

# Infrastructure

## Goal and Work Plan Priorities

### Goal Statement

Support Duncan with adequate services that meet the needs of existing and new residential, commercial and industrial development with community facilities, infrastructure, and services which allow for sustainable growth and that are accessible, equitable, efficient, cost-effective, and sensitive to the environment.

### Work Plan Priorities

#### General Infrastructure Priorities

##### **Ensure City of Duncan is addressing utility bill accuracy for residents and businesses**

With recent technological changes and installation of advanced metering systems, citizens have requested that the City of Duncan provide more information regarding the accuracy of bills to residents and businesses. Regular updates from City Hall, use of downloadable apps, and use of official City of Duncan social media outlets prove to be beneficial to get the desired information out to the public and should be continued.

##### **Improved communication by utility providers to residents and businesses about upcoming projects and improvements**

Like many communities across the nation, Duncan is faced with an aging infrastructure system that requires continued repairs and maintenance. In some instances, these repairs and maintenance may be perceived as an interruption to the daily lives of our citizens and businesses. To help mitigate the interruptions, local utility providers can communicate in advance upcoming projects and improvements that have been planned. In the event of emergency repairs, utility providers can utilize social media and other forms of communication to let residents and businesses know the location and duration of the event.



##### **When feasible, bury utility lines to create a more aesthetically pleasing community**

Duncan residents have asked that local utility companies that have hanging or above ground services consider, when feasible, burying their services to create a more aesthetically pleasing community. The areas and districts where this practice should be focused would include residential districts and commercial areas where the design and streetscape encourage a more pedestrian and human-scale feel. These visual improvements will potentially recreate the feel and quality of the different neighborhoods, drive residential rehabilitation and reinvestment, help to build upon Duncan's "charm" for new tourism opportunities, and allow businesses to utilize outdoor spaces on temporary basis that are currently underutilized for activities and events. Balancing the implementation of this community work plan needs to consider not only the visual impacts but also what added costs may be associated with future repairs and maintenance as additional time and resources will be required with utilities that have been buried.



## **Infrastructure Accessibility Priorities**

### **Continue to work with utility providers and residents seeking to operate homebased businesses so that all utility and infrastructure needs are met**

In the last five years, the ability to work remotely or from home has grown across several industries and has provided new opportunities for individuals and families to be more productive while also allowing for flexibility and balance with home/family life. As these trends continue, citizens have asked that the City of Duncan look at several potential policy changes that would better accommodate this form of work and employment and to ensure that there are adequate utilities and infrastructure made available to the residential districts.



### **Continue to work with utility providers and identify necessary resources to address entrepreneurial needs and allow for greater success**

There are approximately 31 million entrepreneurs in the United States (approximately 16% of the adult workforce population) and it is estimated that over 50% of adults have started a business at some point in their lives. The State of Oklahoma has also established itself as an environment where entrepreneurship is celebrated and cultivated as we grow our own through investment that fosters the innovative ideas and our pioneering spirit. Duncan is also proud of the entrepreneur spirit that exists and has established several industrial leaders, and this spirit needs continued support by ensuring that our utility providers continue to identify and implement the necessary resources to address the needs of our citizens that will maximize success. These items include telecommunications, fiber optics, and power supply needs.



### **Continue to work with utility providers in providing infrastructure and services that will allow current and future businesses to prosper and be competitive in future markets**

Technology is advancing now at its fastest rate in history, and as technology advances our citizens and businesses need to be able to remain competitive at the global market level. This means that access to this new cutting-edge technology, infrastructure, and utilities will need to be made available as soon as possible. To ensure this occurs, the City of Duncan will need to work with multiple service providers to ensure the local policies align with technological advancements, the zoning and land use codes acknowledge and permit these advancements, and the necessary rights-of-way and easements are available to support the installation of new technology that supports Duncan's current and future businesses so that they may remain competitive in future markets.



## **Infrastructure Resilience and Efficiency Priorities**

### **Protect existing water supply for current and future residents and businesses**

To effectively protect our water supply from potential contamination will require the City of Duncan to work with several key partners that exist across organizational and jurisdictional boundaries. The initial steps will need to focus on education and information and demonstrate the need for protecting our local drinking water sources. Volunteer groups and stewardship programs can be beneficial to the education and information stage and is strongly encouraged. The next step will be to offer several action steps that local, tribal, regional, and state officials can consider for watershed protection, conservation, regulation, planning, and economic development. These steps should not only look at the existing water sources that Duncan utilizes, but also potential future sites and sources that could be considered. Finally, through the established partnerships, programs, and planning, the action steps to protect our water supply will need to be adopted and implemented.



### **Establish policies for sustainable and renewable energy sources**

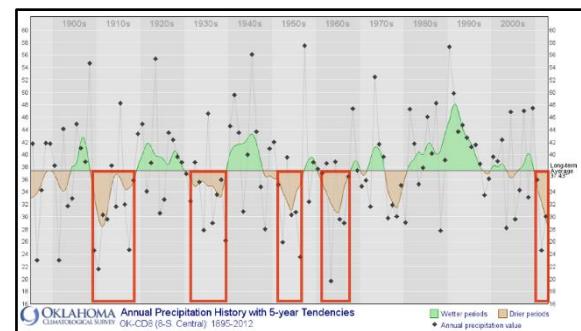
With continued advancement in technology related to sustainable and renewable energy sources, Duncan needs to consider policies that can help guide the residential, commercial, and industrial investments within the community. Currently, Duncan allows private installation and use of solar and small-scale wind (depending on overall height) but does not have a program in place to buy back excess energy produced.

