



Tempe: Distinct, Diverse, Dynamic

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INTRODUCTION

Tempe is the heart of a Southwestern desert metropolis. It maintains a distinct identity.

Tempe is located on the banks of the Salt River and its water is vital to sustaining life in our desert. The rich alluvial soil in its flood plain proved fertile but the river is also a force to be reckoned with. Tempe is a landlocked city with nowhere to grow but up. With roots in agriculture, Tempe grew from a town into a city. It had explosive growth following World War II and development continues today.

Can it be sustained?

Tempe is a culturally diverse city. People of varying backgrounds have always lived here. The university and high tech jobs attract people to Tempe and newcomers arrive from around the globe.

Tempe is home to Arizona State University, founded as the Territorial Normal School in 1885. The university fueled Tempe's growth and is a major economic engine and hub of activity in the city. ASU is among the nation's largest universities.

Discover Tempe's unique identity from prehistoric times to the present day through four themes:

- Surviving in the Desert
- Building Our Community
- Living Together
- College Town

Welcome to "Tempe: Distinct, Diverse, Dynamic"

SURVIVING IN THE DESERT

“Water or the lack of it, rivers or their absence, are among the defining characteristics of the West.” – Gary Holthaus

The Sonoran Desert is a fragile ecosystem formed by the interaction of a complex set of organisms with their environment. Situated in the Salt River Valley, Tempe is located near the northern edge of the Sonoran Desert. Climate, geography and the availability of water shape life here. Prehistoric and historic settlers in the region adapted to the desert by modifying and transforming the environment to meet their needs, often resulting in irreversible changes to this fragile landscape. In the 1860s this region was covered with dense mesquite bosques and the Salt River flowed freely. Today, much of the native vegetation has disappeared due to urbanization and groundwater pumping, and the riverbed is usually dry. Some of these changes have produced unintended consequences, raising questions about the sustainability of desert cities. Water, vital to sustaining life, is a common element in the stories you are about to encounter on your journey through the desert.

Paradise or Purgatory: Why Do We Live Here?

Early explorers such as John Wesley Powell knew: “that water, or the lack of it, would be a major and ongoing problem in America’s westward expansion.” This prophecy proved especially true in the Sonoran Desert, which experiences more than three hundred days of sunshine a year. The mild winters make it a veritable paradise, but the blazing hot summers make it a living purgatory.

Under such conditions water becomes an even more precious, and limited commodity. Yet, people flock here, drawn by the landscapes and the possibilities. Author Wallace Stegner forewarns us that in the arid West: “you have to get over the color green; you have to quit associating beauty with gardens and lawns...”

The Sonoran Desert provides a long growing period with as many as six distinct seasons, but precipitation is limited. The Salt River Valley averages only seven to eight inches of rainfall a year. Thus, a stable water supply is crucial to sustaining life in the region.

Most of the Salt River Valley consists of fill, rocks and dirt washed down over millions of years from the surrounding mountains. ASU archaeologist Arleyn Simon explains that Tempe however, sits on a bedrock structure, “the only place on the Salt River in the valley that has a hard rock bottom. And that was a real geologic advantage in terms of being able to ford the river and not be on just thousands of feet of fill.” Thus, Tempe was a prime location for settlement.

A Land of Little Rain

The Sonoran Desert is a vast arid region of valleys and mountains covering large parts of Arizona and Sonora, Mexico. It differs from other deserts in North America because the Sonoran Desert receives more moisture, making it appear comparatively lush. Author Gary Nabhan observes: “The stimulating power of rain in the desert is simply more than moisture. Be it the nutrients released in a rainstorm, or the physical force of the water, there are other releasing mechanisms associated with rainwater.”

In 1878, explorer John Wesley Powell advised in his *Report on the Lands of the Arid Regions of the United States* that the West be divided into watershed management districts, and that those districts be formed into states, in order to avoid squabbles over water. He argued that no more than 2% of the land (near water sources) in the West was suitable for agriculture.

The relative lack of moisture makes irrigation and water reclamation vital to human survival in the desert. Robert Glennon, Esq. explains: “Water is the essence of life, the core of chemistry, the prime component of the human body; it covers two-thirds of the surface of the earth. Without it, life ceases. With it, life can flourish.” From the days of early settlement, irrigation projects supplied the Tempe area with water for livestock, crops, the Hayden Flour Mill, and human consumption.

Irrigation cycles were woven into the daily fabric of early settlers’ lives. Tempe resident Irene Bishop remembers: “I think the worst chore on the farm was always irrigation and especially at night. And, of course if your time came at night you had to take the water at night.”

A Land of Many Seasons

Misconceptions abound about the climate in the Sonoran Desert. Contrary to popular opinion that it seldom rains and only has one or two seasons, the Sonoran Desert has several seasons. The Arizona-Sonora Desert Museum in Tucson officially recognizes five seasons. Some naturalists add a sixth.

Autumn is a dry season running from mid-September through November. Winter, a rainy season, extends from December through February sometimes. Spring begins in February and lasts through April followed by foreshimmer, a period of drought during May and June. Then the summer rainy season begins in early July and lasts until mid-September. This is known as the monsoon, or summer thunderstorm, season. Some years, there is an additional hot dry season called late summer that lasts from mid-August through September.

The two distinct rainy seasons in winter and summer are defining characteristics of the Sonoran Desert, noted as a tropical desert compared to others around the world. The gentle winter rains that fall between December and March come from storm fronts originating in the North Pacific. The more violent summer thunderstorms are generated by a surge of wet tropical air from the Gulf of Mexico. They result in localized deluges.

The seasons in the Sonoran Desert may be subtle in terms of temperature change, but they are full of distinguishing sights and smells. The smell of citrus blossoms fills the air in springtime as does the pungent odor of creosote during the winter rains and the summer monsoon. Dust storms and the sound of cicadas are also associated with monsoon season. These nuances punctuate the changing seasons in the Sonoran Desert.

A Land of Limitations

The desert has always posed limitations and obstacles to habitation for all living things. Humans have had to adapt to or modify the desert environment to make it more habitable. For thousands of years humans have shaped the landscape of the Valley attempting to cope with the desert heat and dryness.

Before European American settlers, the Salt River Valley was inhabited for centuries by the Hohokam, who constructed a sophisticated irrigation system for farming. Later settlers reused and expanded the original Hohokam irrigation system for farming and ranching. Roosevelt Dam, and other dams built later, have stored so much water that the Salt River no longer flows freely.

Our desert environment was further modified in the 1930s with the advent of evaporative cooling (swamp coolers), and then air conditioning after World War II. Residents no longer had to sleep outside in the summer as early settlers such as Thomas Owens, Jr. did: “In the summertime we’d sleep out in the yard. And, that was a real experience. Gathering up beds and so on when a summer storm would come and move everything into the house...when we used to sleep in the yard, well either a windstorm or mosquitoes, you

were fighting one or the other all night long.” Author Michael Logan observes that after air conditioning: “Encased and insulated, human residents of the cities could at last ignore, if they chose, their desert surrounding.”

A Place in the Sun

The Sonoran Desert is located in the Sunbelt, a region spanning the southern portion of the United States. Historian Bradford Luckingham explains: “Since World War II, the ongoing decline of the old Snowbelt urban centers in the Northeast and Midwest ... caused a shift in economic and demographic power toward the rising urban centers of the Sunbelt in the South, Southwest and southern California.”

That population shift did not happen in Arizona until we had the means to modify our environment. Professor Ken Sweat observes: “this place really didn’t take off until we had that technology to make it as comfortable as it is today.” Author Marc Reisner reinforces this point: “people were happy to leave temperate climates with cold winters for desert climates with fierce summers, provided there was water to sustain them and air conditioning to keep them from perishing.”

Tempe’s sunny warm climate, coupled with the availability of water and the advent of air conditioning, contributed to its explosive growth after World War II. But with growth came the detrimental consequences of urban sprawl and a disappearing desert landscape. Today, the native Sonoran Desert in and around Tempe has virtually disappeared and was replaced by a landscape carefully sculpted to mimic the original. Many refer to this new landscape as “the designer desert.”

One of the few attempts to preserve the native desert in Tempe was the creation of Papago-Saguaro National Monument in 1914. Congress abolished it in 1930, and the land was divided between the cities of Tempe and Phoenix and the state of Arizona. Today, this land is part of Papago Park. Through the preservation efforts of many, some of the native flora and fauna remain, but much of our Sonoran Desert landscape has been lost.

Water: Ebb and Flow

“The mysterious disappearance of Hohokam civilization seems linked to water: they either had too little or used too much.” – Author Marc Reisner

Beginning around 750 CE, the Hohokam created a vast network of canals. Some were huge, up to 33 miles long, 15 feet deep and 25 feet wide. The Hohokam thrived until about 1450 CE, at which point their culture changed dramatically. Many theories exist as to the reason for the decline of the Hohokam culture.

European settlers found the remains of the Hohokam canal system when they arrived in the late 1860s and expanded it to create the beginning of the system still in use today. The presence of a relatively stable water supply in the Salt River Valley spurred economic development in the area. The Arizona Department of Water Resources explains: “Arizona’s desert climate directly affects our economy and quality of life. All economic activity, including mining, irrigated agriculture, and growth of cities occurs only where dependable water supplies are available.”

Author Gary Holthaus observes that: “Water is not only a difficult, complex, and divisive issue; it is a source of our unity, a symbol of rest and health for mind and body, and our great hope.” A limited natural resource, water is vital to sustaining life. ASU Professor Patricia Gober explains: “the ability to draw life-sustaining water from the upland watersheds allowed prehistoric and modern civilizations to develop” in the Salt River Valley.

Water: A Sacred Commodity

Water is precious in all cultures, but particularly so in the Southwest. The various cultures that have inhabited the Salt River Valley have defined their relationship with water differently. Author Michael Logan suggests that: "Native American, Hispanic and Anglo cultures have exploited the water supply according to their own concepts of appropriate use."

Native American tribes throughout the Southwest have long viewed water as sacred in nature, while at the same time utilizing it to best advantage, irrigating the land extensively. Reverence of water is depicted in the arts of many Native peoples of the Southwest in imagery on rock art, jewelry, basketry, and pottery. ASU archaeologist Arleyn Simon explains that such imagery "has to do with water birds and sometimes fish and turtles which go in and out of water. And also snakes throughout North America, but particularly in the arid Southwest and Mexico, snakes are considered associated with water and rainfall and fertility. So, it was recognized just how essential water is for life and that without it nothing exists."

Professors Helen Ingram and F. Lee Brown observe that: "in the Southwest, as in arid regions generally, water is a special resource. Because water is essential to the quality of life and also to a secure future, westerners place a value on water that transcends its material worth."

Water: The Many Values of Water

Water is not only a valuable natural resource; it also possesses community, emotional, symbolic, economic, and recreational value. In Tempe's early historic settlement period water sustained farms, ranches, and the Hayden Flour Mill. Today, water remains economically important, supporting a thriving semiconductor industry, Arizona State University, and an array of businesses. The presence of Tempe Town Lake is a huge economic engine, creating recreational, tourism, and development opportunities for the city, attracting residents, visitors, and businesses.

Water is symbolized in Tempe on things such as street signs named after geological features or with maritime references. Similarly, the recreational value of water is evident in the use of the Salt River. Early settlers used the river and Tempe Beach Park for activities such as fishing and swimming. Today, Tempe Town Lake is used for boating.

