

# PLANNING FOR CLOVIS' WATER FUTURE

## EXECUTIVE SUMMARY OF 40-YEAR MASTER PLAN



**With our strong commitment to exceptional quality and service, EPCOR has been the reliable supplier of safe, clean water to the City of Clovis and adjacent areas since 2012.**

EPCOR is the largest private water, wastewater and wholesale water service provider in the Southwest with customers in Arizona, New Mexico and Texas.

Our unique organizational culture goes back 125 years, blending the efficiency and stability of a successful private water company with the experience and public trust of a municipal utility. For our New Mexico customers, EPCOR brings decades of collective experience in finding creative solutions to the unique water challenges of the desert Southwest.

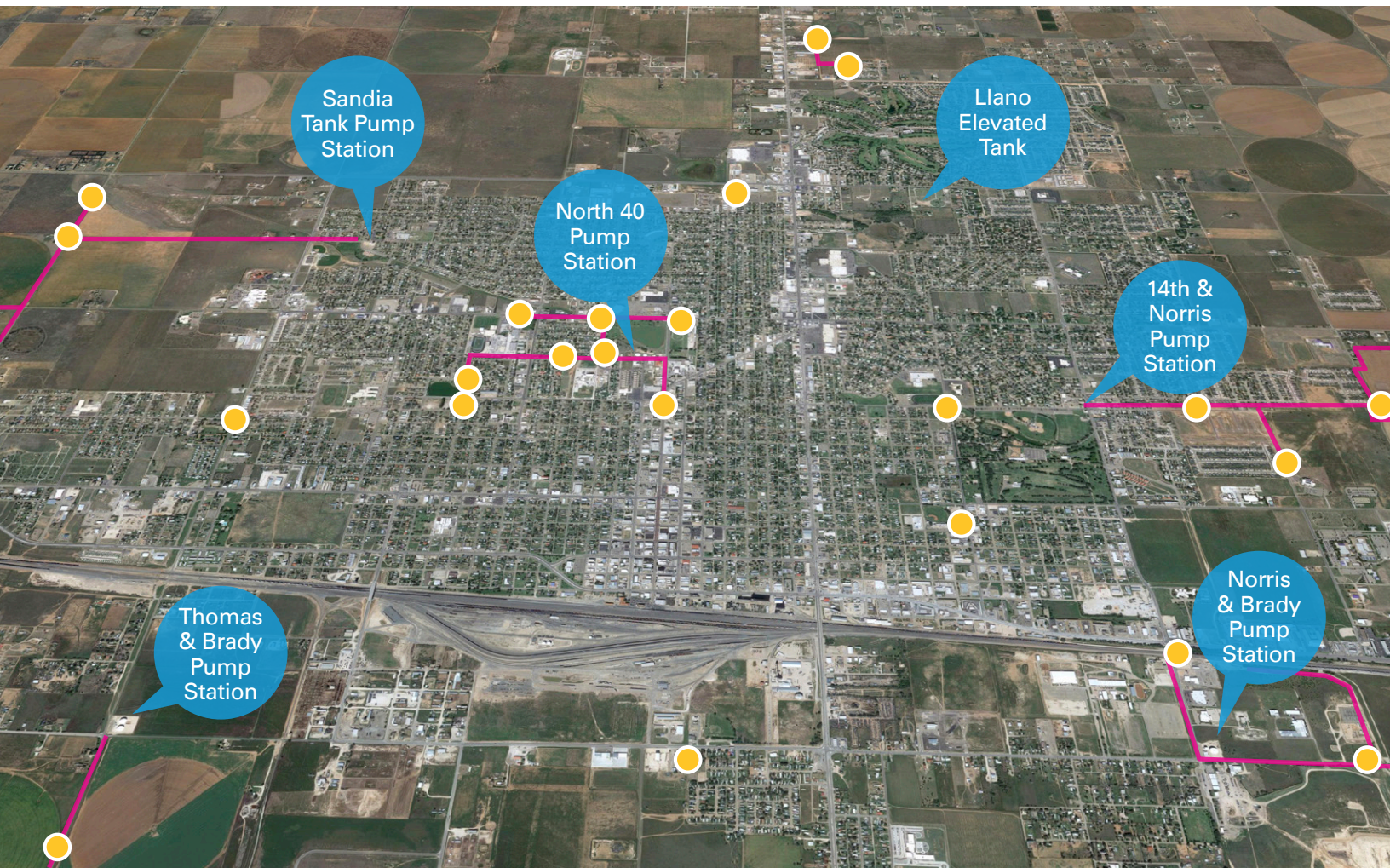
We are pleased to share this executive summary of a recent long-term planning study with customers, community leaders and other stakeholders in our Clovis district and across New Mexico. We include important information on current and future water demand, supply and system improvements – all the ways we're taking steps to ensure a strong water future for the City of Clovis and all our Clovis district customers.

