Moscow is a small college town of 25,146 (2017 U.S. Census estimate) in north central Idaho that offers an outstanding quality of life for its citizens and student population. Located on the edge of the Palouse in Latah County and sharing a border with Washington State, Moscow has a unique advantage in providing small town character with the knowledge and economic resources of a city, and the aesthetic and recreational amenities of a rural community. See Figure 1.1, Moscow Context.

1.1 COMMUNITY VALUES AND PLAN GOAL

Through the public input process it was clear that the community possesses common desires for the future of Moscow. The values that were expressed frame the purpose of the Plan and give a foundation for the formation of goals, objectives, and implementation steps that will turn the community’s vision into a reality. Consideration should be given to these values during decision-making processes.

1.1.1 Community Values

Moscow is a unique community blending amenities of the urban environment with those of the rural landscape. The residents of Moscow value quality of life, stability, and sustainability. They want growth to be sustainable and in keeping with the character of the community and Moscow’s sense of place.

*Maintenance and Enhancement of Community Character that Promotes a Sense of Community*

Character and community are terms that are not easily defined yet have great meaning in context of how the people of Moscow identify with their
environment. The term *character* primarily refers to the built environment. It is formed by the arrangement of buildings and spaces and their relationship to each other, the natural environment, and other features. The design of buildings and the landscape reinforce and enhance the aesthetics of a quality environment. Although the term *community*, by itself, often refers to political boundaries, a *sense of community* is most often in reference to how people interact and the level of connection they share with others within the city.

A sense of community is inherently tied to the character of the built environment because people must feel connected to their environment and comfortable to partake in the interactions and events available to them. The built environment should be safe and provide places for people to gather, such as sidewalks, yards, neighborhoods, and public parks. Development character and aesthetics contribute to an environment that is inviting for residents to experience and enjoy.

Moscow has a unique sense of place that is close to the hearts of those who live here. Each neighborhood has characteristics that make it special, which help form its unique identity and shape each person’s connection to the broader community. Sustaining character is vitally important to the residents as it defines their individual neighborhood and community and creates a quality of place like no other. In order to maintain character, important identifying features must be protected and integrated into development. There must also be transitions between areas of varying character so as to preserve values and ensure compatibility.

*Development and Implementation of Sustainable Policies, Regulations, and Methods that Manage the Use of Resources and Growth of the Community*

Sustainability has emerged as a prevalent and vital concept for the assessment of decisions and actions. It incorporates the ideal expressed by Marian Wright Edelman who stated, “we must not, in trying to think about how we can make a big difference, ignore the small daily differences we can make, which, over time, add up to big differences that we often cannot foresee.” A goal of planning is synonymous with sustainability, in that decisions must not be made solely for an immediate result, but must be considered in light of their cumulative, long-term effects.

Resources are at the root of why sustainable choices are essential. There are limited quantities of necessary resources. To sustain the community for years to come, today’s use of resources must be mindful of the needs of the current residents and that of future generations. Preservation of farmland and natural features, protection of riparian areas, and conservation of water resources are all important to the community. While there may be some concern that considering sustainable methods may initially cost more, there is great long-term value in efficiency, which is central to the concept of sustainability. The
community’s commitment to environmental quality may serve its economic objectives through the promotion and support of the green building practices, transportation options, advances in environmental technology, and attraction of renewable energy industries.

**Establishment of Predictable Development and Decision Making Policies that Balance Desires of the Community with Economic Needs for Growth**

The community needs a certain amount of growth and renewal to remain vibrant and meet the needs of its businesses and citizens; however, without proactive land use and growth policies – and implementing regulations – it may adversely impact the character of the community. Finding a balance between these competing interests will require an ongoing effort and commitment, especially in light of an ever-changing economy. Having comprehensive and well-defined regulations will help produce predictable outcomes for residents, businesses, and landowners alike. Consistent and fair decisions will further the community’s desire for increasing predictability.

**Provision of a Safe Environment in Which Needs and Amenities are Available to People of All Ages, Abilities, and Incomes**

Opportunity and access to all services and amenities are important to the people of Moscow. Moscow serves a diverse population in terms of age, needs, and incomes. It is, therefore, a goal of this Plan that all persons have adequate opportunity and safe access to life needs and amenities. This includes, among many others, provision of adequate sidewalks and safe travel routes for handicap accessibility, a broad mix of housing types and living environments that serve all social strata, and design of parks and public spaces for users of all ages, abilities, and interests.

1.1.2 **Plan Goals and Objectives**

**Overall Plan Goal**

*Provide for sustainable, incremental growth while preserving and enhancing the distinctive characteristics of Moscow, and its rich and vibrant economic, cultural, social, and physical environments.*

The community of Moscow wishes to manage physical and economic growth through sustainable policies while maintaining and promoting the unique character of the City and its neighborhoods, and providing for the needs of all residents.

**Chapter 1: A Vision for Moscow**

**Goal**

- Protect and conserve the natural resources of the area in a manner that balances their ecologic, economic, and aesthetic potentials to preserve
natural features and ecosystems while directing development away from floodplains, steep slopes and other hazard areas to protect public health, safety, and welfare, and preserve sensitive areas.

Objectives
- Promote the conservation of valuable agricultural lands and Moscow’s surrounding rural landscape.
- Protect and enhance regional waterways and sensitive riparian areas to serve their natural functions, and as aesthetic and recreational assets.
- Protect and expand the City’s urban forest.
- Minimize hazard potentials to new developments from flooding, excessive erosion, and earth slides.
- Conserve and protect the groundwater of the region’s aquifers.
- Conserve sensitive natural areas for aesthetic and ecological purposes.

Chapter 2: Community Character and Land Use

Goals
- Direct land uses to meet current and future community desires and needs while conserving natural resources and protecting agricultural lands from scattered development through efficient and orderly development.
- Encourage a variety of housing types to meet the needs of residents of all ages and economic abilities.
- Preserve and enhance special areas of the community to celebrate the community’s identity, character, and heritage.
- Enrich the community’s social, cultural, physical, and economic environments through the arts and integration of aesthetic infrastructure standards, particularly through the placement of public art at key locations in the City.

