** layer included and covered a larger area than the **Wetlands** layer.

It is important to note that because an *erase* tool was utilized, the total area of residentially zoned parcels that do not intersect with wetland and wetland buffer areas needed to be recalculated using *calculate geometry*. The first step is to select 'Add field' so that a new field is added to the existing attribute table. It is important to ensure that the correct data type ('double') and the correct number format ('numeric') are selected. The field was saved and added to the attribute table. On the column header for the new field, right click and select 'Calculate Geometry.' This allows you to calculate the area of the new field you created. Ensure that the correct units (acres) are selected).

With the area field correctly recalculated, the total area of residentially zoned land that did not intersect with wetlands and wetland buffer areas was calculated to determine capacity for middle housing in Des Moines. The values for this calculation were obtained using the attribute table, right clicking on the SHAPE Area field, and selecting 'statistics.' The statistics provided included the sum of all the areas within the SHAPE Area field. The area sums were found for the **Residential Zones (No Wetlands-Buffers)** and the **Residential Zones** layer, which depicts all residentially zoned land in Des Moines. The units attached to this sum for the **Residential Zones** layer were in square feet and were converted to acres. Then, to determine what percentage of residentially zoned land did not intersect with wetlands or wetland buffers, the total amount of residentially zoned land not intersecting any wetlands or wetland buffers was divided by the total amount of residentially zoned land in Des Moines to obtain a percent value.

Critical Areas – Streams and Buffers

The creation of this map utilized 3 datasets:

1. City of Des Moines Zoning
2. Incorporated Areas of King County
3. Streams

Once the datasets were added to the map, the first task was to add buffers to the **Streams** layers. DMMC 16.10.160 specifies stream buffers based on the class of the stream. Streams classified as 'S' or 'F' must have a 115 ft. buffer while streams classified as 'Np' or 'Ns' must have a 65 ft. buffer. The *pairwise buffer* tool was used twice to create a 115 ft. buffer around Class 'S' and 'F' streams and a 65 ft. buffer around Class 'Np' or 'Ns' streams. A new layer was created from each selection.



The next steps involved selecting zones that *did not intersect* with **Streams** and **Stream Buffers**. The process for doing this involved several steps.

To remove portions of zones that intersected with the **Stream Buffers** a *pairwise erase* was used. This was first done with the 115 ft. stream buffer. The input feature was the **Residential Zoning** layer, and the erase feature was the **Stream Type S/F Buffer (115 ft)** layer. Once this erase tool was run, a new layer was created that depicted all residential zoning areas (and portions of zones) with Class S and F streams and their associated buffers removed. This step was repeated with the **Stream Type NP/NS Buffer (65 ft)** layer. These steps did not need to be repeated with the **Stream** layers because the areas of the **Stream Buffer** layers included and covered a larger area than the individual **stream** layer.

It is important to note that because an erase tool was utilized, the total area of residentially zoned parcels that do not intersect with the **Stream and Stream Buffer** layers needs to be recalculated using *calculate geometry*. The first step is to select 'Add field' so that a new field is added to the existing attribute table. It is important to ensure that the correct data type ('double') and the correct number format ('numeric') are selected. The field was saved and added to the attribute table. On the column header for the new field, right click and select 'Calculate Geometry.' This allows you to calculate the area of the new field you created. Ensure that the correct units (acres) are selected).

With the area field correctly recalculated, the total area of residentially zoned land that did not intersect with a streams and stream buffers was calculated to determine capacity for middle housing in Des Moines. The values for this calculation were obtained using the attribute table, right clicking on the SHAPE_Area field, and selecting 'statistics.' The statistics provided included the sum of all the areas within the SHAPE_Area field. The area sums were found for the **Residential Zones (No Streams-Buffers)** and the **Residential Zones** layer, which depicts all residentially zoned land in Des Moines. The units attached to this sum for the **Residential Zones** layer were in square feet and were converted to acres. Then, to determine what percentage of residentially zoned land did not intersect streams and stream buffers, the total amount of residentially zoned land not intersecting any streams and stream buffers was divided by the total amount of residentially zoned land in Des Moines to obtain a percent value.