# EPCOR'S CLOVIS WATER DISTRICT

EPCOR's water service area in the Clovis district currently encompasses about 21 square miles and over 16,000 service connections. Our Clovis district includes the City of Clovis and extends somewhat beyond the current city limits.

EPCOR has completed a comprehensive planning study looking ahead 5, 20 and 40 years to projected population growth and potential new service areas. The geographical area considered for study includes the current boundaries of our water distribution system and areas that the City of Clovis has identified for annexation in its 2018 Comprehensive Plan. Clovis Municipal Airport is also a potential future service area.

## CLOVIS WATER SYSTEM OVERVIEW



Entry Point to the Distribution System – Tank & BPS



Selected Production Wells



Transmission

# POPULATION AND LAND USE PROJECTIONS

The Clovis Comprehensive Plan lays out existing land use inside EPCOR's Clovis water district as well as expected future land use inside that boundary and future annexation areas. EPCOR has used this information in our comprehensive planning study as one key factor in projecting water demand over the next 40 years.

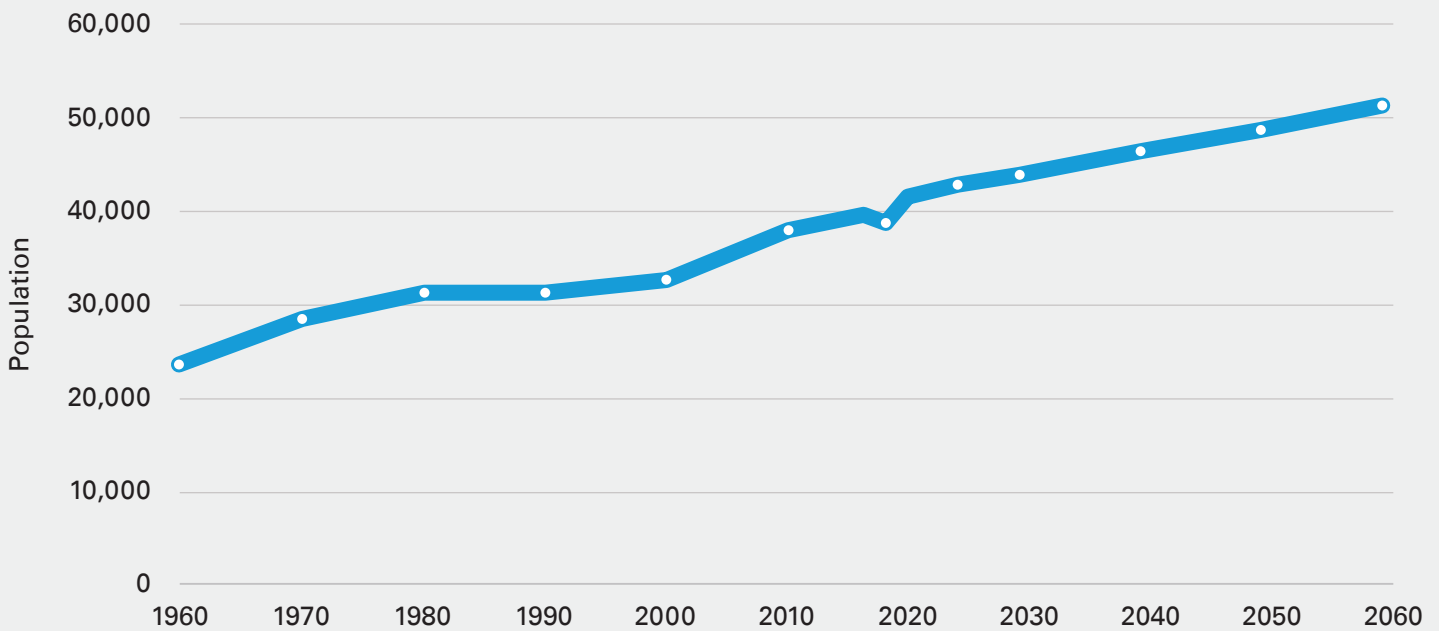
According to its Comprehensive Plan, the City of Clovis is projected to grow by approximately 12,400 people over the next 40 years – adding roughly 33% to the existing population. The City expects most of this growth to happen east, north and northwest of the current city limits, as well as into new annexation areas.