Objectives
- Protect existing neighborhood identity and character.
- Provide a mix of housing that meets the economic and lifestyle needs for the diverse population of Moscow.
- Preserve and enhance special areas of the community to celebrate the community’s identity, character, and heritage.
- Guide the expansion and intensification of downtown development while considering the needs for parking and desire to maintain the existing historic character.
- Strengthen community character through improvement of the physical environment that enhances the small-town feel and historic nature of Moscow.
• Provide a continuum of land uses that allow a variety of uses and housing types to meet the needs of the community while ensuring the preservation of neighborhood character in an efficient manner.

Chapter 3: Community Mobility

Goals

• Ensure the integration and coordination of the City’s transportation systems with the regional facilities and modes of transportation.

• Plan for the orderly development and continuity of the City’s street and pathway systems, as well as connectivity to regional transportation networks to ensure the efficient delivery of services and navigation by residents and visitors.

• Ensure that all transportation systems enable safe access and promote all types of mobility, including pedestrians, bicyclists, motorists, and public transit users of all ages and abilities.

• Provide for the continuity and function of the City’s transportation system while ensuring context-sensitive design that preserves and enhances community character and quality of life.

Objectives

• Provide for the efficient integration of the City’s transportation systems with regional facilities and modes of mobility including county roads, state highways, shared-use trail systems, air transportation, and regional bus transportation services.

• Provide for the safe and efficient movement of people, goods, and services throughout the community supporting all modes of transportation.

• Plan for the logical and orderly extension of the City’s public street network.

• Ensure that the City’s transportation system supports and relates with the surrounding land uses and preserves and enhances the community’s character and values.

• Provide for the safe access and use of the City’s pedestrian facilities for users of all ages and abilities.

• Promote walking as a mode of transportation within the community to enhance the physical and social health of the community.

• Increase the safety and convenience of cyclists of all ages and abilities, and encourage the use of bicycles as a desirable mode of transportation within the community.

• Enhance the integration of cyclists and community public transit services.
- Promote the increased use and expansion of public transit services within the community and region as a desirable transportation alternative.
- Assist local schools in providing efficient and safe student access and transportation to school facility locations within the community.
- Promote student use of biking and walking to school through the development and improvement of pedestrian and bicycle facilities throughout the community.
- Ensure that the City’s off-street parking requirements balance the need for parking to serve developments while promoting alternative transportation options and ensuring that environmental and aesthetic considerations are addressed.

Chapter 4: Parks and Recreation

Goal
- Provide a system of well-distributed parks, open space, and recreational facilities that meet the active and leisure recreation needs of citizens of all ages, interests, and abilities.

Objectives
- A comprehensive network of paths and linear parks connecting all parts of the community.
- Protect and sustain natural areas, resource features, and environmentally sensitive lands.
- Broadened development of the community’s cultural infrastructure and its integration into park sites and recreational programs.
- Even and equal distribution and further development of park spaces, activities, and facilities to meet the diversity of local areas.
- Maximum availability and utilization of recreational programming.

Chapter 5: Public Utilities, Services, and Growth Capacity

Goals
- Provide for sustainable growth while conserving natural resources, protecting natural features, and enhancing the character of the community and region.
- Provide for the orderly and efficient delivery and location of public facilities, utilities, and services to the residents and businesses within the community.
- Advocate and practice the sustainable management and development of local and regional water resources and supplies to meet the needs of both current and future residents.
- Direct growth to areas that can be most efficiently and economically served with public services and utilities while planning for future capacity needs.
Objectives

- Provide for a safe and sustainable water supply that meets the current and future needs of the community.
- Plan and provide for the orderly and efficient collection and treatment of waste water services to the community into the future while minimizing adverse impacts to the surrounding natural environment.
- Provide for the collection, treatment, detention, and conveyance of storm water within the community to minimize the threat of damage to life and property and minimize the impact of the City upon the environment.
- Plan for and provide the efficient and effective delivery of emergency services to the Community today and in the future.
- Provide for the orderly, efficient, and sustainable delivery of sanitation services to the community.
- Reduce municipal waste through the expansion of education, recycling, composting, reuse, and other waste-reducing activities.

Chapter 6: Economic Development

Goals

- Provide for sustainable economic growth and employment opportunities where existing and new businesses can thrive, while preserving and enhancing the character of the community.
- Enhance and strengthen the regional economy utilizing the strengths and assets of the region.
- Promote and enhance the arts and cultural resources as catalysts for economic development and tourism.

Objectives

- Provide for the diversification of the local economy while maintaining and enhancing the character of Moscow.
- Strengthen and enhance the vitality of Downtown as the community’s civic core.
- Reposition the industrial areas near Downtown to allow for redevelopment with modern mixed-use developments of commercial and residential uses; provide for easy approval of relocated industrial and agricultural support uses elsewhere in the City.
- Strengthen the physical linkage between Downtown Moscow and the University of Idaho.
- Expand and enhance the promotion of education, arts, and culture.
- Increase the supply of land available for modern commercial, office, and light industrial uses.
1.8

- Make the development review process more “user-friendly” and efficient, without compromising the quality and character of development.
- Provide a positive regulatory environment for investment in research, technology, and light industrial uses.
- Continue to foster strong relationships among the City of Moscow, the University of Idaho, the City of Pullman, Washington State University, Latah County, and Whitman County.
- Promote efforts of local and regional economic development agencies to provide education, training, and networking for local businesses and entrepreneurs.
- Ensure capacity for growth in the water, wastewater, and stormwater systems.
- Provide a sustainable water supply.
- Provide adequate streets to support traffic generated by planned employment and retail centers.
- Improve the reliability and speed of internet access in the City and reduce the cost of access.
- Provide certainty for investment in industrial uses in the southern part of the City.