Commercial and industrial applications, such as production and long-distance transmission of power generated at "farms" is not fully covered by adopted land use code so there is a need to consider policies that address this potential development and how it may impact existing land uses and developments.



### **Identify potential water supply sources that are more drought resistant**

With Duncan seeing approximately 35 inches of rain each year, and more frequently the region finds itself in drought conditions, it is necessary for the community to look at other sources of water that can be available and used for the potential population growth and economic growth opportunities that are projected. Currently, Duncan pulls water from Waurika Lake with additional water supplies from Fuqua Lake and Lake Humphreys which all have their levels monitored regularly by the United State Geological Survey (USGS). This surface water source is susceptible to drought conditions, evaporation, and use which can result in water use restrictions being applied as necessary.



## **Infrastructure Capacity Building Priorities**

### **Ensure City of Duncan has water capacity for future population growth and economic development**

Historically, the City of Duncan was projected to reach a population of over 25,000 by 2030. This estimate was based on information obtained for the Comprehensive Plan that was adopted in 2011 and the trends appear to be on track. However, our citizens desire more in the form of restaurants, stores, and amenities that are typically found in larger communities and to achieve these local leaders need to be looking towards development opportunities that could eventually bring the population to 30,000 or more. To help achieve, and accommodate, the potential population growth and to encourage future economic development and opportunities, the City of Duncan needs to continue making improvements to the water infrastructure and distribution. These improvements will be costly, but necessary, and consideration of future budgets should begin as soon as possible with the establishment of a 5-year and 10-year capital improvement plan.



### **Ensure City of Duncan has wastewater capacity for future population growth and economic development**

As an important complement to future water improvements, wastewater is equally important for the future growth and development of the City of Duncan. The wastewater infrastructure that currently serves Duncan is a gravity feed system, meaning there are no pumps or lift stations that are publicly maintained. Because of this, future growth is limited to certain watershed and elevations thus limited where future growth may be able to occur and be serviced with Duncan utilities. Current leadership and staff have indicated being open to the installation of future pumps and lift stations to help future economic development opportunities and have also shared that improvements are necessary to the existing treatment facility. These pumps, lift stations, network of sewer mains, and the treatment facility are all expensive infrastructure components and are necessary for the future growth potential of Duncan and therefore consideration of future budgeting for maintenance and additions needs to begin as soon as possible with the establishment of a 5-year and 10-year capital improvement plan.



### **Ensure City of Duncan has electrical capacity for future population growth and economic development**

It is anticipated that the United States will see an approximate 50% increase in energy consumption by 2036 and likely double by 2050. To handle these project loads, communities need to ensure that both the transmission network and the distribution network are adequately designed and maintained to handle the demand rates. It is also important that Duncan begin looking at network improvements that include flexible use and storage of electricity as the transition to renewable and sustainable sources supply more of the electrical grid as the burning of fossil fuels are reduced.

## Work Plan Priorities Matrixes

<b>General Infrastructure Priorities</b>	<b>Start</b>	<b>Timeframe</b>	<b>Key Stakeholders</b>
Ensure City of Duncan is addressing utility bill accuracy for residents and businesses	Ongoing	Ongoing	Duncan Utility Billing, City Council
Improved communication by utility providers to residents and businesses about upcoming projects and improvements	Ongoing	Ongoing	Community Development, Public Works, Public Information and Civic Engagement, Utility Providers, City Council
When feasible, bury utility lines to create a more aesthetically pleasing community	2025	Long-Range	Duncan Power, Cotton Electric, PSO, Community Development, City Council

<b>Infrastructure Accessibility Priorities</b>	<b>Start</b>	<b>Timeframe</b>	<b>Key Stakeholders</b>
Continue to work with utility providers in providing infrastructure and services that allow current and future businesses to prosper and be competitive in future markets	Ongoing	Ongoing	Community Development, Public Works, Utility Providers, City Council
Continue to work with utility providers and residents seeking to operate homebased businesses so that all utility and infrastructure needs are met	2025	Mid-Range	Community Development, Public Works, Utility Providers, City Council
Continue to work with utility providers and identify necessary resources to address entrepreneurial needs and allow for greater success	2025	Mid-Range	Community Development, Public Works, Utility Providers, City Council

<b>Infrastructure Resilience and Efficiency Priorities</b>	<b>Start</b>	<b>Timeframe</b>	<b>Key Stakeholders</b>
Protect existing water supply for current and future residents and businesses	Ongoing	Ongoing	Public Works, City Council
Establish policies for sustainable and renewable energy sources	2025	Mid-Range	Community Development, City Council
Identify potential water supply sources that are more drought resistant	2026	Long-Range	Public Works, Community Development, City Council

<b>Infrastructure Capacity Building Priorities</b>	<b>Start</b>	<b>Timeframe</b>	<b>Key Stakeholders</b>
Ensure City of Duncan has water capacity for future population growth and economic development	Ongoing	Ongoing	Public Works, Community Development, City Council
Ensure City of Duncan has wastewater capacity for future population growth and economic development	Ongoing	Ongoing	Public Works, Community Development, City Council
Ensure City of Duncan has electrical capacity for future population growth and economic development	Ongoing	Ongoing	Duncan Power, Community Development, City Council