The emotional and community value of water is easiest to grasp through memories. Ray Chavarria remembers: "You may not believe it, as a youngster we played from Tempe all the way to Phoenix, through the river. Yeah. Swimming and walking, swimming and walking. And at that time the water was so pure that if we got thirsty, we drank water from the river. And if we got hungry, we ate what we called *vero* [watercress]."

Water: Water's for Fightin'

"Though water has been one of the most complex and divisive issues in the West, it is also what draws us together in this place and allows us to stay. Water is the common bond that we share with one another and with all other creatures. It is one of the gifts that we have to have in order to live and that we therefore must share." – Author Gary Holthaus

People have fought over water in the West for centuries. The control of water is central to survival in the desert, making water rights one of the key legal debates in the modern West. A series of court cases and law have resulted in a very complex system for dealing with Western water rights.

Western water rights are governed by the doctrine of prior appropriation which means: “first in time is first in right.” The first person to put water to beneficial use has the first (or senior) right to use the water. Subsequent users have a junior right.

Today, Tempeans receive their water from three different sources: groundwater, surface flows from the Salt and Verde Rivers, and Colorado River water from the Central Arizona Project. Tempe has some of the oldest water rights within the boundaries of the Salt River Project. Surface water rights belong to members of the Salt River Valley Water users Association, founded in 1903.

Transforming the Desert: Adaptations and Modifications

“Phoenix [area] boosters were ... aggressive in transforming their desert environment into an agrarian paradise and eventual metropolis.” – Author Michael Logan

Many researchers argue that humans have not adapted to the desert so much as they have modified the environment for their comfort and survival. Professor Ken Sweat opines: “I don’t think we’ve adapted at all. I mean we have used literally blunt force to remake this desert in our own image ... we dammed every river, we built huge power plants to air condition our houses, laid down tons of asphalt and irrigated lawns. We’ve used ... large amounts of energy, to make this place hospitable by our own terms.”

Settlers built canals, ditches, dams, and wells to provide water for personal and commercial uses in Tempe and throughout the Salt River Valley. Today, many of these water control structures are still in use to provide water for irrigation, recreation, and residential and industrial consumption.

Once dammed, the Salt River no longer flowed freely, altering the ecosystem throughout the Valley. Manmade irrigation systems are drastically different than natural rivers. Historian Donald Worster explains that: “the modern canal, unlike a river, is not an ecosystem. It is simplified, abstracted water, rigidly separated from the earth and firmly directed to raise food, fill pipes, and make money.”

The agricultural industry has been a primary water user in the Valley for more than a century. Slowly, urban areas have replaced agricultural land, but urban customers did not outnumber agricultural customers in the Valley until 1984. That transition happened earlier in Tempe because it is landlocked.

Transforming the Desert: Agriculture through Irrigation

“Ever since we’ve started living here, we’ve radically altered the Valley. And, every culture that has come has done even more so.” – Professor Ken Sweat

Humans have transformed the Sonoran Desert through irrigation since prehistoric times. The Hohokam continuously built canals between 750 CE and 1450 CE. After that, the Hohokam culture changed and the Salt River Valley was virtually uninhabited from 1450 CE until the 1860s when Hispanic and Anglo settlers made their way into the area.

During the early historic settlement period the Hohokam canals were reconstructed and expanded, wells were drilled, and dams were constructed. All of these activities had effects on the environment. Archaeologist Jerry Howard explains that by irrigating, the Hohokam “really changed the whole chemistry of the soil, they did change their environment, but if you’re an agriculturalist and you want to grow food, they changed it for the better.”

Early settlers’ lives revolved around the irrigation cycle. Irene Bishop remembers that: “You’d have to call up and order it [water] whenever you wanted to order water to irrigate...my father, a *zanjero*, had to

proportion that water all out. And, sometimes there wasn't enough water...and during a flood he would have to get people to take the water in order to get rid of it, or it would break the canal...when it came down the canal it had to go someplace." A *zanjero* was a person who manipulated irrigation gates for the orderly delivery of water.

Transforming the Desert: Water for the Future

"If you want to talk about the history of the Southwest you have to talk about water. This region would not have been settled and you could not have the number of people here you do today without all the dams that were built." – Professor Ken Sweat

The elaborate canal system built by early historic period settlers was not enough to sustain modern life in the Salt River Valley. Residents of the Salt River Valley were at the mercy of the river and suffered the hardships associated with cycles of flood followed by drought. Water storage systems were necessary.

The 1902 Reclamation Act made the construction of Roosevelt Dam possible. Completed in 1911, and made taller in 1996, Roosevelt Dam and the three dams below it provide massive water storage capacity on the Salt River. With the completion of the dam, farmers, ranchers, and citizens in Tempe had a more reliable water source.

Roosevelt Dam also serves as a source of hydroelectric power. That power made it possible to begin electricity distribution to the Salt River Valley in 1909 before the construction of the dam was even complete. Historian Bradford Luckingham notes that: "the success of the Roosevelt Dam system illustrated the importance of water to the development of Phoenix and the Southwest."

Transforming the Desert: Uses for Water

In the early historic settlement period canals provided water for agriculture, but that has virtually disappeared from Tempe. The canals also provided water for irrigating yards and for recreational uses such as swimming. Tempe still employs *zanjeros* and provides municipally managed irrigation to over 1,600 customers.

The canal banks were once lined with cottonwood trees that provided shade for walkers and picknickers. As the Salt River Valley became urbanized, the canal system became much more utilitarian than recreational. Many canals were buried underground in concrete culverts and the water-loving cottonwoods were cut down.

In the 21st century, canals and dams in the Salt River Project area provide water for many uses, including residential, industrial, agricultural, and recreational. One of the most ambitious attempts to modify the desert environment is Tempe Town Lake, completed in 1999. Professor Randall Cervený observes: "What that does to the surrounding area is ... for a fairly narrow strip of land right around that lake, conditions are much milder in terms of the temperatures because the humidity holds in the heat – prevents it from getting too hot, but also prevents it from getting too cold, kind of like a San Diego effect if you will..."

Today, Tempe Town Lake functions as a social space and urban amenity, just as the canals used to. Drawn to the water, residents and visitors engage in many recreational activities on and around the lake, such as sailing, fishing, kayaking, and rowing.

Beauty or Blight: A Fragile Land

"In many ways, we are trying to adapt this environment and learning the hard way that some of the ideas we thought were good ideas in the past are not so good, not so intelligent." – Professor Ken Sweat

The Sonoran Desert is a much more fragile environment than it appears at first glance. A delicate ecosystem affected by natural cycles of flood and drought, as well as human development in the Salt River Valley, the Sonoran Desert is constantly evolving. Development has consequences for the desert and the people who live here, both positive and negative. Within the boundaries of Tempe, very little of the native desert remains in its original state.

This transformation of ecosystems is happening across the American West. Author Daniel Kemmis observes that “the relentless wave of migration ... puts steadily increasing pressure on all western land, including public land. It also creates growth challenges in terms of regional identity as relative newcomers, less familiar than old-timers with the region and its traditions, become a more dominant force in the West.”

Native desert plants were replaced by non-indigenous landscaping. These newly-introduced plants thrive almost year-round in this climate if given enough water. Phoenix used to be touted as a place for allergy sufferers to come, but no more. Professor Ken Sweat explains that: “no matter what you’re allergic to, you’ll find it in a garden somewhere in Maricopa County, so don’t come here for respiratory problems. In many ways, we are trying to adapt this environment and learning the hard way that some of the ideas we thought were good ideas in the past are not so good, not so intelligent.”

Beauty or Blight: Water Fluctuations

“When we were kids, from the house we could see the water...when it’d come up high... we could see the water looked like an ocean.” --Irene Rodriguez

“You never dreamed the water would come that high. But it used to...I remember that we used to hold our breath, thinking it [the water] would come as far as our house.”—Irene Rodriguez

Natural processes have shaped the Sonoran Desert for millions of years, including cycles of flood and drought. The peoples who have inhabited this land have always been affected by extreme water fluctuations. The maximum flood on record for Maricopa County occurred during February 1891 on the Verde, Salt and Gila rivers, only to be followed by nearly a decade of drought. Moderate to severe flooding occurred again in 1905.

To control these floods and provide a reliable water source, Roosevelt Dam was built. The world’s highest masonry dam, it was completed in 1911. The dam measured 184 feet thick at the base, 16 feet wide at the crest, and rose 280 feet. Three more dams were constructed on the Salt River to provide hydroelectric power, and two on the Verde River.

Even with the tremendous capacity of the reservoirs in the Salt River Project system, the Valley is still susceptible to flood and drought. Intense summer thunderstorms and the remnants of tropical storms and hurricanes from the Pacific regularly result in flooding, property damage, and sometimes loss of life. Between 1977 and 1980, seven floods occurred in the Valley and a national disaster was declared three times. Eleven of the thirteen bridges or crossings over the Salt River were destroyed or damaged.

In 1993, a portion of the scaffolding used for construction of the new Mill Avenue Bridge was washed away. In 1996, the height of the dam was raised 77 feet for safety reasons. Within a few years the Valley was once again gripped by drought, this time one of the most severe in recent history.

Beauty or Blight: Unintended Consequences

“If you go outside the metro area now, you see a rather parched landscape that wouldn’t have been like that with the higher water table.” – Archaeologist Arleyn Simon

Human interactions with the Sonoran Desert, particularly here in the Salt River Valley, have resulted in changes to the local flora and fauna. Some native plants and animals no longer exist here in the Valley, while countless non-native species have been introduced.

When explorers passed through the Valley in the 1850s, the mesquite bosques were so thick that they were difficult to pass through. Many were cut down to make way for farms and ranches. In the 1920s, groundwater pumping began. Our never-ending thirst for water has resulted in a drop in the water table, causing much of the native vegetation to die. Arizona State University archaeologist Arleyn Simon explains that, “if you go outside the metro area now, you see a rather parched landscape that wouldn’t have been like that with the higher water table.”

In comparison, the urban environment, a carefully-designed desert, appears lush due to constant irrigation. Areas within the urban landscape that have not been irrigated, such as Papago Park, have changed dramatically. Simon observes that: “the area around the zoo and botanical garden and Papago Park and the buttes, at one time that may have looked very much like the area around Saguaro National Monument [outside Tucson]. Of course, the river itself was a very lush, rich, riparian zone with cottonwood forests and willows and cattails and cane and marshes and fish, birds and things like that.”

Beauty or Blight: Brown Clouds and Heat Islands

“Urbanization is changing the pattern yet again, creating a heat island effect, in which the average temperatures begin to rise since the pavement, buildings, and other thermal sinks of urban living do not quickly cool down.” – Grady Gammage, Jr.

Human transformations of the native Sonoran Desert landscape in the Salt River Valley have resulted in pollution and an increase in nighttime temperatures. As agricultural areas and native desert were replaced by buildings and stripped of vegetation, an urban heat island effect occurred.

But, this was not always the case. Grady Gammage, Jr. once remarked that: “the Sonoran Desert, left alone, cools considerably at night even after a blistering summer day, creating a large swing in temperature within each 24-hour period. Irrigated agriculture altered this pattern, increasing humidity, and thus actually decreasing daytime ground temperatures. Urbanization is changing the pattern yet again, creating a heat island effect, in which the average temperatures begin to rise since the pavement, buildings, and other thermal sinks of urban living do not quickly cool down.”