1.2 COMMUNITY CONTEXT

Incorporated in 1887, Moscow’s historic roots are planted in agriculture. The University of Idaho was initially founded in 1889 as a land-grant university offering courses in agriculture and the mechanical arts. Since its inception, the University of Idaho has continued to expand its educational offerings as a premier research and educational institution and has formed the foundation of the community. As a result, Moscow has blossomed into the unique and vibrant community it is today.

1.2.1 Moscow’s Beginnings

Moscow was not always known as “Moscow.” Camas (a flowering bulb that was an important staple of the indigenous Native American diet) was once abundant and regional tribes of the Nez Perce, Coeur d’Alene, and Palouse would gather annually in the area to collect the roots. See Figure 1.2, Camas Flower (next page). It was the Nez Perce who first called the area Tatkinmah [Tat-Kin-Mah, tukkinma, or Taxt-hinma] referring to the abundance of deer fawns that were present while they gathered the starchy food source. The first permanent settlers of the area found that their pigs thrived on the camas roots, and the area was dubbed “hog heaven” for a time. The area was generally referred to as Paradise Valley and when the first post office—located at the southeast corner of Mountain View Road and Hillcrest Drive—was granted to the settlement in 1873, it was called “Paradise.” When a new post office was established in 1876 at the
southwest corner of First and Main Streets by Almon Asbury Lieuallen, the postal service requested a name change. Samuel Miles Neff is credited with choosing the name of Moscow. Although the reasons for Neff’s choice are not clear, it is suggested that the meaning of “city of brotherly love” was a desirable connotation for the community, and he was likely influenced by the fact that he had been born near Moscow, Pennsylvania and had previously resided in Moscow, Iowa.

Although there was no permanent settlement by the three nomadic Native American tribes who visited the area to gather camas root and for other reasons, it was an important area to their cultures. The Nez Perce were the primary inhabitants of the area and became skilled horsemen. The tribe first obtained horses in the late 1600s and early 1700s and bred the horses for speed and endurance. These spotted horses became famous well outside of the region and are known as the Appaloosa. At one time, thousands of these horses could be seen on the Palouse. After the War of 1877, in which the United States government moved the tribes onto reservations, the horses had mostly been destroyed or confiscated. Even though the war occurred away from Paradise Valley, the settlers at the time were afraid of attacks and built three stockades to protect themselves. The most famous is Fort Russell, which was located northeast of present day Main Street; a historic neighborhood in the same area is named for this fort. The others included: Fort Howard, which was located northeast of town, and Fort Crumerine, which was located at the east end of present day Sixth Street.

Moscow’s beginnings were humble, but the community has prospered due to a series of events that allowed the community to develop. Fur traders arrived in the area as early as 1809 and missionaries came to the area in the 1840s. Others came during the 1850s when a route for the Northern Pacific Railroad was sought out and documented. Some prospectors appeared in the 1860s and mining occurred in the region for decades after. Homesteaders arrived in the early 1870s and laid the framework for what was to become Moscow. Samuel Miles Neff opened the first general store in Paradise Valley in 1873; it also served as Moscow’s first post office. Another early and important homesteader and businessman was Almon Asbury Lieuallen. Although he homesteaded in 1871 east of present day Moscow, Lieuallen bought Neff’s claim in northeast Moscow in 1875 and established a general store at the southwest corner of First and Main Streets. This location also served as the Lieuallen residence and the community’s second post office, which was by then called Moscow. In 1876 four homesteaders, whose claims met at the corner of Sixth and Main Streets, agreed to donate 30
acres of land each to establish a city center for the community. Almon Asbury Lieuallen owned the northwest portion, James Deakin the southwest, Henry McGregor the southeast, and John Russell the northeast. The namesakes of each founder may be found to this day in the street names, plats, and neighborhood identities of each quadrant.

During the late 1870s, Moscow established itself as a center for business and trade. Previously having to travel 150 miles by wagon to Walla Walla, Washington, for goods and supplies, settlers of the area could now conduct business in the community. Early businesses included a dentist, doctor, sawmill, hotel, and blacksmith shop. The opening of the McConnell Maguire General Store in 1879 was large enough to draw consumers from nearby communities. See Figure 1.3, Historic Downtown. By 1880 the population of Moscow had grown to 300 persons and the community continued to thrive with the establishment of a flourmill, church, brewery, and newspaper in the early 1880s. Soon, a school followed on land donated by homesteader John Russell and the first brick building that housed one of the first banks was constructed by Lieuallen in 1885.

Moscow was incorporated on July 12, 1887, after growing in population partly due to the development of a Union Pacific Railroad depot. By the following year Moscow had become the largest city in Nez Perce County and requested to become the county seat. When that moved failed, Representative Fred Dubois pushed a bill through the United States Congress to carve out Latah County from the northern part of Nez Perce County, thus creating the only county formed by an act of Congress. When Moscow became the county seat of Latah County, its citizens dropped their support for the county to join Washington in statehood.

Another great movement in 1888 included Moscow’s journey to become the site for Idaho’s land grant college, the University of Idaho. Congress had approved a measure severing the Idaho panhandle from the rest of the territory and attaching it to Washington; however the bill was stopped by President Grover Cleveland due to protests from Idaho Governor Edward A. Stevenson. This action angered the residents of the north who favored joining Washington, fueled by Lewiston’s loss of the territorial capital to Boise in 1865. As a gesture of peace to the north, the 1889 territorial legislature designated Moscow as the location for the public university. Council Bill 20, known as the university’s charter, was signed into law on January 30, 1889, and became a part of the state constitution when Idaho was admitted to the Union in 1890.

1.2.2 Moscow Today

Moscow is a unique and vibrant community that prides itself in a strong sense of
place, a high quality of life, and a place where people choose to live. The education industry established over 100 years ago continues to serve as the foundation of the community’s economy and, along with the region’s agricultural heritage, continues to contribute to Moscow’s community character. See Figure 1.4, Present-Day Downtown.