FIRM Flood Zone/Frequently Flooded Areas

Three datasets were needed to create this map:

1. City of Des Moines Zoning
2. Incorporated Areas of King County
3. Flood Insurance Rate Map (FIRM) Data

The FIRM data showed which areas of Des Moines were within the 100-year floodplain. There are three FEMA flood ones present within the City of Des Moines. Zone A, which depicts areas with a 1% annual chance of flooding (100-year floodplain). Zone AE depicts the base floodplain where base flood elevations are provided. Zone VE includes coastal areas with 1% or greater chance of flooding and an additional hazard with storm waves

Once the datasets were added to the map, the first task was to clean the data because the FIRM Flood zone data extended far into Puget Sound. To remedy this, a *pairwise clip* was conducted to ensure that only those portions of the **FIRM** layer within the **Des Moines City Limits** layer were included.

The next steps involved selecting zones that *did not intersect* with the FIRM layer. The process for doing this involved several steps.

To remove portions of zones that intersected with the **FIRM** layer, a *pairwise erase* was used. The input feature was the **Residential Zoning** layer, and the erase feature was the **FIRM** layer. Once this erase tool was run, a



new layer was created that depicted all residential zoning areas (and portions of zones) that are outside the 100-year floodplain, entitled **Residential Zones (No Flood Hazard)**.

It is important to note that because an erase tool was utilized, the total area of residentially zoned parcels that do not intersect with the 100-year floodplain needs to be recalculated using *calculate geometry*. The first step is to select 'Add field' so that a new field is added to the existing attribute table. It is important to ensure that the correct data type ('double') and the correct number format ('numeric') are selected. The field was saved and added to the attribute table. On the column header for the new field, right click and select 'Calculate Geometry.' This allows you to calculate the area of the new field you created. Ensure that the correct units (acres) are selected).

With the area field correctly recalculated, the total area of residentially zoned land that did not intersect with a 100-year floodplain was calculated to determine capacity for middle housing in Des Moines. The values for this calculation were obtained using the attribute table, right clicking on the SHAPE Area field, and selecting 'statistics.' The statistics provided included the sum of all the areas within the SHAPE Area field. The area sums were found for the **Residential Zones (No Flood Hazard)** and the **Residential Zones** layer, which depicts all residentially zoned land in Des Moines. The units attached to this sum for the **Residential Zones** layer were in square feet and were converted to acres. Then, to determine what percentage of residentially zoned land that did not intersect with hazard areas, the total amount of residentially zoned land not intersecting any hazard areas was divided by the total amount of residentially zoned land in Des Moines to obtain a percent value.

Impervious Surface Coverage

Three datasets were needed to create this map:

1. City of Des Moines Zoning
2. Incorporated Areas of King County
3. National Land Cover Data (2021)

The NLCD layer is National Land Cover Data provided by the USGS. This layer contains raster data. Raster data is shown as pixels. In the case of this layer, each pixel was given a value based on the percent impervious surface coverage present in that area. Pixels were given a value ranging between 0 (no impervious surface coverage) to 100 (which means the pixel is 100% covered by impervious surfaces). Raster data works slightly differently than the shapefiles utilized in pervious maps. A *clip raster (data management)* tool was used to ensure that only data for the City of Des Moines was shown from the larger **National Land Cover Data** layer. The input raster was the National Land Cover layer. The output extent was the **Des Moines City Limits** layer. The option 'use input features for clipping geometry' was checked. A new layer was created from this tool, entitled **Impervious Surface Coverage (Percent)**.

After this step, the primary task was to organize the data to make it easier to visualize. This involved organizing the symbology for the **Impervious Surface Coverage (Percent)** layer. Right click on the **Impervious Surface Coverage (Percent)** layer and select *symbology*. When the data was imported, all areas for the **Impervious Surface Coverage (Percent)** layer utilized a colormap symbology. This was changed by navigating to the symbology tab, clicking the 'primary symbology' drop down and selecting *classify*. With classify, values can be grouped together by a predefined interval. Under the method drop down, 'equal interval was selected' so that the data range of each 'class' of values was held constant. 10 classes were chosen so that values could be grouped between 0% to 10%; 10.01%-20%; and so on. This symbology was added to the map so that it was easier to show the progression between areas with less impervious surface coverage and areas with more impervious surface coverage.