Today, nighttime temperatures in the Phoenix metropolitan area are in excess of 90 degrees on some summer nights, illustrating the growing urban heat island effect. Research studies attribute this effect to the following causes: 56% to less vegetation, 38% to dark roofing, and 6% to dark paving. Here in the Valley we no longer experience the natural cooling effect that less developed areas in the Sonoran Desert do.

Not only is our air warmer than it used to be here in the Valley; it is also not as clean. Warm air aloft in the wintertime traps the cooler air at the surface, preventing all of the dust and manmade pollutants in the air from escaping. The result is a murky haze, known as “the brown cloud,” that obscures the surrounding mountains.

Sustainability: The Future of Desert Cities

“Being cognizant of the ancient need for water can help us think about what we’re doing in our own little micro-local environment of our own home, and whether we’re allowing nature to replenish itself, or helping it to do that, rather than hindering it.” – Archaeologist Arleyn Simon

Sustainability, in general terms, is the ability to maintain the balance of a certain process or state in any system. For humans to live sustainably, the Earth's resources must be used at a rate at which they can be replenished. Resources such as water must be harvested or used in such a way that they are not depleted or permanently damaged in order to ensure productivity into the future.

ASU archaeologist Arleyn Simon suggests that "being cognizant of the ancient need for water can help us think about what we're doing in our own little micro-local environment of our own home, and whether we're allowing nature to replenish itself, or helping it to do that, rather than hindering it."

In relation to the Sonoran Desert sustainability refers to a balanced ecosystem. The Global Institute of Sustainability and the Decision Center for a Desert City at Arizona State University are both working to understand what kind of changes are taking place in our desert environment.

The effects of growth in the Phoenix area reach far beyond its boundaries. Author Philip Fradkin explains that the Colorado River is "a river whose water level was determined by the air conditioning load in Phoenix ... [and that] the daily fluctuations of the river ... are mostly determined by the diurnal energy needs of such cities as Phoenix." In the past decade the Bureau of Reclamation has conducted experiments to correct this problem in order to protect endangered species.

The health and well-being of Tempe depends on the ongoing relationship between people and the desert environment. It is possible to moderate human impacts on the environment by practicing sustainable growth practices. Renewable energy sources, water conservation, "green" buildings and land use planning all play an important role.

Renewable Energy

The most practical form of renewable energy in the Sonoran Desert comes from sunlight. Solar energy, also referred to as solar power, is the conversion of sunlight into electricity. This process takes place either through the photovoltaic effect, or by heating a transfer fluid, such as water, to produce steam to run a generator. Not all solar energy is necessarily "green" though. Solar arrays, large concentrations of solar cells, are very water intensive, and require that the land beneath them be stripped of vegetation, potentially destroying wildlife habitats.

Photovoltaic devices (solar cells) directly convert solar radiation into electricity without any noise, pollution, or moving parts. Long lasting and reliable, solar cells are an important alternative to conventional fossil fuel electricity generation.

First demonstrated in the 1950s, photovoltaic devices slowly became more popular during the oil crisis of the 1970s. They became increasingly more efficient throughout the 1980s and 1990s proving to be a practical and economical source of energy generation. More importantly, photovoltaic devices are among the most environmentally friendly electricity generating sources.

Since the 1970s Arizona State University (ASU) has been recognized as a leader in solar energy research and development. Its Photovoltaic Testing Laboratory, now run in partnership with TUV Rheinland, is one of only a handful of similar facilities in the world.

Solar power is easily capable of providing many times the total current energy demand. The only drawbacks are the initial installation cost, although that has been declining, and the intermittent nature of solar power. Solar power either needs to be stored for use when the sun is not out, or combined with other energy sources such as wind or hydropower.

Water

Water is perhaps the most precious natural resource on Earth. It must be carefully managed for future generations. Water conservation practices are applied in agricultural, residential, and commercial settings, to reduce the use of water and avoid waste. In the Sonoran Desert where water is so scarce, conservation is critical.

In crop irrigation, water can be conserved by minimizing losses due to evaporation and runoff. Residential water conservation can be both high and low tech. Water-saving technology for homes and businesses includes low-flow showerheads, low-flush toilets, faucet aerators, and wastewater reuse or recycling systems. Xeriscaping (gardening in ways that reduce or eliminate the need for irrigation) is another way to conserve water, by using plants whose water requirements are appropriate to the local climate.

A low-tech means of saving water is rainwater harvesting. Rainwater harvesting is the gathering, or accumulating and storing, of rainwater. This technique is used around the world today, and has been for millennia. Prehistoric peoples in the Sonoran Desert harvested rainwater. There are many types of systems to harvest rainwater, including rooftop and hillside runoff systems.

In Arizona there are financial incentives for homeowners who install rainwater-harvesting and greywater-harvesting systems. The latter reuse water from showers, sinks and washing machines to flush toilets and sometimes for irrigation. Some cities encourage the installation of such systems while others discourage them, citing sanitation and efficiency problems.

Support for water harvesting is not universal throughout the American West. Water rights laws in some states severely restrict rainwater harvesting. The thinking behind these laws is that a property owner who captures rainwater is using water that would become surface flow through runoff – and other users may have prior rights to take water from the watershed.

Building Materials

Shelter from the elements is a basic necessity for human existence, but not all types of shelter are equally sustainable, or environmentally friendly. Today, thousands of “green” or eco-friendly building materials are available for homes, commercial structures, and the built environment that surrounds them. Some of these materials tackle the environmental challenges of living in the desert -- the lack of water and the heat. For example, artificial turf is available for those who wish to enjoy a green lawn even while living in the desert.

In most urban areas pavement comprises more of the built environment than roofs or open spaces. Paved surfaces absorb radiation during the day and release it at night, creating nighttime temperatures here that are up to 15 degrees warmer than the adjacent desert region. This heat island effect results in increased water consumption and evaporation and greater energy demands. One option to lessen this effect is the use of pervious – or porous – pavements, which like soil allow water and air to enter the ground forming a natural cooling cycle. Another option is rubberized asphalt, which cools rapidly at night as the temperature drops.

Two types of newer building materials that help reduce the amount of heat transferred into buildings are cool roofs and insulating concrete forms (ICF’s). Cool roofs reflect the sun’s heat, keeping the building surface cooler and reducing the amount of energy needed to cool the structure. ICF’s work similarly. These interlocking modular units of foam insulation fit together like Lego blocks, and when filled with concrete, ICF’s reduce the amount of heat gain and heat loss in a structure. This translates into less energy (and fossil fuel) used and less carbon dioxide released into the atmosphere.

Land Use Planning

Humans have modified the natural environment in the Sonoran Desert for millennia, transforming wilderness into a built environment. The Hohokam built canals, fields and villages. Historic period settlers re-excavated and extended those canals adding much more irrigated land. The agricultural boom in the Salt River Valley between the 1870s and 1950s resulted in soil erosion, degradation, and salinization. Groundwater pumping began in the 1920s, resulting in a decrease in the water table killing off much of the native vegetation.

Following World War II the population in Tempe and surrounding cities exploded and land previously used for agriculture became urbanized. Many Valley cities expanded beyond the former agricultural lands and vast swaths of native desert were turned into cities. The growth spurt that began in the 1940s has yet to subside. Tempe, roughly 40 square miles in size, is landlocked by surrounding cities. Today, the native desert habitat in Tempe is virtually gone.

Land use planning is part aesthetics, part organization, and part science. Land, resources, facilities and services are utilized to ensure the physical, economic, and social well-being of a community. Today, land use planning ensures that land is used efficiently, taking into consideration economics, social implications, and the environment. Cities such as Tempe create General Plans and planning guidelines to help govern development decisions that have long-term impacts on the environment, such as noise, pollution, and changes in surface runoff.

BUILDING OUR COMMUNITY

The American dream, from its earliest beginnings to today, has always been firmly rooted in the promise of a brighter future. Generations of people crossed continents and the seas, traveled over mountains and deserts, to seek out a new life in America.

After gold was discovered in California in 1848, thousands of new settlers began moving westward across the United States and north from Mexico to the western territories. They came searching for a land of promise, full of new opportunities. For some it was a vision, for others it was a mirage.

The Origins of a Desert Community- 1865

Four hundred years after the Hohokam culture migrated from the Salt River Valley, a new influx of settlers arrived. Following the establishment of Fort McDowell on the eastern edge of central Arizona's Salt River Valley in 1865, enterprising farmers moved into the area. They restored the irrigation canals left by the prehistoric Hohokam people and built new ones to carry water to their fields. Valley farms soon supplied food to Arizona's military posts and mining towns.

The first settlers to move to the Tempe area were Mexican-American families from southern Arizona and Sonora, Mexico. One such family in 1870, led by Tiburcio Sotelo, homesteaded 160 acres at the southeast corner of Rural Road and University Drive. The Sotelos and other Mexican-American settlers helped construct the first two irrigation canals, the Kirkland-McKinney Ditch and the San Francisco Canal. They started small farms to the east and west of a large butte, now known as Tempe Butte. In 1872, some of these Mexican-American settlers founded a town on land donated by William Kirkland called San Pablo, just east of Tempe Butte.

Another settlement, known as Hayden's Ferry, developed to the west of Tempe Butte. Charles Trumbull Hayden, owner of a retail and a freighting business in Tucson, homesteaded this location in 1870. Within a few years this community became the trade center for the south side of the Salt River Valley.

Both settlements grew quickly and soon formed one community, known today as Tempe.

The Story of San Pablo-1870-1872

About three hundred years ago, settlers began moving north from central Mexico into the region that is now Arizona. When this area became part of the United States in 1853, the Mexican residents of Tucson and Tubac became U.S. citizens. These farmers and ranchers were descendents of the families that had lived there for generations.

After the Civil War, the U.S. Army established Fort McDowell on the Verde River. John Y.T. Smith was contracted to provide feed for the soldiers' horses. He hired Mexican-American laborers to cut wild hay on the banks of the Salt River. These workers established a camp near where the town of Tempe would soon be founded. Other Mexican families from southern Arizona and Sonora joined them and homesteaded farms nearby.

William H. Kirkland was a well-known early Arizona pioneer, rancher and businessman. In 1872, he encouraged the Mexican-American laborers, who had worked on the Kirkland-McKinney Ditch in 1870, to build a community on the southeast side of Tempe Butte. He donated eighty acres of land for the town site, and the sale of lots raised money to build Our Lady of Mt. Carmel Catholic Church. The community of Sonoran-style adobe houses with flat roofs, just east of Hayden's Ferry, was named San Pablo by William Kirkland.

Desert Crossroads -The Story of Hayden's Ferry-1871-1874

Legend states that in 1868, Charles Trumbull Hayden, while en route from Tucson to the territorial capital of Prescott, was forced to stop his freight wagon at the site where the old wagon road crossed the river, just west of the large butte. Delayed by flooding along the Salt River, it is said that he climbed the butte to survey the area. While viewing the vast expanse of surrounding land, Hayden instantly recognized the great agricultural potential of the area. He also noticed the unique geography that would permit the construction of a water-powered grain mill that could supply flour and other milled goods to military camps and mining towns in northern Arizona. Whether this story is true or not, by 1871 Hayden returned to lay plans for a future settlement.

Between 1871 and 1874, Hayden quickly established the commercial foundations for the new settlement. He built a cable-operated ferry crossing, a flour mill operated by water power, an inn and a general store. In 1876, Hayden moved his successful freighting business from Tucson to his new outpost. He continued to build businesses that supported his fledging settlement, including blacksmith and carpenter shops, warehouses, and boarding houses for employees. In just a few years, the newly-established outpost became known throughout the territory as the settlement of Hayden's Ferry.