Agriculture

The main draw for the early settlers of the area, agriculture continues to be the foundation of the community’s identity. The Palouse region’s rich soils, adequate rainfall, and mild 150-day growing season allow for dryland farming practices and contribute to the factors that make the agricultural lands around Moscow some of the most productive in the world. The steep 25 and 30 percent slopes of the area created unique challenges to farming, resulting in skilled teamsters and eventually tractors and harvesters specially designed for the region’s steep slopes.

Livestock and fruit were once bigger parts of the region’s agricultural production and economy, but today the principal crops in the region are soft white winter wheat and rotations of pulse crops such as peas, lentils, and garbanzos. These pulse crops earned Moscow the home of the headquarters for the USA Dry Pea and Lentil Council, and neighboring Pullman, Washington, is host to the National Lentil Festival.

University of Idaho

Founded in 1889 as the State of Idaho’s only land grant institution, the University of Idaho provides the major economic, educational, and cultural foundation of Moscow. The University’s 1,585 acre campus encompasses a major portion of land area within Moscow’s city limits, and provides more to the community than simply a place of learning. The historic core of the campus was designed by the Olmstead Brothers in 1908 and includes a beautifully landscaped setting for the Tudor Gothic Administration Building designed by Boise architect John Tourtellotte. The campus grounds are irrigated predominantly with treated effluent from the City’s wastewater treatment plant, and include nearly 80 acres of arboretum, which provide not only learning grounds for students, but an area for passive recreation and conservation of open space. In addition to the campus, the University has over 850 acres of farmland that is utilized for teaching and research and serves as a tribute to the community’s tradition in agriculture.

Recreation and athletics play a large part in the identity and assets of the University. Home of the Vandals, the University has a variety of collegiate sporting events that draw residents, area alumni, and fans to Moscow. The Kibbie Dome is the home to the football and soccer teams, but also plays an
important role in community-wide events and is a point of pride as it achieved a national engineering structural achievement award when constructed in 1976. Large outdoor play fields are often utilized by practicing teams, student groups, and community members. The campus also includes a 150 acre, 18-hole public golf course that adds to the recreational assets of the community.

Focusing on quality undergraduate and graduate education, the University continues to emphasize its commitment to higher education by providing a variety of programs to more than 11,000 students from all 50 states and many foreign countries. The University has been recognized as one of the best values for public colleges due to the institution’s academic strength and value. Employing over 850 faculty and 1,300 staff members, the University is a core employer in the community. In large measure, the question of the future rate of Moscow’s growth will depend on the growth of the University of Idaho. The University’s Long-Range Development Plan Update 2000 states that the University can support 15,000 to 17,000 students by intensifying its current academic core.

**Arts & Culture**

Arts and culture are at the heart of Moscow’s identity. In fact, one of the City’s official slogans is “Heart of the Arts” and Moscow has many programs and events that foster connections to the arts. The Farmers’ Market was established in 1977 and is a popular gathering and shopping event held on Downtown Main Street every Saturday from May through October. The Fresh Aire Concert series highlighting local musicians is sponsored by the Moscow Arts Commission (MAC). Moscow ARTWALK, started in 2004, brings regional artists together with local businesses. Moscow City Hall is home to the Third Street Gallery where exhibits sponsored by the MAC are open to the public during business hours and evening openings.

The University of Idaho also contributes strongly to the cultural amenities of the community. Each February, the Lionel Hampton International Jazz Festival brings thousands of students and jazz fans to Moscow for three full days and nights of artist studios, performances, and student competitions. See Figure 1.5, Lionel Hampton Jazz Festival (next page). The event began in 1967 and took on Lionel Hampton’s name in 1985 after he pledged his support to the event, and the festival was awarded the National Medal of the Arts in 2007. The mounting importance and recognition of this event illustrates Moscow’s ability to cultivate assets and contend with communities of larger size. The Prichard Art Gallery is an outreach facility of the University located in the heart of Downtown since 1982. It hosts changing exhibits throughout the year, serving over 15,000 visitors annually. The Hartung and Forge Theaters, located on the University campus, present many live theater productions.

There are many other long-standing traditions and facilities that promote Moscow as an arts and cultural center. The Renaissance Fair, started in 1973, is held the first weekend of May as a celebration of spring with arts and crafts...
booths and live entertainment. Rendezvous in the Park is a three-day music event that has been held each July since 1983, and, due to its great success, it became a private non-profit corporation in 1990. Both of these events occur at the East City Park, which is a favored location for many outdoor arts and music events. The McConnell Mansion Museum, located at 110 S Adams Street, was constructed in 1886 as the home of William J. McConnell who, as state governor, secured Moscow as the site for the University of Idaho. The house was bequeathed to Latah County in 1966 for use as a museum and is operated by the Latah County Historical Society. Another museum housing important local history is the Appaloosa Museum and Heritage Center, located at 2720 W Pullman Road. It was established in 1975 to collect, preserve, study, and exhibit objects and information that illustrate the history of the Appaloosa horse.

**Regional Connections**

Moscow is not only characterized by its historical foundations and current activities within its borders, but also by its relationships with the surrounding areas and communities. Moscow is tied closely to the residents of Latah and Whitman Counties and surrounding incorporated towns, many of whom commute to or through Moscow daily.

Moscow’s location in north central Idaho is part of a mini-region often referred to in local economic conversations as the Quad Cities. This designation is shared with Lewiston in Nez Perce County, Idaho; Clarkston in Asotin County, Washington; and Pullman in Whitman County, Washington. All four communities are within easy commuting distance of one another and individuals often have split interests in the communities as either the place they live or work.

Pullman is the closest community to Moscow, not only in distance but also in economic foundations. Just eight miles to the west of Moscow, Pullman is home to Washington State University (WSU) and has the same historical roots in agriculture as does Moscow. In comparison, Pullman is home to approximately 33,354 residents (2017 U.S. Census estimate) and WSU has 20,286 students (2017 Pullman Campus enrollment). Moscow and Pullman, with their twin-like characteristics, share some assets but retain their distinct identities. Shared amenities include the Moscow-Pullman Regional Airport, the Bill Chipman Palouse Trail, and certain academic and athletic events.