Future annexation areas for the City are not likely to be fully populated in the next 40 years. For this reason, EPCOR has estimated overall needs based on a careful future modeling formula.



## Population Projections and Trends

Projections from the 2018 Clovis Comprehensive Plan (Consensus Planning, Inc., 2018), which uses the growth rate for Curry County from the University of New Mexico Geospatial and Population Studies (UNM GPS) .



# CURRENT WATER DEMAND

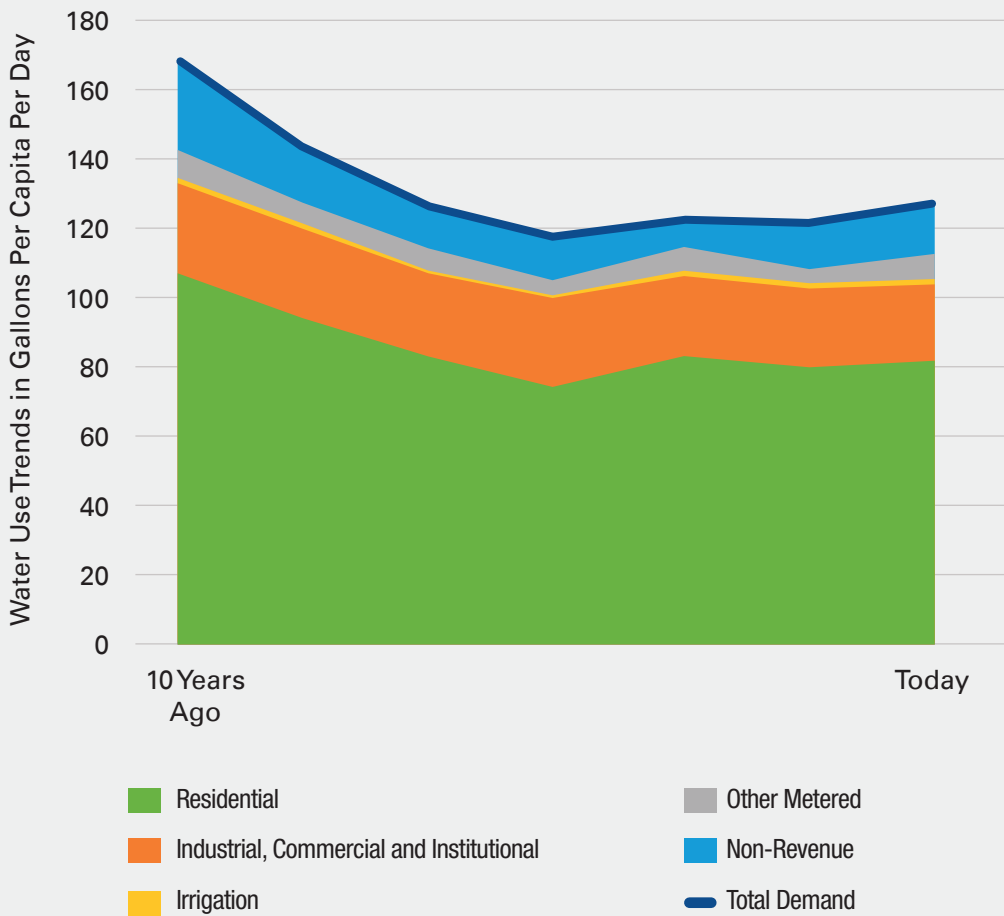
EPCOR's comprehensive planning study looked in depth at past and current water use to arrive at the most accurate baseline information for our future planning.