Vision in the Desert - A Story of the Naming of Tempe-1879

One folk tale, often told by early settlers, relates to how Tempe was named. The story begins in 1879 with an Englishman named Byron Phillips Darrell Duppa, who is also credited with naming Phoenix. "Lord" Darrell, as many of his friends addressed him, was well-read, with a fondness for the dramatic. He is said to have come from a wealthy English family of respectability, educated in Cambridge, England and fluent in five languages and the classics. His friends often noted that Duppa was fond of quoting Shakespeare, flawlessly from memory, by the hour.

The story relates how "Lord" Darrell, at seeing the large valley between the two buttes, the wide river, and the nearby expanse of green fields, proclaimed this area "Tempe," because it reminded him of the Vale of Tempe in ancient Greece. Whether he had ever seen the real Vale of Tempe is unknown, but it is certain that he had read one of the many classical references to its beautiful scenery. Knowing this, it is understandable why he made that association.

A Page from History-The Birth of a Hometown Newspaper-1886

In early 1886, John Fitch and Thomas Martin set up a small "News Printing Office" in a loft above the blacksmith and carpenter shops owned by Charles Hayden. There, on January 30, 1886, they published the first issue of the *Salt River Valley News*. In the winter of 1887, John Fitch sold his stake in the newspaper to James McClintock. In just a few short weeks, McClintock sold it to Curt Miller.

Curt Miller, as the new editor, pledged to provide a newspaper that would keep local farmers informed about new agricultural discoveries and experiments. Soon after giving that pledge, in August of 1887, Curt Miller changed the name of the newspaper from the *Salt River Valley News* to the *Tempe News*. The *Tempe News*, under his leadership as editor for the next 55 years, became Tempe's hometown newspaper.

In 1944, the *Tempe Daily News* was sold by Curt Miller's heirs to Irma and Frank Connolly. They owned and published the paper for the next 36 years. For several years, Frank and Irma Connolly, their linotype operator and Frank's brother, Max, represented the newspaper's entire work force.

In 1980, the Cox Newspaper syndicate purchased the *Tempe Daily News* from Irma Connolly after Frank's death. After exploring several cost-cutting measures and moving the newspaper offices to several Tempe

locations, in 2006, the local office was closed. All of the remaining staff were moved to Mesa and the paper was printed regionally for several years. In 2009, the paper was no longer circulated in Tempe.

The *Tempe News*, Tempe's original hometown newspaper, became one of the longest, continually-published newspapers in Arizona history. It proudly celebrated one hundred years of community service in 1987.

Town Boasting, Boosting and other Tall Tales -1887

Originally, in 1879, Tempe was the name that "Lord" Darrell Duppa suggested for a large irrigation district that was served by the Tempe Canal. By 1885, the name Tempe had gradually become associated with the area surrounding the separate communities of Hayden's Ferry, San Pablo and the Johnson Homestead, a Mormon settlement just south of Charles Hayden's homestead.

In October of 1887, several enterprising Tombstone residents, including George N. Gage, along with other investors from Tombstone and California, took the steps necessary to transform Tempe from a small village to a town. They organized the Tempe Land and Improvement Company and acquired a total of 705 acres of land from Charles Hayden and the Johnson Family, early Mormon settlers who had begun to relocate to Mesa.

The newly-incorporated firm surveyed and laid out the property in blocks and lots for sale. The firm of Schultz and Franklin, Immigration Solicitors, was engaged as real estate agents to promote the sale of land in Tempe throughout the eastern United States. Advertising pamphlets and a colorful Bird's-eye view map by C.J. Dyer were prepared to attract new settlers and investors.

Humble Beginnings-The Formation of City Services- 1894

Tempe's town services originated with citizen volunteers serving in leadership roles for the first several decades. In 1887, Winchester Miller, a local farmer, was named Tempe's first county constable. In 1894, Tempe was incorporated as a town and local business owner George Compton was elected as its first marshal. By 1895, the Tempe Town Marshal was also the Supervisor of Streets, the Collector of Tax and Licenses, and the Water Master.

Electricity lit up Tempe streets by 1898. The Sunset Telephone and Telegraph Company brought in telephone service in 1900. Domestic water was available by 1902, the same year a volunteer fire department was authorized, and gas was brought into town in 1909. The town had the last of its public services in place with the completion of the sewer system in 1913. Tempe built its first City Hall in 1914 and Mill Avenue became Tempe's first paved street in 1919.

This One Horse Town- Main Street, 1900

In 1877, Tempe had two stores and a population of about 100. By 1887, speculators completed a railroad through Tempe. This made it much easier for the surrounding farmers to sell their produce in distant markets, and solidified Tempe's standing as a major agricultural center for the area. The farmers' successes permitted further commercial development in the town.

By the early 1890s Tempe's population had reached over 500 residents, with 31 commercial buildings in downtown. These included the Laird and Dines Pharmacy, the Tempe Hardware Store and the Arizona Mercantile, among others. Several new arrivals, attracted by Tempe's agricultural and commercial vitality, formed a Common Council and formally incorporated the town in November of 1894.

By the turn of the century, many of the citizens of Tempe and the Arizona Territory longed for statehood. In 1910, fulfilling a campaign promise made a year before, newly elected President William Howard Taft

authorized a state constitutional convention. Tempe's Dr. Benjamin B. Moeur and Tempe Normal School President A.J. Matthews were local delegates to the convention. Arizonans elected George Hunt of Globe their first state governor and Tempe's Carl Hayden as Arizona's only member of the House of Representatives in 1911.

On February 14, 1912, after being a territory for almost 49 years, President Taft signed a proclamation declaring Arizona the 48th state in the Union.

The Great Depression- Economic Life in Tempe-1929

The economic difficulties of the Great Depression not only left their mark on the nation, but also on the small town of Tempe. The town, once insulated from the outside world, could no longer remain as isolated as it once was. Tempe's main street, Mill Avenue, was now part of the national highway system. Additionally, slow but steady population growth resulted in the 1929 passage of a resolution officially changing the small town status of Tempe to a city. The city's government now struggled with the demand for increased city services.

The federal recovery projects of the 1930s and the availability of radios also brought Tempe into closer contact with the outside world. The CWA Civil Works Administration (CWA), unveiled in 1933, and later the WCA Works Progress Administration (WPA), authorized in 1935, were two federal projects that put people back to work locally. These projects helped construct many new buildings, a bridge, sidewalks, and other major community improvements.

An instrumental figure in bringing many of the CWA sponsored projects to the city was Tempe resident Dr. Benjamin Baker Moeur who served as Arizona's governor between 1932 and 1934.

World War II-On the Home Front- 1941-1945

The Second World War was not a distant event in Tempe. Many residents saw their sons and daughters leaving the community to serve the nation. A Roll of Honor, located on the southwest corner of Fifth Street and Mill Avenue, was erected by the City of Tempe recognizing the young Tempeans who joined the various branches of the military. Many residents also remember, as the war years went by, a separate section honoring those who were killed while serving their country.

After Pearl Harbor was attacked in December of 1941, the war affected other local citizens in a much different way. Americans of Japanese ancestry living in southern Arizona were ordered by the US Government to relocation camps for the duration of the War. Those Japanese families living north of the government drawn exclusion line, like the Kajikawas and the Nakatsus who lived in or around Tempe were allowed to remain in their homes. Although these families were allowed to remain in their homes they found that their movements were severely restricted.

Elsewhere on the home front, because Tempe was a farming community, many families avoided food shortages by growing their own food, rather than relying on rationed goods. Also, many local women took jobs that had traditionally been filled by men. One example was Margaret Carr, who ran the family mortuary business while her brothers were in the armed services. Other women contributed to the war effort by knitting bandages for the Red Cross.

A Sense of Place-Peace and Prosperity -1946

With the end of World War II, the nation's and Tempe's period of sacrifice was replaced by widespread optimism. The national economy strengthened during those years and the Depression was finally over. The patriotic posters and pledges that sustained everyone's spirits during the hard times were no longer needed.

After World War II, the Southwest, and the Phoenix metropolitan area in particular, experienced a burst of large-scale development and growth. Many ex-servicemen, taking advantage of the GI Bill, came to Tempe to attend the Arizona State Teachers College (now Arizona State University), and then remained to start careers and raise families. In 1948, the high technology industry was born in Arizona when Motorola built one of its first manufacturing plants in Phoenix. This industry, and soon others, began employing many of the new graduates from the Arizona State College.

Many Tempeans were among the people who made important contributions to the War effort and later to our community. One of the better-known was Howard Pyle, a news correspondent who reported on the signing of the Japanese surrender and was later elected Governor of Arizona. Howard Pyle, who helped guide our community and state in the post war era, served two terms as the Governor of Arizona from 1951 to 1955.

Tempe - The Great Building Boom Begins-1950

As the nation approached the mid-century mark, Tempe and the rest of Arizona were poised for a period of extraordinary growth, development and change. With the passage of the GI Bill and the Federal Housing Act after World War II, returning war veterans were assured of low cost education and home financing, thus creating new opportunities for the pursuit of the American Dream.

Also for the first time in history, responding to a severe national shortage of housing created by the demand from returning veterans, homebuilders began constructing homes in large numbers in residential subdivisions. In Tempe, William Mitchell, the grandfather of Congressman and former Tempe Mayor Harry Mitchell developed the first such subdivision. Many builders soon followed, including Del Webb and William Bradley. The "ranch style" house, with its open floor plan became the standard for these new subdivisions. This coupled with the invention of evaporative cooling and air conditioning, and the expansion of the Salt River Project water system, contributed greatly to the post World War II building "boom" here in the Valley of the Sun.

As the decade advanced, city officials again struggled to provide the water, sewer, infrastructure and other city services that were needed by new families as they moved to Tempe. During the 1950s the population of Tempe rose an unprecedented 324%, from 7,684 to 24,897 residents.

Highway to Suburbia -Southward Expansion Leaves Downtown Behind-1959

The rapid growth of national and local economies in the late 1940s and early 1950s brushed aside any lingering gloom left by the economic difficulties of the Great Depression and the hardships of a World War.

Subdivisions began to replace the family farms, and Tempe was no longer a primarily agricultural center. The commercial center of Tempe was traditionally along Mill Avenue between First and Eighth Streets. Long-time merchants maintained businesses in the downtown area, but soon, downtown Tempe was no longer central to the rapidly-expanding city.

In late 1956, a new shopping center, Tempe Center, was built at southeast corner of Eighth Street and Mill Avenue. The area surrounding the shopping center and its parking lot was formerly occupied by the Tempe Union High School and is now owned by Arizona State University.

By the early 1960s, Tempe Center was joined by a strip mall on the southeast corner of Mill and Broadway. These two projects, in response to the general population shift to just south of Southern Avenue, signaled

the advancing decline of the old downtown central business district and the southward movement of the commercial center of Tempe.

Flight to Suburbia-Everything is Going South-1960

The City of Tempe experienced modest geographic growth from 1930 to 1950. During those same years the population grew seven-fold to 7,684 in 1950. By the 1960s, the town's southern border reached halfway between Southern Avenue and Baseline Road. At that time, Tempe's Common Council considered concentrating all of Tempe's government services in one location in the old downtown area.

By 1968 though, after almost two decades of phenomenal southward population growth, the city leadership began planning for some city services to be moved further southward. The library, which shared the downtown city hall site, was moved to the intersection of Rural Road and Southern Avenue in 1970. At that same time the Tempe Community Center Building, now the Edna Vihel Center for the Arts, was also constructed on this site.