Within the Inland Northwest region, the largest nearby cities are Spokane, Washington, and Coeur d’Alene, Idaho, both approximately 85 miles north. Spokane has a population of just over 217,000 persons and provides international air travel. Both cities are situated along I-90, Moscow’s nearest link to the interstate system. Moscow is more closely related to these cities for...
1.14

Figure 1.6
Moscow Population Trend

Source: U.S. Census (1970-2017); City of Moscow (projections)

economics and commerce than to the state’s capital of Boise which is roughly 300 miles to the south and accessed only by the state highway system and air transport.

1.2.3 Moscow in 2030

In 2010, the City of Moscow had a population of 23,800 persons according to the U.S. Census. As of 2017, the population had grown to 25,146, an increase of 1,346 persons or five percent over the seven-year span. This amounts to an average annual rate of growth of slightly less than one percent. The relatively linear population growth rate the City has historically experienced is projected to reach 28,760 people by 2030. See Figure 1.6, Moscow Population Trend. This would be a 14.4 percent increase over the 2017 estimate, adding another 3,614 persons.

1.3 NATURAL RESOURCES

Moscow’s unique sense of place comes as much from the surrounding rolling hills of the Palouse as it does from the City’s built environment. The preservation and protection of these scenic landscapes, valuable farmlands, and other natural
resources from scattered urban development is critical to the logical, orderly, and sustainable growth of the community that preserves the community’s noted high quality of life.

1.3.1 Natural Setting

Moscow’s natural setting on the eastern edge of the Palouse region provides the basis for the region’s agricultural economy while providing a picturesque landscape with recreational opportunities for area residents. The Palouse is a region of asymmetric rolling hills in Idaho and eastern Washington north of the Clearwater and Snake Rivers. The rolling landscape is composed of wind-blown silt, or loess, that is particularly beneficial for dry land farming.

*Vegetation and Wildlife.* Before the first settlers arrived in the late 1860s, the area was prized by the regional Native American tribes for gathering camas root. The native landscape was rich in bunchgrasses, short shrubs, and wildflowers with stands of ponderosa pine. The northern faces of the region’s higher hills continue to grow small stands of Douglas fir and ponderosa pine. Views from Moscow to Paradise Ridge and Moscow Mountain are evidence of the more heavily timbered past of the Palouse and the region’s wood product industries. These stands of forest not only offer a home to area wildlife, but also provide an amenity to rural home sites.

Within the City there is an extensive urban tree canopy, especially in the historic and established neighborhoods that surround downtown. Moscow has been recognized as Tree City USA since 1994 and its volunteer Tree Commission works for the preservation, protection, and management of the community urban forest. Trees provide great benefits to the community in the way of aesthetics, reducing pollutants, and protecting resources. Trees enhance the appearance of the street environs while calming traffic and promoting a comfortable environment for pedestrians. Studies have shown that the presence of trees increases residential property values and encourages shoppers to linger in commercial districts. Summertime shade afforded by tree canopies reduces energy consumption by minimizing the need for air conditioning and reduces the effect of heat islands, such as parking lots, which increase the air temperature. Pollutants are removed from the air and ground through a tree’s natural processes, thus creating cleaner air and preventing pollutants from entering the waterways. The sheltering effect of trees also slows rain, reducing the speeds of runoff, allowing for better absorption of water into the ground and reducing erosion.

Riparian, wetlands, and pollinator habitats are a unique part of the natural and urban environment as they provide for a diversity of species and are beneficial to wildlife and people alike. The term *riparian* generally refers to the vegetation that occurs along the banks of natural watercourses while *wetlands* are low lying areas saturated with water. *Pollinator* habitats focus on pollinator-friendly plants, flowers, and ground areas that promote insect transit corridors and pesticide-
safe islands and borders in an urban environment which are further useful for accessing rural agricultural lands. These types of environments are important for protecting water quality and providing shelter, food, and corridors for animals. Common riparian vegetation in the area includes willows, alders, aspen, and cottonwoods. The vegetation slows water velocity and provides multiple benefits to water quality. With the slower stream velocity, the rate of erosion is slowed and particulate matter is allowed to settle. The roots filter pollutants and catch sediment thereby preventing them from reaching the stream. The canopy provides shade preventing an increase in stream temperature. The riparian areas and wetlands are especially important for avian habitat and support red-winged blackbirds, mallards, and yellow warblers on the Palouse. Agricultural and urban development adjacent to waterways often harms these important habitats. Preservation of these areas can help minimize the impacts of development and provide amenities such as buffers between uses and recreational pathways.

Deer, elk, and moose originally inhabited the area and can still be seen today. Hawks and owls have thrived despite the change in habitat, feeding on ground squirrels, gophers, and mice. However, many species have not been so fortunate due to the changing landscape. Birds such as the Brewer’s sparrow and the sharp-tailed grouse are diminished while many non-native species are commonly seen such as the Canada goose, California quail, and ring-necked pheasant.

Although these animals generally depend upon the natural and agricultural areas that surround the City for habitat, some have adapted to living within the City such as ring-necked pheasants, squirrels, California quail, and others. Many residents enjoy watching the birds and small animals in their neighborhoods, which connects the urban area with its surrounding rural landscapes.

Soils and Minerals. The rolling hills of the Palouse were formed from windblown silt, or loess, that has been shaped by wind and snow and is more than 150 feet deep in some places. The predominant soil types are Palouse Silt Loam and Caldwell Silt Loam. The latter is found where drainage courses have cut through the deep soil and deposited alluvial material in their valleys. The earliest settlers found the region to be particularly suitable for agricultural uses despite the challenging topography. The unique water-retention qualities of the soil allows crops to mature over the dry summers without irrigation.