Our current water users are grouped into these categories:

- Residential
- Industrial, commercial and institutional
- Irrigation
- Other metered: fire service, etc.
- Non-revenue water (NRW)

The chart below shows water demand for the last 10 years by customer type.

**Water Use Trends for the Last 10 Years**



**Importantly, as the chart shows, demand for water dropped noticeably 8-10 years ago and has not changed significantly since then.**

This reduced demand is largely attributable to successful conservation programs EPCOR initiated several years ago, which our Clovis customers enthusiastically put into action. Conservation plays a critical role in water management in New Mexico and this will only become more important going forward.



## Conservation Matters

As a provider of vital water services in a desert region, EPCOR places a very high priority on environmental sustainability and water conservation.

Our Clovis conservation efforts include programs to replace old fixtures with high-efficiency washers and toilets, replace irrigated landscaping with xeriscape, and offer free household water audits and retrofit kits to rate-paying customers. We also offer a rainwater harvesting option – a water- and cost-saving program for customers that not only reduces water use, but recycles naturally occurring rainwater for outdoor irrigation.

Working with customers to implement these measures has resulted in measurable reductions in water demand as shown in the graph on this page.

# CURRENT WATER SUPPLY

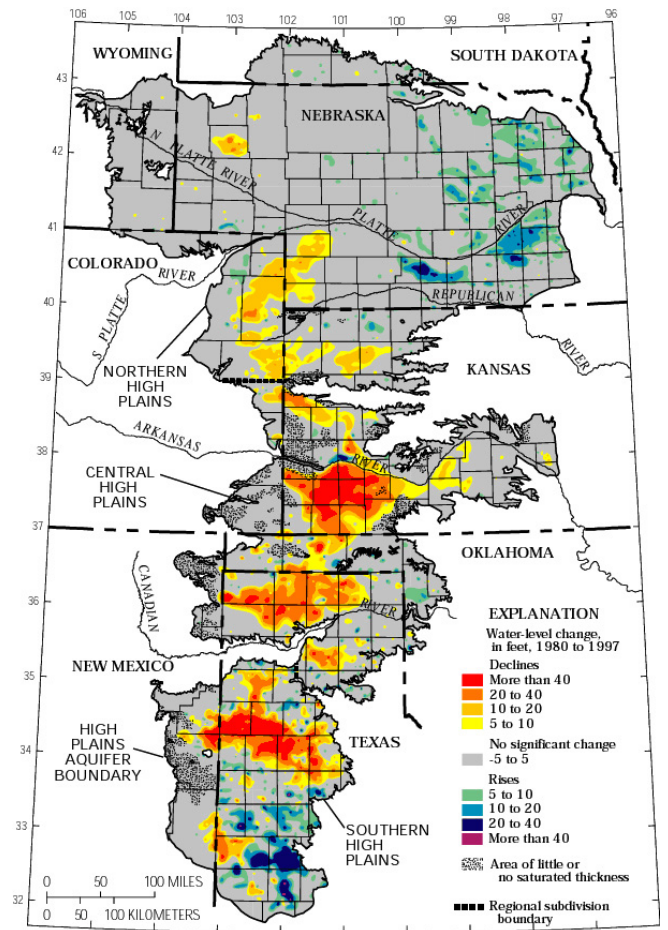
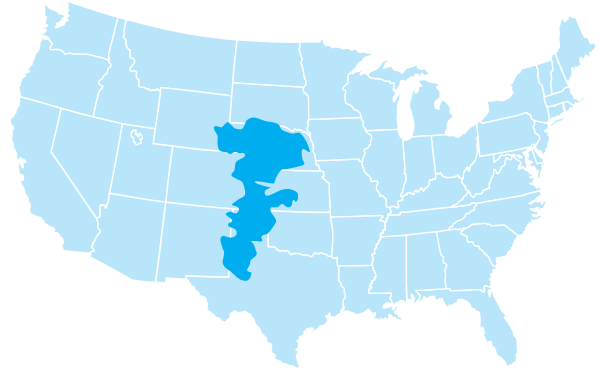
All water for EPCOR's Clovis district currently comes from the Ogallala (also called High Plains) Aquifer. The City of Clovis and EPCOR's service area are located on the southwestern receding edge of this aquifer that underlies multiple states.