In the next few years, Tempe's geographic boundaries once again moved further south. The Lakes, the first master planned large scale housing and water development of its kind in Arizona, was built in 1969, just south of Baseline Road. This southward movement was also reflected in Tempe's schools. In 1971, a new high school, Marcos de Niza, was constructed just south of The Lakes. By 1974, it had the largest enrollment of Tempe's three high schools.

Old Town Tempe- The Age of Aquarius -1968

The old city center also continued to change. Tempe's rapid growth to the south meant that fewer and fewer people were coming into the old business district to shop. In 1963, the Vienna Bakery closed after 59 years in the same downtown location. In the next year, Laird and Dines Drugstore closed after 67 years downtown. As the old downtown buildings became vacant and fell into disrepair, the resulting low rents and the nearby university attracted several new individuals interested in starting their own businesses.

This new group of merchants recognized the potential of the historic downtown area. In late 1968, young artists and entrepreneurs began taking advantage of the low rents in the vacant commercial properties along Mill Avenue. They painted the old buildings in bright colors and sold a wide variety of handcrafted items. They also formed the Mill Avenue Merchants Association in 1968, to further strengthen the newly flourishing, yet still physically deteriorated, commercial area.

The Changing Face of Mill Avenue-Downtown or Midtown?-That is The Question -1970

With the explosive growth of the previous two decades, detrimental consequences came to downtown Tempe. Many other downtown businesses closed or suffered commercially as shopping centers, catering to residents of the new subdivisions, sprang up to the south.

By 1968, the Tempe City Council faced a momentous decision. The need for expanded city facilities and services was obvious, but the debate centered on the location for a new city hall. Sentiments were equally divided over whether to redevelop the existing city hall property downtown, or to relocate the new city hall building to a more geographically-central site at the southwest corner of Rural Road and Southern Avenue, adjacent to the new city library site. After months of contentious debate and by the narrowest of margins, a historic vote of 4 to 3 was taken. The City Council selected the downtown site for its strikingly-modern municipal building in the form of an upside-down pyramid. This unique design, by local architect Michael Goodwin, replaced the 1914 Classical Revival style city hall building.

But as stated by a number of the council members, including former Mayor Harry Mitchell, the decision went well beyond the location of the city government building. It also symbolized a commitment by the city to the revitalization of downtown Tempe. Today, four decades later, that commitment of revitalization, reinvention and renewal of downtown Tempe is as strong as ever.

City of Vision- Putting Water Back into the Salt-1966-1999

By 1975, Tempe became completely "landlocked" with four major cities surrounding its boundaries. In the decade to follow Tempe citizens and their leaders confronted many major planning, zoning and developmental issues. Among the most pressing of these issues was the use of finite land for development, the preservation of historic buildings and traditional neighborhoods, the expansion of commercial development and the revitalization of downtown.

One development project that ultimately captured the imagination and vision of Tempe's leaders and citizens was the Rio Salado Project, originally envisioned in 1966 by students of the College of Architecture at Arizona State University. The class proposed that a five mile "green belt" system be built along the dry river bed of the Salt River. The project, led by Dean James Elmore, proposed to combine flood control with environmental design to convert the Salt River from a dry desolate scar to a major asset of open space parks and greenbelts.

What began as a student project over forty years ago later became known as the Tempe Town Lake Project. Today the 214 acre town lake, completed in 1999, is the crown jewel of decades of planning and development. The lake and its surrounding park and recreational activities, coupled with many private and public development projects along the lake front, has come to define Tempe, as stated by former Mayor Neil Giuliano "as a regional destination and urban center for recreation."

Tempe Today

As one century drew to a close and another dawned, Tempe's future again seemed bright and hopeful. With the completion of the Tempe Town Lake, in the year 1999, the City of Tempe began development of another visionary project it had planned for nearly a decade. The project became known as the Central Phoenix/East Valley Light Rail Project.

The Light Rail Project began as a cooperative urban transit project between the cities of Phoenix, Tempe and Mesa. The light rail transit system is a 20.3 mile corridor linking activity centers in central downtown Phoenix with downtown Tempe, Arizona State University and west Mesa. Begun in February 2005, the first phase of construction took nearly four years to complete. At the opening day ceremony, on December 27, 2008, United States Representative and former Tempe City Mayor Harry Mitchell said:

"This is the first phase of a light-rail system that will help us reach a shared vision of a[n] ... economically vibrant urban corridor."

Tempe today has again positioned itself to be a visionary leader in the Valley. Rising from the humble roots of its entrepreneurial Anglo and Mexican-American pioneers, Tempe has developed into a vibrant urban desert community with a diverse and involved citizenry and a shared vision for its future.

LIVING TOGETHER

“I think Tempe has come a long way, and there are greater things in front of it, but its citizens will make the difference.” Arthur Reeves

Since the first human occupation in the area, Tempe has been shaped by the efforts and interactions of diverse groups of people. Each group has contributed in many ways to what Tempe has become.

Living together has not always been harmonious and at times injustices have occurred. Yet great strides have been made through mutual effort. This is the story of how Tempeans have struggled to find a balance between celebrating differences and achieving a unified sense of community. Tempeans are still learning to live together.

They Were Here First

Even in prehistoric times, Tempe was home to the ethnically diverse Hohokam people. The archaeological evidence shows that the Hohokam were made up of different ethnic groups operating under a single cultural, economic and political system.

Many diverse communities came together once more during Tempe’s early history. By the 1870s, many Akimel O’odham (Pima) and Piipaash (Maricopa) had moved north along the Salt River near Tempe, due to the encroachment of European American and Hispanic farmers on their traditional homeland near the Gila River.

Tensions built with European American farmers who also had settled on the fertile land along the Salt River. Attempts to force the Native Americans out of the Salt River Valley ultimately failed. In time European American farmers grew to accept the Native Americans’ presence. The Akimel O’odham and Piipaash remain Tempe’s neighbors to this day.

“...just like today, in prehistoric times, societies were...pluralistic and an amalgam of different people coming together.” Dr. Arleyn Simon

The Hohokam were the first people to establish year-round settlements in this area. They occupied the Valley and much of southern Arizona from approximately A.D. 1 to 1450. Farmers who built a vast canal system, the Hohokam laid the foundation for productive agriculture here. Recent research suggests that they were a diverse people. The archaeological evidence shows that the Hohokam culture actually was composed of many different ethnic groups operating under a single cultural, economic and political system.

By the 1870s, European American and Hispanic farmers had settled upstream from the Gila River reservation and appropriated much of the water that local Native Americans had always used for growing their crops. Poverty and starvation resulted. Many Akimel O’odham (Pima) and Piipaash (Maricopa) had no choice but to move from their Gila River reservation to settlements along the Salt River near Tempe, where water was more plentiful.

Tensions built with European American farmers over the fertile land along the Salt River. All of the best agricultural lands had been cleared and Tempe was growing rapidly. The European American and Mexican farmers resented that the Native Americans were already farming valuable land. They began a campaign of harassment and legal challenges to drive off their Akimel O’odham and Piipaash neighbors.

On June 14, 1879, President Rutherford B. Hayes issued an Executive Order creating a reservation on the north side of the Salt River and expanding the Gila River reservation to the north and west. Repeated

appeals to the territorial legislature to force the Native Americans to return to the Gila River reservation failed. The potential for violence grew.

The Akimel O'odham and Piipaash were major suppliers of wheat to the Hayden Flour Mill. Charles Trumbull Hayden publicly defended the Native Americans' rights to their land and water, despite much opposition. In 1880, troops from Fort McDowell were stationed around Tempe to stop further disturbances and to protect the Hayden family who had received threats.

In time European American farmers grew to accept the Native Americans' presence. The Akimel O'odham and Piipaash remain Tempe's neighbors to this day.

Settlement by the Butte: Hispanic

In the 1850s, descendants of Hispanic pioneer families began moving from Tucson, Tubac and northern Sonora to build new communities in the Salt River Valley. They helped restore the original Hohokam canals and build more canals, bringing water to newly cultivated land. They also began farming and homesteading in the area. By the 1870s, the east Tempe area had one of the largest concentrations of Hispanics in the Valley. Between 1870 and 1900, about half the population of the Tempe area was Hispanic. The community where they lived was known as San Pablo.

Hispanic laborers were essential to the successful completion of the new canals, not just for their labor but for their practical experience in canal engineering. Sonorans had practiced irrigation techniques for generations. They were the first to develop the region for farming, which later benefitted the less-experienced European American homesteaders that moved into the area. Hispanics also worked on European American farms and dairies.

About 50 Hispanic employees worked at Hayden Flour Mill, the store, the warehouses and blacksmith's shops. They also worked as freighters, driving the mules that transported goods by the wagon load. Many Hispanics found employment with the railroads in the late nineteenth and early twentieth centuries.

Settlement by the Butte: Japanese and Chinese

Although a large Chinese community existed in Phoenix as early as 1880, there were few Chinese businesses in Tempe during its early decades. Tom Ping's restaurant was a popular eatery in 1900. In the 1910 census, only nine Chinese were reported as living in Tempe. Their occupations included cooks, restaurant proprietors, a laundryman and a merchant. Sadly in 1910, the *Tempe Daily News* reported a fire that destroyed the Chinese laundry and killed its proprietor, Tom Wing.

Very little is known about early Japanese settlers in Tempe. Winchester Miller allowed Japanese farmers to use some of his fields to grow their crops in the late nineteenth century. In 1897, the Canaigre Company of Tempe hired 100 Japanese workers to gather canaigre (an herb used for tanning and medicine) along the Agua Fria River, after which the laborers returned to California. At least one other Japanese family leased land from the White family in the 1910s.

As with the Chinese, there was a more established Japanese community in Phoenix after 1900. They introduced new crops such as flowers and vegetables, and innovative growing techniques that would eventually become standard practices in Arizona.

Settlement by the Butte

A few African Americans are shown in early Tempe photographs. They depict farm workers, musicians, and a baseball player. However, nothing is known about these individuals. Did they live and/or work in Tempe? How long were they in Tempe? When did they leave and why? These questions remain unanswered.

Mary Green and her son Moses were the first documented African American residents of Tempe. Mary Green began as a domestic in the household of the Columbus Gray family who came to Phoenix from Arkansas in 1868. She homesteaded in the Tempe area around 1890. An African American family was residing on First Street in 1891. However, nothing is known of their fate after a fire destroyed the house where they were living. African Americans did not live in Tempe again until the 1950s when several students lived in dormitories on the university campus. African Americans did not own homes in Tempe until the 1960s.

As early as 1920, African Americans were admitted to the Territorial Normal School. However, they received unequal treatment, being excluded from the cafeteria, the dorms and even the restrooms. For a long time they were not allowed to live in the City of Tempe. Several African American students excelled in sports. Many alumni went on to pursue careers in education.

In the late 1870s, Mormon farmers from Utah settled in the Salt River Valley. Lehi was established on the south bank of the Salt River east of Tempe. Other Mormons settled in Mesa in 1878. Charles Trumbull Hayden extended credit to the Mormons for supplies and bought their grain. In 1882, Benjamin Franklin Johnson and Joseph E. Johnson bought 80 acres from Hayden and started a Mormon colony between what is now Fifth Street and University Drive. About 300 people joined the colony, almost doubling the population of Tempe. They built homes and a cooperative store, planted trees and other vegetation, and imported bees from California. This community became known as West Tempe. Although they moved east to the growing colonies of Lehi and Mesa in 1887, these early Mormon settlers made a significant impact on the development of Tempe.