The steep 25 and 30 percent slopes combined with the silty soil and agricultural uses create prime conditions for erosion. Where vegetation is removed periodically in the fields, severe erosion of the topsoil can occur. According to the Latah County Soil and Water Conservation District, the average farm loses three to four tons of topsoil per acre annually. This reduces the productivity of the land, creates siltation of streams, and damages water quality. The Latah County Soil and Water Conservation District works with farmers on a voluntary basis to implement best management practices to reduce soil erosion. The erosive soils around Moscow are generally not fit for septic systems, except on large parcels.
Under the layers of wind-deposited loess, the area has a very unique geology. Once a deep canyon, volcanic activity filled the area and provided for the basalt layers that contain two major aquifers that supply the area with water. The distinctive geology also provided for the development of minerals and gems. Early settlers mined for gold, opals, copper, mica, vermiculite, and asbestos in limited areas of the Palouse and the surrounding mountainous areas to the east of Moscow. Today, recreational mining of garnets occurs in Latah County as well as commercial mining of clay for pottery and mineral extraction and basalt for gravel. To the northeast of Moscow, there are clay deposits rich in alumina and ilmenite, which is a source of titanium. Although additional mining could be possible in the area surrounding Moscow and Latah County, steps should be taken to ensure that such activity does not adversely affect the quality or quantity of water available to area residents.

**Water.** Moscow utilizes two major aquifers that are located in the basalt rock under the layers of loess soil. The Wanapum is the shallower of the two aquifers at about 60 feet below the surface. The Grande Ronde is much deeper at 300 feet below the surface. These aquifers supply water to Moscow. The Grande Ronde also supplies water to Pullman, Palouse, and Colfax, Washington. During the 1950s and 1960s, draws from the Wanapum aquifer brought levels down to alarmingly low levels so the City then developed wells within the Grande Ronde aquifer. As demand increased, the City began drawing water from both aquifers, finding that in the interim the Wanapum aquifer had experienced some level of recharge. The City still draws from both aquifers, but concerns remain about the quantity of water that is available to the City. To protect future water supply, the City should engage in conservation, promote further research, and investigate the potential for using alternative sources of water.

Much research has been conducted on the area’s hydrology since the 1960s, yet identification of significant recharge areas has been elusive. Research is ongoing as to how, where, and to what degree the aquifers are recharged. The Latah County Hydrologic Characterization Project Final Report by Jerry Fairley et al., found that the base of Moscow Mountain was not a significant area of recharge for the Wanapum aquifer, as had been previously suspected. The September 2006 report concluded that a field study with regard to Wanapum aquifer recharge should be conducted at the west side of the basin in the vicinity of the Idaho-Washington state line.

Paradise Creek and the South Fork of the Palouse River are the principal watercourses in the area. Paradise Creek originates in the Palouse Range to the northeast of Moscow. It runs along the east side of the City limits, cuts through the southeast corner of town, follows the Burlington Northern–Union Pacific Railroad rights-of-way through the center of town, and then continues west toward Pullman, Washington. The South Fork of the Palouse River and Paradise Creek both normally experience year-round flow. A small tributary
named Hogg Creek cuts through the Northwestern area of the City and flows into Paradise Creek along Pullman Road.

The valleys of these three waterways, containing more level land than is found in other areas of the City, attract development. Both the river and creeks, however, are subject to occasional flooding during the winter and early spring when warmer air melts snow and brings heavier precipitation.

**Climate and Air Quality.** Moscow’s climate is relatively mild. Average summer high temperatures are in the low 80s, and average winter low temperatures are in the 20s. The City averages 23.8 inches of total annual precipitation. January is generally the month with the greatest snowfall, averaging 16 inches of snowfall and four inches of snow depth. Mild winters with wet springs facilitate the growth of crops and the unique water-retention qualities of the soil allow the crops to mature over the dry summers without irrigation. Monthly climate data is shown in Figure 1.7, Moscow’s Climate.

Air quality in the region is generally quite good. The state monitors the air for particulate matter that is 2.5 microns in size (PM2.5) and at this time has no cause to monitor for other pollutants. The Environmental Protection Agency (EPA) provides a composite measure of air quality called the Air Quality Index or AQI. Ninety-nine percent of the time the air quality was considered “good” at an AQI less than 50. Since 2001, there have been only three recorded instances where air quality was considered unhealthy for sensitive groups with an AQI between 101 and 150. The most significant sources of air pollution, including particulates, are wildfires and agricultural field burning.

### 1.3.2 Hazardous Areas

With the exception of steep slopes and floodplains that are discussed below, there are very few natural hazards in the City or its area of influence.

**Topography.** Topography in and around Moscow is generally rolling hills, typically rising between 20 and 80 feet above adjacent low points. See Map 1.1, Steep Slopes and Floodplain Areas. The north and northeast faces of the area’s hills are frequently as steep as 40 to 50 percent, while the south and southwest
slopes have grades that are generally between 10 and 25 percent. The City’s rolling hills and surrounding peaks are a visual asset. The ridges in and around Moscow are desirable sites for residential development because of their views, yet the challenges presented by the topography are as numerous as the desirable aspects.

The steeper slopes increase building costs and make intensive development difficult. For example, pumping facilities are required to provide water and sewer service to some areas. Furthermore, as slopes increase the velocity of runoff is increased, which, in turn, increases the severity of erosion to vulnerable fine-grained soils. Where land is developed and vegetation is not replaced or expensive retaining walls built, excessive moisture and highly erosive soils can cause small-scale landslides. As such, City regulations should require extensive erosion control measures on slopes during and after construction, and the City should support efforts to educate landowners about soil conservation best management practices.

**Floodplains.** The most recent Federal Emergency Management Agency (FEMA) flood zone map was promulgated by FEMA on April 15, 2002. A Letter of Map Revision (LOMR) was approved by FEMA on March 27, 2013 as part of the University of Idaho Recreation Center/Paradise Creek daylighting project. The 2013 LOMR remapped the floodplain from the US95/HWY8 south couplet to Perimeter Drive. Floodplains are depicted in Figure 1.8, Map of Flood Hazard Areas (next page).