**The Ogallala Aquifer.** As we work to plan for future water needs, it's important to fully understand the status of current water supply. The saturated thickness of the Ogallala Aquifer has been declining for decades, and water production from the aquifer has been decreasing over the years, as well. New Mexico is also in a two-decade-long regional drought with insufficient natural recharge to sustain current rates of water withdrawal from the Ogallala.

**Groundwater System.** EPCOR's water system is currently supplied by about 80 active wells throughout southern Curry County and northern Roosevelt County. Of these, EPCOR owns 85% and leases the remaining 15%, and pumps water to various entry points to the distribution system. The total production capacity of owned and leased wells is 8,345 gallons per minute (gpm) or 12.02 million gallons per day (mgd). EPCOR's leased wells are among the highest-producing wells in the system, and we expect to continue this leasing program especially for those wells near existing EPCOR infrastructure.

**Ute Reservoir.** The City of Clovis is a member of the Eastern New Mexico Water Utility Authority (ENMWUA), which is pursuing a project to deliver surface water from Ute Reservoir to the City and other ENMWUA member cities and agencies as a replacement for declining groundwater.

Currently, the ENMWUA is pursuing an Interim Groundwater effort to access potential sources of supplemental groundwater until renewable surface water from Ute Reservoir is available. As water provider to the City of Clovis, EPCOR will receive this water via a recently constructed transmission pipe.



Source: United States Geological Survey

# FUTURE WATER DEMAND

EPCOR’s comprehensive planning study scoped out future water use and supply needs based on population projections outlined above for the City and targeted annexations and current water demand.

The table below presents the future average day demand (ADD) and maximum day demand (MDD) for our 5, 20 and 40-year planning horizons with an added 10-year metric. This includes potential demand from Clovis Municipal Airport as well as large industrial customers.

## Projected Average and Maximum Day Water Demand

Planning Horizon	Clovis Population	Clovis District Projected Demand (mgd)		Airport Demand (mgd)	Total Maximum Day Demand (mgd)
		Average Day Demand	Maximum Day Demand		
Today	38,603	4.81	8.66	–	8.66
in 5 years	42,570	5.31	9.15	0.30	9.45
in 10 years	43,716	5.45	9.41	0.30	9.71
in 20 years	46,220	5.76	9.77	0.30	10.07
in 40 years	51,013	6.36	10.85	0.30	11.15



## How Did We Calculate Future Demand?

EPCOR projected future water demand for the Clovis district using the following methodology.

Given that per capita demand has stayed constant over the last five years, we projected future demands at a similar rate to what we recorded in the past — 125 gallons per capita per day (gpcd). We multiplied this number by the added population to arrive at average day demand (ADD). This is similar to historical demand for all categories over the last five years.