Approximately 200 Danes immigrated to the Tempe area under the sponsorship of Niels Petersen. Petersen, himself a Dane, filed for a homestead in 1874 at what is now the northwest corner of Priest Road and Southern Avenue. Many of these sponsored Danes worked for Niels Petersen on his ranch before homesteading themselves. The Andersens, Thudes, Lassens, Hansens, Jepsens, Ellingsons, Jensens, Bertlesens and Nielsens were among the pioneer families that settled in and around Tempe. As a result of Petersen's efforts, Arizona has one of the highest concentrations of Americans with Danish descent in the United States.

Communities Apart

By 1900, two separate towns co-existed within close proximity to one another. Tempe, formerly known as Hayden's Ferry or Butte City, lay west of Hayden Butte. San Pablo was situated south and east of Hayden Butte and became known to the European American community as East Tempe or Mexican Town. It was called *Barrio el Centro* by its inhabitants.

In its early years, Tempe did not have strict segregation and outright racial discrimination. Attitudes changed, however, after large numbers of Mexican laborers were recruited in the 1910s. Most of them were migrant farm workers living in camps near the fields where they worked. Prejudice escalated as the Mexican population in the area increased.

The barrios of San Pablo had inferior housing and few city services. Paved streets, sidewalks and street lights were nonexistent. The Hispanic community had their own fire volunteers who lacked the equipment used by the Tempe fire volunteers just a few blocks from their neighborhood.

Segregation continued in the work place and beyond. Few jobs existed for Hispanics in Tempe. San Pablo had its own shops, owned and operated by mostly Hispanic merchants. Its residents only shopped on Mill Avenue when it was necessary. The children from San Pablo attended the Eighth Street School. They were taught by student teachers from the Normal School who had less experience than their counterparts at the European American schools. Hispanics did not swim with European Americans at Tempe Beach Pool. Their access to the pool was restricted to the days before the pool was cleaned.

The segregation and relative poverty of the barrios led to a close-knit community that was largely self-sufficient. Neighbors helped one another through the hard times and celebrated the good times together. Many former residents of San Pablo have pleasant memories of growing up in the barrios.

“They never let us know. They just came to the door and said that the college was going to buy that land. Sooner or later you had to sell, but the college was making you this offer. Take it or leave it. You had no choice. The Hispanics have no choice but to sell and get out.” Ray Chavarria

After the end of World War II, enrollment at Arizona State College skyrocketed. To build new dormitories, the college started buying all of the land north of University Drive in the mid-1950s. The northward expansion of the college campus led to the demise of the San Pablo barrio and the displacement of an entire Hispanic community.

Many displaced families moved to other locations in Tempe, throughout the Salt River Valley and beyond. Hard feelings still remain concerning the way in which residents were forced to sell their homes.

Thanks to an informal organization known as Amigos de Tempe, periodic reunions gave former neighbors the opportunity to get together to reminisce and catch up on recent happenings.

Tempe's Hispanic residents resisted discrimination. They joined *mutualistas*, mutual aid organizations like the *Alianza Hispano-Americana* (Hispanic American Alliance) that provided life insurance, burials, and a political voice. Residents also joined *La Liga Protectora Latina* (the Latin Protection League). In 1923, Adolfo "Babe" Romo challenged school segregation in court. A judge ruled that the European American 10th Street School must admit Hispanic children if their parents objected to the segregation.

During World War II, many Mexican-Americans from Tempe served in the armed forces. After the war, returning veterans demanded changes in the segregated community in which they lived. Their first success was in 1946 when Hispanic families were allowed to swim at the Tempe Beach pool. In 1964, voters elected Gil Montanez to the Tempe City Council.

The GI Bill brought many more diverse groups to Tempe as veterans sought to earn a college degree. This demographic shift provided new pressure to integrate. The GI Bill also provided more affordable housing for veterans, making available places for their families to live while they attended college.

The United States Supreme Court ruling on *Brown v. Board of Education* in 1955 declared that the segregation of schools was unconstitutional. The Court's reasoning in this case paved the way for change in other areas of discrimination such as housing, voting, and employment. Although federal civil rights legislation in the 1950s and 1960s prohibited segregation and discrimination, racism still persisted in the form of "unwritten laws" or practices.

In the 1880s Yaquis fled into Arizona from Sonora, Mexico due to persecution by the Mexican government. In about 1904, 30 Yaquis moved north from the Tucson area. With the assistance of Franciscan friars, they settled on five acres relinquished by Tempe homesteader Sylvester Roche. The Yaquis provided a dependable labor force for local farms, the railroads and the Salt River Valley Water User's Association.

However, they were occupying potentially valuable farm land and in 1910 the community, now 200 strong, was forced to relocate two miles to the southwest. A townsite was established with the assistance of Maricopa County Judge John C. Phillips, attorney M. J. Dougherty and Lucius Zittier, a Catholic Franciscan Missionary. Thus was born the town of Guadalupe, which today is made up primarily of Yaqui and Hispanic residents.

During the 1920s and 1930s, the Ak-Chin Community grew wheat which they loaded on wagons and brought from their land in Maricopa to the Hayden Flour Mill for processing.

Some Chinese businessmen began to leave Arizona and other parts of the country after the turn of the twentieth century. This exodus was due in large part to several Federal anti-immigration laws that restricted their rights to citizenship and representation in court, and banished them from returning to the United States if they visited their relatives in China. The large Chinese community in Phoenix remained but it was segregated from the rest of the population.

Prejudice and racism also affected Japanese Americans in the Valley. In 1942, President Roosevelt signed Executive Order No. 9066 authorizing the evacuation of people of Japanese descent from several states in the West, U.S. 60 became the dividing line between those allowed to remain and those that were sent to internment camps during World War II. The families living north of U.S. 60 were allowed to remain. However, they were subject to curfews and restrictions that severely limited their ability to run their farms, educate their children and go about their daily lives.

Racist attitudes in the valley continued to increase after African American share croppers arrived to work in the cotton fields in the 1920s.

African Americans were largely kept out of Tempe except for attending classes at Arizona State University. They lived primarily in South Phoenix, often in inferior housing. African Americans attended separate schools and were required to use separate seating in theaters and restaurants.

Getting Better at Being Together

“...[A] lot of our kids go to school in Tempe. A lot of our adult population is now working in Tempe. A lot of kids in Tempe are coming to school in Guadalupe...So I think now there is more opportunity for us to see how two distinct cities and two distinct cultures kind of work with each other.” John Molina

Although poverty and unspoken discrimination still exist, there has been a general trend since the end of World War II toward greater diversity and increased affluence among Tempe’s different communities. Hispanic laborers of the past have given way to teachers, school administrators, and professionals. The Hispanic population has diversified beyond Mexican Americans. Immigrants from Cuba, El Salvador, and many other countries in Central and South America have settled in the area.

Chinese laborers and shop owners, and Japanese farmers have given way to professionals from many Asian countries. Today’s African Americans work in a wide spectrum of professions where in the past they were limited primarily to the fields of education, farm work or providing professional services exclusively to their own community. There has been an influx of refugees from Eastern Africa, broadening the diversity of this community.

The presence of Arizona State University has been a major factor in bringing a diverse population to Tempe. According to the 2000 census, the student housing area east of the campus was the most diverse census tract in the state. However, other reasons exist for various groups settling in Tempe. Immigrants from Viet Nam, Cambodia, Thailand and Laos immigrated to this area after the end of the Viet Nam War. Other

political refugees have followed from regions such as Central America and the Sudan in Africa. Many immigrants have come to Tempe to join family members who had already settled here. Companies such as Intel, Motorola and other high tech employers have attracted a diverse work force. Tempe now has gained a reputation for welcoming diversity.

“If people get to know you, they’ll find out we’re more alike than we are different.” Arthur Reeves

COLLEGE TOWN

“...in 1884, there weren’t any high schools in the Arizona Territory and if a supply of teachers wasn’t found soon, there wouldn’t be many elementary schools left before long either.”

Peggy Bryant, Tempe Daily News 3/10/1984

In 1885, the Territorial Legislature established the Territorial Normal School for training much-needed Arizona teachers. Tempe citizens provided a cow pasture for the school site. On February 8, 1886 it became the first institution of higher learning in Arizona to open its doors.

The Normal School has changed its name and its role many times over the past 125 years. Now named Arizona State University, it is a major research institution with over 67,000 students at four campuses.

ASU shapes Tempe by attracting talent-rich students and faculty from all over the world and by bringing in arts, music, and cultural events. The school is now defining itself as a *New American University*, combining interdisciplinary research with free enterprise in a sustainable framework.

The *Arizona Gazette* was very prophetic when, in 1887, it stated: “We firmly believe time will work the desired change, and the Normal School will become one of the most important public institutions of the Southwest.”

ASU’s Economic Impact

“When all economic interdependencies are accounted for, the spending of the ASU community was responsible for 51,600 Arizona jobs and earnings of \$1.9 billion in FY 2005.” - Timothy D. Hogan, Professor Emeritus, Department of Economics

ASU’s spending includes:

- \$660 million to pay 17,500 faculty, staff, and student employees.
- \$620 million for construction projects, equipment, purchased goods and services.
- \$380 million worth of goods and services, purchased by faculty, staff and students.

How much is \$1.9 billion?

If you started laying out \$100 bills on the floor of this exhibit hall, you would be up to your knees in money by the time you spread out \$1.9 billion.

What’s in a Name?

For close to 100 years, a letter has been on Tempe Butte - but it wasn’t always an “A.” As the school’s name has changed, so has the letter on the butte.

The Tempe Normal School class of 1918 built the first letter, a 36-foot-tall “N.” The “N” stood for Tempe Normal School.

When the school became the Tempe State Teachers College in 1925, students retained one side of the “N” to form the stem of the letter “T.”

The school changed its name to Arizona State Teachers College, and in 1938, a 36-foot-high letter “A” was built on the butte. On the night of September 16, 1952, vandals climbed the butte and used explosives to destroy the 1938 “A.” The present “A” stands 60-feet-tall and was built using reinforced steel and concrete in 1955.

College Name	Year	Curriculum	Mascot
Territorial Normal School at Tempe	1885-1889	Teacher Certificate (22 weeks)	
Arizona Territorial Normal School	1889-1896	Teacher certificate (2 years)	Normals
Normal School of Arizona	1896-1903	Teacher certificate (3 years)	
Tempe Normal School of Arizona	1903-1925	Manual Arts department and agriculture classes added	Bulldogs
Tempe State Teachers College	1925-1928	Four-year Bachelor of Education degree	
Arizona State Teachers College	1928-1945	Bachelor of Arts degree in Education Masters in Education	
Arizona State College	1945-1958	Bachelor of Arts and Science degrees	Sun Devils
Arizona State University	1958-present	Masters of Arts and Science degrees Doctoral degrees	

Bringing a School to Tempe

On March 12, 1885, the Thirteenth Territorial Legislature established the Territorial Normal School at Tempe. during this legislative session, many options existed for locating the Territorial Normal School, the insane asylum, the prison, the capital, and the university. John S. Armstrong, a representative from the Tempe area, took the two-day stage trip from the territorial capital in Prescott back to Tempe to check on one option with his constituents. Armstrong, dirty from his trip, burst into the Charles Hayden store and blurted out, "Judge Hayden, I got a chance to get the \$100,000 Insane Asylum for Tempe." According to town tradition, Hayden roared, "To hell with the Insane Asylum! Go back to Prescott to get the Normal School."