Flood mitigation requirements for development within a floodway and/or floodplain have been incorporated into the Zoning Ordinance. Historically, Moscow’s focal points for flood damage have been:

- Paradise Creek on the north side of East D Street, west of Eisenhower Street;
- The east end of Hillcrest Drive and the north end of Bridge Street
- The land south of the creek east of Mountain View Road, west of South Meadow Street, and north of Joseph Street
- South Meadow Street north of Joseph Street
- Ghormley Park and Home Street
- East of Line Street at its intersection with State Highway (S.H.) 8 and Third Street
- South Fork of the Palouse River east of U.S. Highway 95 South at Palouse River Drive
- West of U.S. Highway 95 south of Palouse River Drive
- South Harding Street

**Seismology.** There are no active faults within Moscow or its Area of City Impact. However, Moscow is situated within Seismic Zone IIb, which means that there is
1.20 a moderate risk of earthquakes resulting from seismic activity in other locations. The City’s Building Codes account for this risk.

1.3.3 Local Response to Changing Global Climate Conditions

According to the American Planning Association, over the past decade, planners have long focused on smart growth and sustainability, although they have not always directly connected them to climate change. Mitigation measures such as combating urban sprawl and, in turn, fewer vehicle-miles traveled can result
in reduced greenhouse gas (GHG) emissions. Addressing the symptoms of climate change such as stormwater management and precipitation changes are adaptation measures. Many cities are working to significantly lower GHG emissions among a variety of actions, including higher density development, encouraging green building materials, and incorporating alternative energy sources. “By promoting the synergy between smart growth, sustainability and climate change mitigation and adaptation, planners can effect positive outcomes through a so-called ’no regrets’ approach, whereby actions taken to adapt to or mitigate climate change are ones that should be taken anyway for other reasons related to smart growth and sustainability.” (American Planning Association, Policy Guide on Planning and Climate Change)

The Guide identifies five primary hazard types linked to climate change: Heat waves, strong storms, flooding, drought, and wildfires. It further references areas of local concern. It is generally expected that the specific climate change impacts to the Pacific Northwest Region will include increases in annual average temperatures between 5ºF and 8.5ºF by the year 2080 with potentially slight increases in annual precipitation. With the warmer temperatures it is anticipated that annual snowpack will decline, stressing water resources, and increasing the risk of wildfires from rising temperatures and drier summer conditions. Additionally, climate changes may result in population migration as people seek less adversely impacted areas. The Guide states that, “Rapid population growth may strain infrastructure, exacerbate NIMBYism, negatively impact community character, and create significant social services capacity issues.”

Among their recommendations are: to protect and enhance green spaces; reduce GHG emissions; promote public awareness and incentive programs; focus on public construction specifications, requirements, and retrofitting; and encourage locally produced food.

**Water.** With the reliance on the Wanapum and Grande Ronde aquifers as the primary water sources for Moscow, there is a potential for reduced aquifer recharge because of changing climate patterns. The relatively linear population growth rate that the City has historically experienced is projected to reach 28,760 people by 2030. The changing climate conditions in other regions of the United States may lead to an increase in population growth in the northwest region due to a migration of people from areas that are more adversely effected by climate change. Increased water consumption due to population growth, declining aquifers, lower precipitation in the summer, earlier and faster runoff in the spring, and climate migration could further strain water supply in the future. Providing for future growth will require additional conservation, the expansion of effluent irrigation, and the investigation into an alternate water supply among other recommendations which are discussed in detail in **Section 5.3, Potable Water.**
Air Quality. Climate change is projected to alter forests in the northwest and southwest regions of the United States by increasing wildfire risk and insect and tree disease outbreaks. Many impacts will be driven by water deficits, which increase tree stress and mortality, tree vulnerability to insects, and fuel flammability. Although Moscow has a relatively low wildfire risk because of the surrounding agricultural fields, the City will continue to experience impacts to air quality because of regional wildfires and a lengthened fire season. Health, quality of life, outside working conditions, outdoor recreation, and the tourist economy can all be significantly impacted by air quality. Although air quality is largely a result from broad weather patterns that far exceed the City’s ability to influence, the City should encourage natural filtering agents such as the urban forests, continue to reduce carbon emissions, and explore alternatives to outdoor activities that would provide additional options during negative air quality events.

Energy Usage. Moscow is currently implementing a 20% by 2020 Plan through City operations with a goal of reducing carbon emissions 20% below a 2005 baseline. Upon completion of this goal in 2020, the City should explore expanding that effort to further reduce carbon emissions and fossil fuel consumption. The City could also explore incentives for citizens, businesses, and the University of Idaho to reduce their carbon emissions, similar to current incentives for water conservation. Individuals and businesses may desire to implement on-site solar electric or solar thermal or small-scale wind systems. There may also be a desire to create co-op or other community energy production systems which may require new permitting schemes. The City should identify barriers to alternative energy production and promote the use of fossil fuel alternatives.

