EXPLORING CLIMATE IMPACTS

Social Vulnerability

When climate hazards occur now and worsen in the future, the most vulnerable populations are dealt the most severe consequences. Identifying who in the community is most vulnerable is key to assure policy doesn't disproportionately address hazards and miss helping underserved community members. Based on census tracts, the area, including the City of Royal City, has a medium social vulnerability index of 5 out of 10.

City of Royal City Assets

Agriculture & Food Systems

Grant County contributes to roughly 20% of the state's agricultural market value. A wide variety of crops are grown, processed, and/or stored in the area, which include beans, apples, pears, cherries, wheat, alfalfa, mint, onions, potatoes, and carrots.

Buildings & Energy

The City has a healthy mix of uses and ample open land left for growth. About 39% of the housing stock includes mobile homes and RVs, which are less insulated and less equipped for efficient temperature and air quality control.

Cultural Resources & Practices

The City is in an area with high archeological risk, so major development is required to have a cultural resource survey taken prior to development to ensure significant history isn't lost. The City has a rich community centered around youth sports and annual festivities including Summer Fest and Fiestas Patrias.

Economic Development

The City's economy is greatly influenced by the agriculture industry. The active Port of Royal Slope and Hiawatha Industrial Park along Highway 26, supported by a private airstrip and railway, are promising additional economic drivers for the community.

Ecosystems

Mixed between crop circles, roads and highways, and City development, Shrub-steppe habitat has been presumptively identified by the Dept. of Fish and Wildlife. The City also has notable tree canopy at Lions Park, the Golf Course, and along Ahlers Ave., providing shade and cooling in the high desert climate.

Education

The Royal City School District #160 operates four schools serving pre-K through 12th grade. A new 4,000 sq. ft. North Central Washington Library branch was completed in 2025, offering public computer access, meeting spaces, and a broad media catalog.

Emergency Management

Grant County Fire District #10 (Royal Slope Fire Rescue and EMS) provides fire protection and EMS services to the City, while protecting 400 miles regionally. The City's Police Department and its officers serve the community from offices in City Hall.

Health & Well-being

A Confluence Health Clinic operates within the City, with most residents traveling to Moses Lake or Othello for specialized services. Behavioral health services are also available through Renew within the City.

Transportation

SR-26 is the City's primary transportation corridor. Grant Transit Authority provides Dial-A-Ride service, and the community has a robust trail and sidewalk system in place for a community of its size.

Waste Management

The City sends about 1,400 tons of waste to the landfill. Cardboard and aluminum can recycling is available at City Hall, and the City's Water Reclamation Facility treats wastewater and recharges groundwater through three infiltration beds.

Water Resources

The municipal water system is composed of three deep basalt wells, three reservoirs, and approximately 49,700 feet of distribution piping. The City is also surrounded by USBR irrigation canals, providing a separate irrigation water source for agriculture.

Zoning & Development

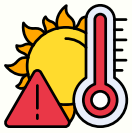
The City amended its Comprehensive Plan in 2025 and will add a Climate Planning Element through the 2027 periodic update required by the Growth Management Act. These documents help set City priorities and goals for the next 20 years.

Climate Hazards

Drought

- Royal City is going to see an increase in precipitation by the end of the century, however, when and how the rain falls is projected to be more concentrated with an increase in extreme rainstorm events and erratic decreases in summer precipitation.
- Overall, a 25% chance of summer drought is expected. Reduced snowpack in the greater region can contribute to reduced aquifer levels and water supply, while water demand is expected to grow.

Extreme Heat



- Royal City is going to see an increase in extreme heat days through the rest of the century.
- More days of the year will require cooling and fewer days of the year will require heating.
- Currently on average from 1990–2020, the area experiences only 3.3 days of the summer that reach 100°F or above.
- With the increase projected, that can become between 14.8 and 33.2 days of the year by the end of the century.
- The cooling energy demand increase is significant to the built environment, particularly for the many residents in mobile homes and older housing stock with limited insulation.

Extreme Precipitation

- Royal City is going to see an increase in extreme precipitation events through the rest of the century.
- The average 2-year storm of 0.8"/day could increase 8–26%, and the 25-year storm average of 1.74"/day could increase 10–33%. Concentrated storm intensity could cause erosion and temporarily overload stormwater systems.

Wildfire- Smoke and Air Quality

- While Royal City and most of Grant County is protected from an increased wildfire risk, it is surrounded by environments that will be at more risk, with winds likely to blow smoke and poor air quality into the City.
- Locally, undeveloped areas are generally mowed and maintained, reducing combustible fuels, however tumbleweed accumulation through windstorms presents an increasing fire risk within City limits at a growing labor cost to the community.