Hopkins and Thomas, *The ASU Story*

Armstrong returned to Prescott and introduced House Bill 164, an act to establish a Normal School in Tempe. Tempe was proposed because:

"...the town of Tempe, in Maricopa County, offers superior inducements for a Normal School, owing to cheapness of living, healthy location and agricultural surroundings, and agrees to give the Territory not less than twenty acres of patented land, with water, adjacent to the town..."
(from House Bill 164)

The territorial capital remained in Prescott, the prison went to Yuma, the university to Tucson, and the insane asylum ended up in Phoenix.

The First

"And a rather tiny community chose to bring the Normal School here, which started conferring degrees five years before the U of A."

Dr. Lattie Coor (ASU President in the 1990s)

Tempe residents raised money, donated land, constructed the first building, and in 1886 the new school became the first institution of higher learning to open in Arizona. As Armstrong sought the Normal School for Tempe in the legislature, Charles T. Hayden was finding land and funding for the school. A strong

proponent of education in Tempe, Hayden was appointed as the first president of the Board of Education for the Normal School.

In one account, the citizens of Tempe suggested that George and Martha Wilson's cow pasture might be the best location for the new school. The Wilsons originally agreed to donate five acres in exchange for the \$500 raised by the citizens. But House Bill 164 required 20 acres to secure the school for Tempe. On May 5, 1885, the Wilsons agreed to donate their entire twenty-acre cow pasture in exchange for \$500. They included 10" of water per year from the Kirkland – McKinney ditch, but they retained the right to graze their cows on the property.

A Statewide Naming Battle

Attempts to expand the academic role, direction, and name of the Tempe Normal School met with stiff resistance in the state legislature and from representatives of the University of Arizona.

In 1915, a bill was introduced into the state legislature to re-name the Tempe Normal School the "State Normal College of Arizona" and expand the institution. Some Tucsonans saw this as a threat to their university. Tucson's *Arizona Star* newspaper stated, "Any injury to the University is an injury to the town."

In a February 26, 1925 editorial, the *Tucson Citizen* newspaper opposed upgrading normal schools to teachers colleges because of the fear that such institutions would hamper the growth of the University of Arizona:

"For, if students in considerable number are taken away from the state university, will not the taking away of funds at present used for its maintenance, for use in the maintenance of these other institutions, follow?"

In spite of this resistance, the Arizona Legislature passed a bill in 1925, authorizing the Tempe Normal School to grant four-year degrees in education. The school changed its name to **Tempe State Teachers College**. In 1928, the state legislature authorized the school to grant a Bachelor of Arts degree in education, and the name then changed to the **Arizona State Teachers College**.

In 1945, the school became **Arizona State College** and began granting four-year degrees in the arts and sciences. This positioned the school perfectly for the big changes coming to Tempe after World War II.

A Unique Solution

Attempts were again made in 1954 to change the school's name, but the effort was blocked by influential legislators from Tucson.

To Grady Gammage (then president of Arizona State College), the main concern was:

"The post war period will bring new problems to higher education. The change recommended here will enable the Teachers Colleges to meet some of these problems more adequately. The men who fought on Leyte, Guam, in the Solomons and in the quagmire of France and Germany are not going to be very patient as they register with us for standard arts and science courses when we tell them they can't have the degree to which those courses rightfully entitle them."

The *Arizona Republic* newspaper stated in a 1945 editorial:

"The University of Arizona, the one institution in the State authorized to grant Bachelor degrees in the Arts and Sciences, isn't going to be able to meet the demands of the veterans in the post-war era."

James Yeater (Former head of the ASU Drama Department) remembers:

“The first semester I was here was the big election. The higher levels of government, I don’t know whether it was the Regents or the Legislature, wouldn’t let Arizona State be called Arizona State University. The pressure from the U of A was quite intense. So it became a ballot issue and people associated, all of our alumni, and faculty wives, and so forth, worked hard getting petitions and getting out to vote ...”

Proposition 200 – Creating a University

The Phoenix Junior Chamber of Commerce, with support from most of the state’s major newspapers, Arizona State students, alumni, and community leaders set out to gather the necessary 28,500 signatures to launch a name change proposal. When the final tally was taken, 64,681 signatures were delivered to the Secretary of State’s office.

The name change proposal became Proposition 200 on the November 1958 ballot. “Yes – 200!” was seen everywhere but in Tucson – where it was “No – 200!”

Seventy-two percent of the voters turned out and approved the name change by a two to one margin. Pima County (Tucson) voted against the measure by an eight to one margin. The total vote was Yes: 101,811, No: 51,471.

As Alfred Thomas stated in *Arizona State University, A Documentary History of the First Seventy-five Years*: “Arizona State College at Tempe now was a University – because the people of Arizona, outside of one concentrated section, wanted it so.”

Arizona State University was created when Proposition 200 was signed into law by Governor Ernest W. McFarland on December 5, 1958.

Students in Tempe

ASU attracts faculty and students from all over the world, making the area around ASU one of the most diverse in the state. Once faculty and students came to Tempe, it was important to try to keep them here:

“Because part of what the university brings [is] people from other places and they get their education and you want them to stay... And, you know, you want those folks to find this a place they desire to stay in. They bring their expertise; they create wealth for the community....” Don Cassano (Former Tempe City Councilmember)

New students bring new ideas:

“What I’ve loved about Tempe ...is that every year, every fall, along comes a freshman group who doesn’t know the problems that we are facing in Tempe can’t be solved. And when they come along with this new perspective, every now and then, one of those unsolved problems is solved....” Dennis Cahill (Former Tempe City Councilmember)

College life is more than just problem solving; it is also about friends and fun:

“But we had lots of fun and most of us will say we wouldn’t trade it for today.... In our dormitory we had one car, one fellow had a car, and it was about a 1923 car or something like that. And gasoline, you could buy gasoline in the middle of the Depression for about five cents a gallon... Okay, in order to go to Phoenix, why then, the fellows would chip in a nickel or a dime or pennies, you see, to buy a gallon of gas. And then you’d go to Phoenix. And then coming home, about the bridge, we’d probably run out of gas and have to push it home.”

Bill Kajikawa (Former ASU player and coach)

The City and the School: the Early Years

Tempe has always supported the school in its backyard.

In 1903, the town provided a water system and other upgrades:

“One of the greatest steps made in the year is from a sanitary point of view. All wells have been abandoned, earthen closets removed, and all buildings plumbed and connected with the Tempe water supply, which chemical analysis shows to be superior to any other in the valley.”

“The town council of Tempe has been most generous with us, and on the first day of September, they will have expended, approximately \$1500 in providing us with fire protection, hydrants, water mains, and filling, grading, and graniting the streets and sidewalks adjacent to the grounds.”

Dr. Charles H. Jones, Secretary of TNS Education Board, 1903

The town provided the first sewage system:

“For years the Normal has been awaiting an opportunity to secure proper sewage connections, but the cost of an independent system was prohibitive, consequently we have been compelled to resort to ordinary cesspools until the condition is serious. The City of Tempe is now taking steps to secure a sewage system.... It is estimated that it will require \$10,000 to install a complete sewage system for the campus, make connections with all the buildings, and secure connections with the city system.”

Board of Education of TNS 1913-1915 Report

A Few Rocks in the Road

But, on occasion, the relationship between the school and the city hit a few rocks in the road. Sometimes the school grew too fast – outpacing its construction budget.

“But, throughout that early period, I remember all of that row of houses behind what would be Tempe Center.... And as the university gradually took them over then they couldn’t afford to build anything yet but they had the property.... The Music department was in those series of houses and the bathtubs were piled high with music scores and [the Music department] used what had once been somebody’s living room and dining rooms were blocked off, you know, for rehearsal spaces for operas and so forth right in what were people’s homes.”

James Yeater (Former head of the Drama Department)

Student housing shortages appeared when ASU grew too quickly.

“Well, it’s been a rocky road sometimes, and I can remember we still have those issues, when the university didn’t have as much housing available to students. Where did they go? They went out into apartments; they also went into homes in neighborhoods surrounding the university. And that’s had an impact on the residents who are permanent residents there.”

Don Cassano (Former Tempe City Councilmember)

When ASU wanted to convert some city streets into a pedestrian-only mall concept, a few rocks were in the middle of those streets also:

“I remember when I first came, the campus, of course, did not have those malls or things like that, those were all streets – connecting streets as you came to class you could park and there was all street parking....you could at each of the block areas, you could drive right through one way or another.”

James Yeater (Former head of the Drama Department)

ASU needed support for this pedestrian campus concept from the Tempe City Council. They requested that the city abandon the streets within the ASU campus and deed them to the university. The Council wanted

payment or a land trade for those streets. On Monday, August 31, 1964, at Gammage Auditorium, ASU president G. Homer Durham met with all of the Tempe City Council and the Tempe Chamber of Commerce to discuss the plans for the university and the city and said:

“Gentlemen, this is what is going to happen to ASU and Tempe. With the amount of money the Legislature pumps into this institution each year, plus buildings like this, the thousands of students and their spendings, you have an economic engine here which spells tremendous population growth, increase in land values, new tax revenues for the city, and transformation of the community. As we are planning for on the campus so must you plan for the city as citizens and civic leaders.”

The City Responds

When the city realized what an economic engine ASU had become, working together with the school became the norm:

“It’s an almost perfect relationship. College towns, university towns often come in one of two flavors. Either the university is so much larger than the community that it dominates it..... Or the city is so large that the university, kind of, is just one of a number of things the city has to deal with....And while there are inevitably complexities in a town-gown relationship, it is as healthy and has been as systematically as healthy as any place I know.”

Dr. Lattie Coor (Former president of ASU in the 1990s)

To maintain this good relationship, ASU has completed a Comprehensive Development Plan. The Plan’s objective is to build ASU as a “comprehensive, metropolitan research university that embodies an unparalleled combination of academic excellence with a commitment to its social, economic, and environmental setting.”

ASU also created a Director of Campus Planning position. This person serves as the conduit between ASU and the surrounding community.

Perhaps the rocks in the road between ASU and the City of Tempe are behind them. As Dr. Lattie Coor (Former president of ASU in the 1990s) comments:

“I cannot imagine ASU without Tempe.”

Leaders and Innovators

Often charismatic, innovative leaders led the evolution as the Normal School progressed to one of the nation’s largest universities.

Hiram Bradford Farmer and the Normal School

The first principal of the **Territorial Normal School at Tempe**, Hiram Bradford Farmer served as the faculty, the administration, and maintenance man. Farmer developed a core curriculum to ensure students had a good background in reading, writing, spelling, grammar, arithmetic, geography, and American history.

Cow Pasture to Teachers College

Dr. A.J. Matthews (President from 1900 – 1930) remarked in 1901:

“The first thing of real constructive value which I did at the Normal was to go before the Board of Education and ask that they appropriate enough money to provide a barb wire fence around the

premises of the school. This, in my estimation, was of prime importance because the large porch surrounding the Normal building looked more like a stable than an institution of higher education. My first sight of the cattle using the porch as a sun shade was discouraging. I did not think it advisable to allow that condition to continue.”

Over the next 30 years, Dr. Matthews enhanced the curriculum and managed the construction of 18 new campus buildings.

A True University

College president Dr. Grady Gammage (1933-1959) established the granting of non-education degrees, a master’s program and a name change to **Arizona State College (ASC)**.