Transportation. In order to reduce carbon emissions in the transportation sector, the City should continue to promote the use of multi-modal transportation within the community. Expanding SMART Transit routes and schedules while sustaining them at low- or no-cost to citizens (the fixed SMART route is currently free to riders while the Dial-a-Ride has a fare charge) has been surveyed as a desired community outcome. Greater flexibility and accessibility should increase SMART ridership and decrease general vehicle usage. The City should continue to expand the bicycle and pedestrian transportation network and continue the “Complete Streets” approach that has been incorporated in new development. The City should continue to work with the University of Idaho to implement a bike and potentially, scooter share program initially focused on stations located on campus and downtown. Electric vehicles and their charging stations are also an emerging trend which the City could partner with Avista to explore. Strategic locations could be chosen for charging stations, such as public parking lots downtown, which could provide an economic benefit to downtown. Mixed-use developments and subdivisions can also provide shorter distances to critical services and promote the use of non-motorized transportation. Transportation goals and objectives are discussed in more detail in Chapter 3, Community Mobility.
**Infrastructure and Environmental Impacts.** Over the past decade the City has been focusing on revising Zoning Code requirements to allow greater flexibility in setback requirements, more mixed-use development permitted by right, more opportunities for infill development, and higher density close to the City core. Parking requirements were revised in 2017 to allow for reduced areas of impervious surface, larger areas of green space to manage and filter stormwater runoff, incentives for incorporating bicycle parking, and easier opportunities shared parking arrangements. The City should continue to support opportunities to incorporate higher density development where appropriate as well as different housing options such as townhomes, twinhomes, and smaller homes. Managing storm water runoff as federally mandated and mitigating stream flooding impacts will maintain property value and retain more moisture in soils, as well as reduce impacts on city wastewater treatment and recovery systems.

**Climate Migration.** Due to the effects of climate change in certain regions of the Country potentially flooding coastal areas, causing widespread drought and extreme temperatures, and increasing the frequency of dangerous storm events, there is a potential for a population migration from those regions to areas that are less adversely impacted such as Moscow. Migration could occur slowly or could become sudden and would increase the demand for jobs, housing, resources, and services. Planning for growth is critical for normal population growth and made more urgent by the potential of climate migration which could bring with it an increasing burden to support economic opportunities, infrastructure, and city services.

**Food Security.** Climate change presents two challenges to the local food supply. Remote weather events could impact production and prices, and local weather events (e.g., ice storms, flooding) could impede supply. Locally produced and distributed food could address some of these concerns, both via the Farmers Market and individual urban agricultural efforts. There is a growing trend toward local food establishments featuring locally grown produce, as evidenced by a very successful downtown Moscow Food Co-op, local restaurants that feature regionally-sourced ingredients, and a variety of food vendors in the Farmers Market. The City approved an urban agriculture ordinance in 2013 which permitted agricultural activities throughout the City to promote local food production. Continued support of local food production can increase access to healthy food options, reduce the environmental impacts of food distribution and transportation, and increase food security and affordability in the community.

**1.4 NATURAL RESOURCE GOALS AND OBJECTIVES**

**1.4.1 General Natural Resource Goal**

- To protect and conserve the natural resources of the area in a manner that balances their ecologic, economic, and aesthetic potentials to preserve
natural features and ecosystems while directing development away from floodplains, steep slopes, and other hazard areas to protect public health, safety and welfare, and preserve sensitive areas.

1.4.2 Natural Resource

Objectives:

A. Promote the conservation of valuable agricultural lands and Moscow’s surrounding rural landscape.

B. Protect and enhance regional waterways and sensitive riparian areas to serve their natural functions, and as aesthetic and recreational assets.

C. Protect and expand the City’s urban forest.

D. Minimize hazard potentials to new developments from flooding, excessive erosion, and earth slides.

E. Incorporate a proactive response to potential local and regional effects of changing climate conditions on natural resources and their impacts on biological diversity, ecological sustainability, and socio-economic factors.

F. Conserve and protect the groundwater of the region’s aquifers and their natural recharge areas (as they are identified).

G. Conserve sensitive natural areas for aesthetic and ecological purposes.

Implementation Actions

1. Direct new development to areas that are adjacent to existing developed areas where City utilities and other public services are readily available.

2. Minimize large lot subdivisions and other low-density development patterns in areas close to the City where higher density development can make more efficient use of available lands.

3. Protect farmland in areas surrounding the City, where intensive development is not appropriate, through agricultural zoning, clustered development, and non-agricultural use restrictions.

4. Promote the protection of the remaining areas of Palouse Prairie, utilize restoration methods for open spaces and retired farmland, and encourage use of native plant species in landscaping applications.

5. Provide buffer areas between new development and waterways, riparian and wetland areas by clustering development outside these areas, while still providing for the equivalent development density.

Where feasible, non-motorized multi-use pathways should be incorporated within riparian buffer areas to enhance educational, transportation, and recreational opportunities.
6. Develop partnerships with local, state, and federal environmental and natural resource management agencies to preserve and restore riparian areas and key wildlife corridors and habitats.

7. Actively promote the protection and expansion of the City’s urban forest by:
   a. Increasing the species diversity of ROW tree planting efforts through publications, educational venues, and partnerships with local tree nurseries.
   b. Developing a systematic program for education, attentive monitoring, and active enforcement of existing ordinances concerning the removal and replanting of ROW trees.
   c. Inventorying the condition and vigor of the Downtown Business District ROW trees and determining a complete lifecycle and replacement plan that would consider methods of improving conditions for existing trees and developing improved planting schemes.
   d. Working with utility providers to relocate utility lines underground or to one side of the street to reduce the damage done to street trees by pruning around utility lines.

8. Revise the surface drainage regulations to increase treatment and detention of surface water runoff using techniques such as bioswales and on-site detention, and consideration of the use of alternative pervious paving surfaces, particularly in areas of modest or infrequent vehicular utilization.

9. Adopt regulations to direct intense development away from steeply sloped areas to minimize grading, soil erosion, and the potential for property damage.

10. As they are identified, adopt regulations that protect and set aside aquifer recharge areas as open space.

11. Understand, conserve, and protect the aquifers of the region including:
   a. The enhancement and expansion of water conservation practices by individuals and private and public entities, including the expansion of effluent reuse.
   b. Further research of the aquifers to better understand the water quantity, quality, sources, and locations of recharge that may be occurring.
   c. Research and consideration of alternative water sources that may be utilized to supplement the current groundwater withdrawals.

12. Adopt regulations that provide for preservation of sensitive natural areas via development clustering and other innovative development practices.

13. Amend the parkland dedication ordinance to allow credit for the preservation of sensitive natural areas that meet defined passive recreation and open space preservation criteria.