ADD was multiplied by a maximum day factor (MDF) of 1.80 to arrive at maximum day demand (MDD). This MDF is based on the average over the last five years and EPCOR design criteria.

For the 5 and 20-year horizons, we also applied reductions due to reuse.

# FUTURE WATER SUPPLY

EPCOR's comprehensive planning study includes a diversified, thoughtful strategy for ensuring the City of Clovis and other customers within our Clovis water district have adequate supplies of clean, safe water for the next 5, 20 and 40 years.

**Groundwater.** Groundwater supply will remain an integral part of the EPCOR water supply strategy – in the next 40 years, we expect to add a number of wells until interim water is made available by the ENMWUA.

**Surface Water.** Under the ENMWUA, surface water is slated to provide important additional water sourcing. The availability of this water is potentially several years out, and the City, EPCOR and ENMWUA will work together to integrate groundwater and surface water.

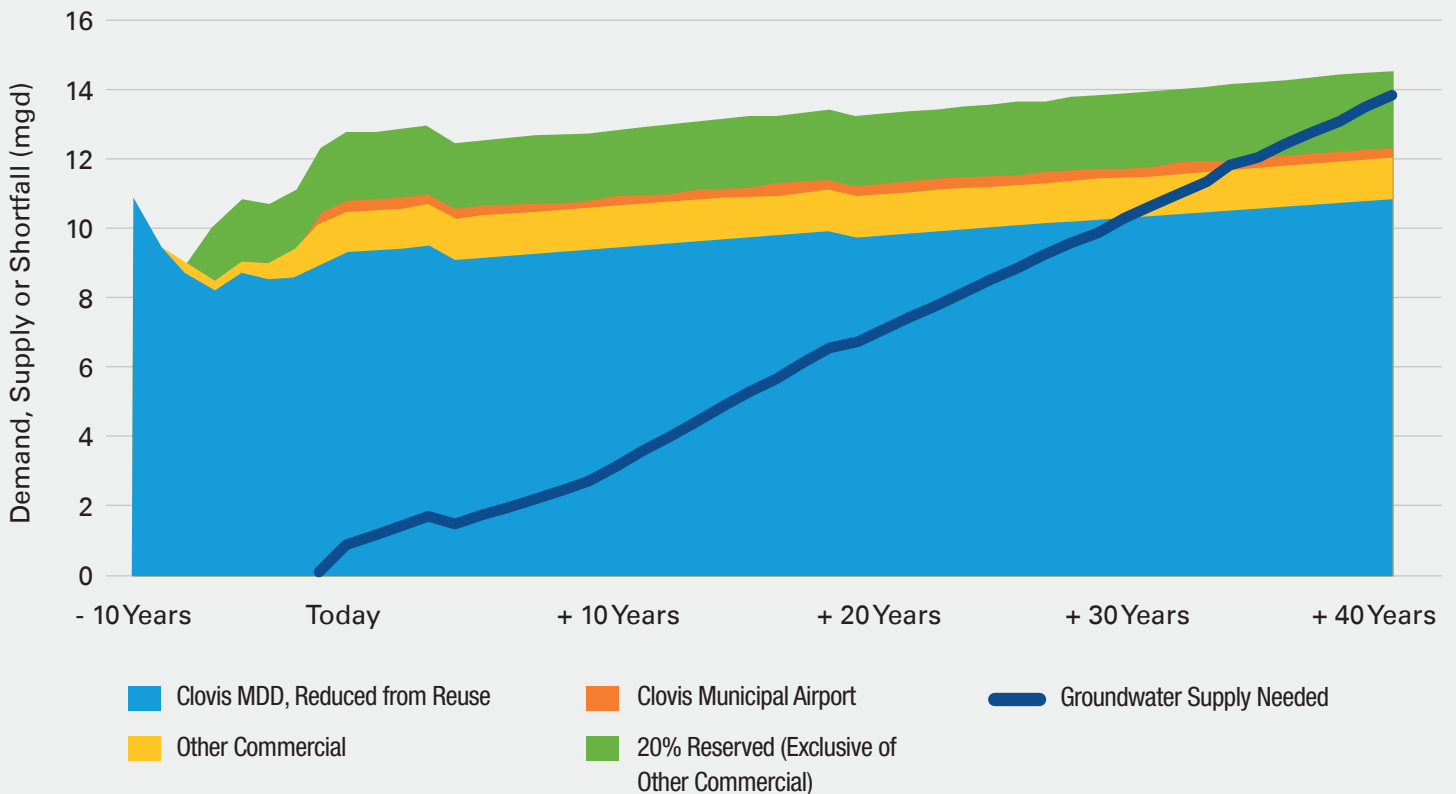
**Reclaimed Water.** Another key strategy for meeting future demand is expanding the City's reclaimed water system, which EPCOR expects will reduce demand for potable water within five years.

**Other Sources.** Additional anticipated or potential future supplies include:

- Conservation – continue the successful water conservation program already in place
- Reduced demand from an expansion of reclaimed water use, described above under Future Water Demand
- Productivity enhancements of selected existing wells
- Artificial recharge and recovery
- Rainwater harvesting and management



## Future Water Supply



# WATER QUALITY

EPCOR recognizes that our primary responsibility is to provide safe, clean drinking water to our customers, and we take this responsibility very seriously.

The ENMWUA project will provide treated surface water from Ute Reservoir to the EPCOR system at one or more of our distribution system entry sites.

This new surface water will have different quality characteristics than the groundwater EPCOR currently treats and delivers to customers. As part of our comprehensive water supply strategy, EPCOR is developing plans and infrastructure to blend water sources under several possible scenarios to ensure that all water consistently meets federal and state health standards.



## Groundwater

Water produced from EPCOR's existing Clovis wells meets all EPA Primary Drinking Water Standards. Groundwater from the wells can be generally characterized as containing high alkalinity, high hardness, moderate total dissolved solids and low organic carbon.

## Surface Water Supply from Ute Reservoir

Surface water from Ute Reservoir will also have unique characteristics and treatment needs. EPCOR's comprehensive water plan includes detailed tactics for incorporating the new supplies into the existing system – and blending it with groundwater supplies – in ways that are safe, cost-effective and reliable.

## Water Quality and PFAS

EPCOR's water quality experts closely follow the national study of man-made substances called per- and polyfluoroalkyl substances (PFAS).

In 2019, EPCOR received results that, for the first time, indicated an extremely low presence of PFAS at certain entry points to our drinking water system – none believed to be associated the Cannon Air Force Base plume. Ninety percent of EPCOR's wells show no indication of these man-made substances. The handful that did measured well below the EPA's recommended safety advisory level.

Out of an abundance of caution, EPCOR took the wells where these samples were taken out of service and began a study to determine the best way to treat for these substances to stay ahead of this issue. We're coordinating with the New Mexico Environment and Health departments on all these questions.



# INVESTING IN THE FUTURE

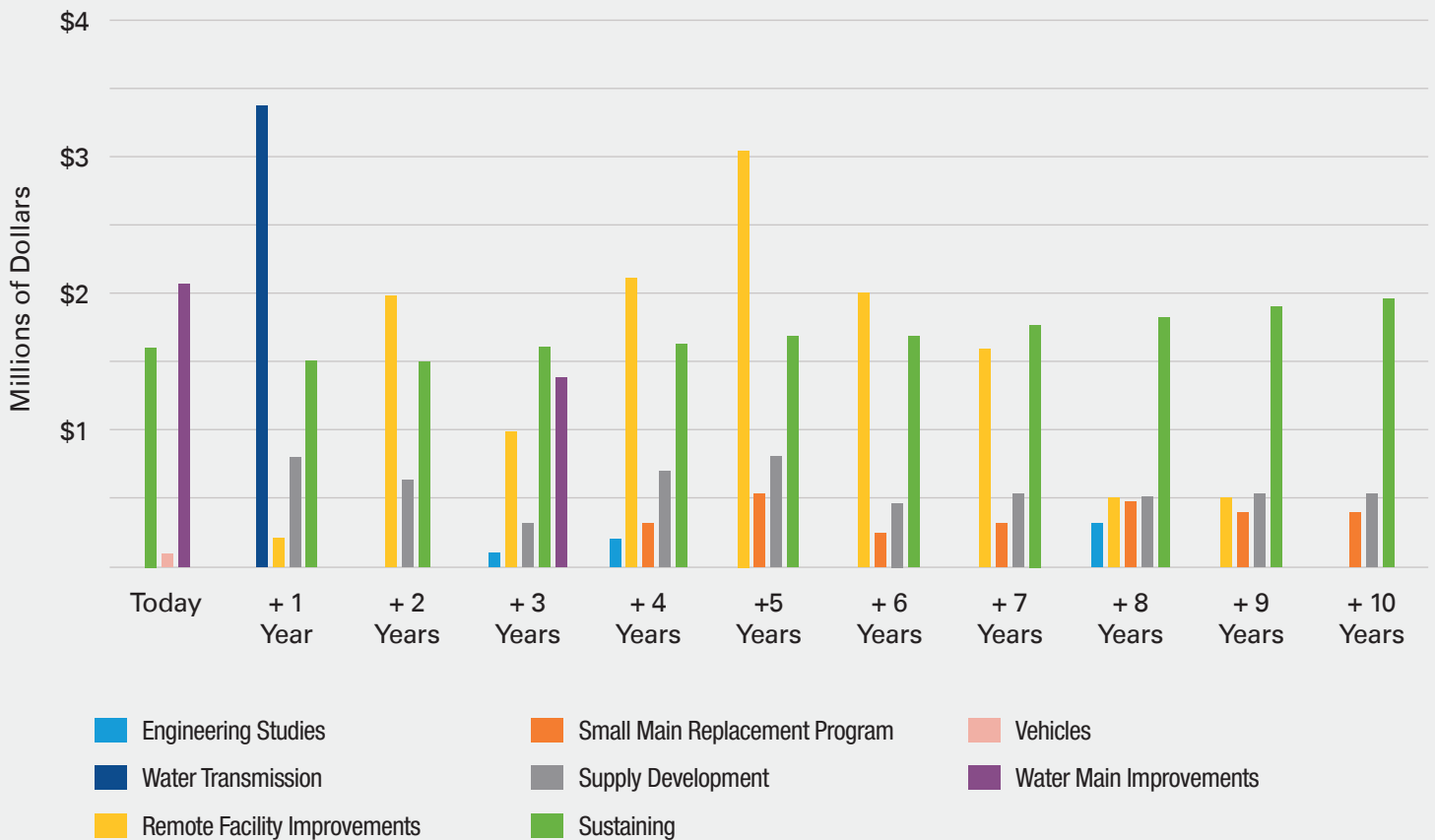
As EPCOR looks to the future of our Clovis water district, we are focused on diversifying our water supply sources and integrating those sources effectively for continued reliable delivery of safe, clean and affordable water for our customers.

Our comprehensive planning study developed a variety of scenarios anticipating infrastructure and system improvement needs for 5, 20 and 40-year planning horizons to help us reach these goals.

From these scenarios, we developed a capital improvement plan with recommended projects necessary to develop new water supplies, integrate groundwater and surface water supplies, improve our water distribution and fire flow systems, develop projects for new service areas and more. EPCOR is making significant investments into these areas to ensure safety, reliability and long-term sustainability for the Clovis system. The chart below indicates our projections for these investment categories over the next 10 years.

We are proud to serve water customers in and around Clovis, New Mexico, today and look forward to continuing to support regional water needs well into the future.

## Projected Water System Investments





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