In 1958, Gammage also led the effort to approve proposition 200, upgrading ASC to a true university, and officially changing the name to **Arizona State University (ASU)**.

ASU’s Growth Years

G. Homer Durham (ASU President in the 1960s) was a driving force in creating a pedestrian-oriented campus. In 1964, Durham also opened Grady Gammage Auditorium, a building designed by Frank Lloyd Wright. The auditorium and a new art museum brought many national music and theater performances to Tempe. In the 1960s, the university also began granting doctoral degrees.

J. Russell Nelson (President in the 1980s) established several ASU branch campuses. He also made great strides toward ASU becoming a major research university:

“It’s become reasonably well positioned within the group of major research universities. When I first came here I think we had about 13 million dollars a year in research dollars. And when I left, we were a little over 100 million dollars....”

Lattie Coor (President in the 1990s) had four priorities when he came to ASU: undergraduate education, economic development, cultural diversity, and research. ASU earned the Carnegie Foundation’s Classification of Institutions of Higher Education Level I research status in 2000. This allowed ASU to attract top faculty and students, be involved with the sciences that make headlines, and garner revenue from the licensing of technology. As Lattie Coor put it,

“It’s like sharing a common destiny. Today ASU is a major research university. The knowledge developed at ASU enables our industries to prosper.”

A New American University

ASU is now one of the largest public research universities in the United States. President Michael Crow is currently focused on establishing ASU as the model for a *New American University*, measured not by who it excludes, but rather by whom it includes. He believes ASU should be challenged to help society and the faculty and students are urged to tackle global problems.

These Challenges include:

- How do we defend and extend human rights?
- How can we lead healthier, more fulfilling lives?
- How do we build strong, vibrant communities?
- How can we promote shared economic prosperity?

- How can we create a sustainable way of life?
- How do we educate in a rapidly changing world?
- How can we gain a deeper understanding of ourselves and our future?

In the *New American University* model:

Such a university would give more students access to a college education, improve the quality of that education, promote entrepreneurship, and help communities solve problems.

ASU has grown from a single-purpose school with 33 students in 1886 into a model for a new type of multi-campus university, with over 68,000 students.

Integration and Diversity at ASU

Ending Segregation at Tempe Schools

In 1925, Adolpho Romo brought suit against the Tempe School District #3 because his children weren't allowed to attend the Tempe Grammar School (Tenth Street School.) They, like other Mexican-American youngsters, had to attend the Eighth Street training school run by Tempe State Teachers College and its student teachers. Judge Joseph S. Jenkes ruled in Romo's favor:

"It is clear from the foregoing facts that the defendants have failed in their duty to the plaintiff in not providing teachers of as high a standard of ability and qualifications to teach the children of plaintiff in the said Eighth Street School as possessed by the teachers provided by them to teach in the Tenth Street School."

However, this didn't end segregation, as the Teachers College only agreed to add certified teachers at the Eighth Street School. Segregation in Tempe schools remained until 1953. In a 1953 ruling, Arizona Superior Court judge Fred Struckmeyer declared school segregation unconstitutional. "A half century of intolerance is enough. There are no second class citizens in Arizona."

"Arizona was the first to pass a non-segregation law for schools - months ahead of the Supreme Court ruling. And our schools are now non-segregated." Dr. Grady Gammage (Former ASC and ASU president)

In spite of these rulings, Arizona continues to struggle with the challenges posed by its diversity: undocumented immigrants, the educational needs of children who do not speak English, and minorities lagging in educational achievement. There is much to be thankful for, but more work to do.

African Americans at ASU

African Americans attended the Tempe Normal School as early as 1920. However, they were excluded from the cafeteria, the dorms and even the restrooms. It wasn't until 1961, that African American students were allowed to live in campus housing.

Arizona State Teachers College (ASTC), however, was a leader in integrating the sports playing fields. Joe Island was the first African American baseball player at ASTC. He played outfield and first base for the 1936 Bulldog baseball team. He later served as a Phoenix police officer from 1938 until 1961.

In 1937, Emerson Harvey was the first African American football player to wear an ASTC uniform and one of the first to play on any southwestern college team. Tom Lillico (Assistant Athletic Director 1938-1942, 1947-1949) who recruited Harvey explained:

"I went after Emerson not because he was black, but because he was a good football player. We had ambitions to build a good football program at Arizona State, and Harvey helped launch that program. Except for Negro colleges, there were barely a half dozen Negroes playing on U.S. teams in 1937, all of them in the North."

According to Harvey: *(from Mary Connell – AZ State Press 1977)*

"Imagine you were the only white person on the field with 21 blacks playing with and competing against you. How do you think you would feel? Believe me, it was tough."

"On the team we were real close," he said, "real brothers as far as football was concerned, blood brothers. But off the field society took over and we didn't associate."

After graduating from ASTC, Harvey worked for many years as an industrial arts teacher and coach in Phoenix inner-city schools.

Note: This section contains direct quotes with language we may now consider offensive. This historical context shows how our society has changed.

Barriers Broken

Integration wasn't easy. During the 1946 football season, Morrison Warren (Arizona State College football star in the mid-1940s and education professor at ASU) explained:

"George Diggs and I had gotten out of the Army only a short time before, and we felt we had earned first-class citizenship. When we arrived in Wichita, we checked into our hotel rooms with the rest of the team and then took a short walk because we were both airsick after the plane ride. When we returned, there were our bags sitting out in the lobby. The desk clerk said, 'Sorry, but we can't accommodate you here,' and we were hustled off to a little flea-bitten Negro hotel. Just a few months before, I'd been fighting in Europe with Patton's Third Army, and we were a close-knit team, risking our lives for this country. Somehow I thought the black-white thing would be different when the war was over."

At some colleges, it wasn't safe for the African American players to play in the games. At halftime in El Paso, the Texas school presented a patriotic Armistice Day show honoring World War II veterans. Tom Lillico (Assistant Athletic Director 1938-1942, 1947-1949) recalled:

"I was in the press box, and the El Paso radio announcer offered me the microphone to comment on the show. 'Fine show,' I said on the air, 'but it's a shame our two Negro boys had to stay at home. They were good enough to fight for Texas in the war, but somehow they're not good enough to play ball in Texas.' The man grabbed the mic and cut me off without another word."

In the early 1950s, ASC continued to push the football integration issue, breaking the racial barrier, season by season.

Morrison Warren concludes:

"I'm proud of my university for many reasons, but most of all for its stand against racial segregation in sports. We led the way."

Diverse from Day One

Between 1886 and 1936, the school graduated over 60 Mexican American teachers. Mostly women, these coeds often gained classroom experience at Tempe's Eighth Street School for Mexican American children. After graduation, most began teaching in schools throughout Arizona.

World War II and GI Bill

After World War II, many soldiers used the GI Bill for an education at ASC. Irene Hormell recalls:

"You know how my friends went to college? When they joined the service and they came back and then they got that opportunity. If it hadn't been for that, a lot of them wouldn't have gone, because that was a big boost in our arm, is to get to the service, and then they came back, and then those guys, they had the GI rights and then they went to college and they took advantage of it."

Building Diversity

The first efforts to recruit minority students began during U.S. President L.B. Johnson's War on Poverty programs. Federal dollars for minority students supported Upward Bound, Teacher Corps, bilingual/bicultural classes, and minority group history programs. These led to many universities forming Chicano and African American Studies departments in the early 1990s.

Lattie Coor (ASU president in the 1990s):

"I think Tempe has evolved into a community that is something more than just a college town. It has gotten a degree of diversity that adds to the University as well as the city, and we think the added culture has been a benefit."

Beginning in the 1990s, ASU increased its efforts in attracting and retaining a culturally diverse student and faculty population.

"But it is so significant for a state like ours that has been built by, shaped by, formed by a multicultural origin that we reflect it, not just to ensure that our identity contains that, but even more importantly to ensure that we're providing opportunities for the next generation and generations beyond that....." Lattie Coor (ASU president in the 1990s)

Recruiting Diversity

Gus Edwards (Head of the ASU Multi-ethnic Theater Program) on a diverse faculty:

"So my perception on the diversity aspect of things is that ASU is a leader in some ways ... we go into various areas in search of diversity for our faculty and we do have a rather diverse faculty."

How are minority students attracted to ASU? Peterson Zah (Advisor to the President on Native American Student Affairs) explains:

"We have 21 tribes in Arizona; I make sure I visit those tribes every two years... I talk to their education committee about making funds available for their youngsters so that they can have an opportunity to go to college. We actually get ten of our [ASU] students, a freshman, sophomore, junior, senior, and a graduate, ten of them and I go to those high schools on the Navajo reservation.

The students listen very, very carefully. That's been working very well and the students really like it, the ones that are listening as well as the students that go with me. And so that's how we recruit."

Has the effort succeeded? Minority student enrollment has more than doubled. More than one fourth of incoming freshmen are minorities. ASU has one of the largest Native American faculties in the United States. ASU's Hispanic student population is one of the largest in the nation. In 2009, 34 % of the students were minorities, reflecting the demographics of Arizona.

Modeling Change

"Despite all the good things that we do now, the biggest challenge is to try to improve... I'd like to get it to 2000 [American Indian students]. If we get it up to 2000, by far, we are the largest university in America that has the largest number of American Indian students." Peterson Zah (Advisor to the President on Native American Student Affairs)

ASU named an expanded scholarship program, aimed at middle income families, for U.S. President Barack Obama. At the 2009 commencement, the president remarked:

"And I want to thank the entire ASU community for the honor of attaching my name to a scholarship program that will help open the doors of higher education to students from every background. That is the core mission of this school; it is a core mission of my presidency; and I hope this program will serve as a model for universities across this country."

Mascots and Logos: Changing with the University

Since 1896, gold has been the prominent color for the Tempe school. It represents Arizona's golden promise, treasure, and sunshine. In 1898, maroon and white were added to the color scheme.

The Normals

From 1897 until 1922, the school used the letter "N" as a logo and the teams were known as the Normals. For some reason, the football team was often pictured with an owl.

The Bulldogs

In 1922, a spectator, impressed with the football team's spirit, suggested they be renamed the Bulldogs. Students agreed, and that name stuck for over 20 years.

Sun Devils

A disastrous 1946 football season was the catalyst for a complete overhaul of the Arizona State College athletic program. A committee of boosters formed the Sun Angel Foundation. They felt ASC needed a new look, something unique, something to change the school's image. The group struck on Sun Devils as a combination of their Sun Angel name and that of the Duke University's Blue Devils. On November 8, 1946, students voted 816 to 196 to adopt the Sun Devils as the new name. For a logo, Berk Anthony, a one-time employee at the Walt Disney Studios, designed the original Sun Devil running with a pitchfork, surrounded by a sunburst. Although many other Sun Devil designs were presented, the Berk Anthony version won and made its first appearance in the November 14, 1947 *State Press* student newspaper.

Sparky

Almost immediately, students devised a mascot costume of maroon and gold with a pitchfork and a grinning devil head-piece. This mascot, Sparky, first came to life with legendary acrobat Dick Jacobs. Because Sparky's

head is not oversized, he can still tumble: back handsprings, back tucks, and back layouts. Sparky also speared the competition and raced into the stands to cheer on the student section. Sparky is best known for his post-touchdown push-ups. After a Sun Devils touchdown or field goal, he drops and does a push-up for every point scored up to that time.

Sparky Forever?

In 1971, a more Viking-like logo/mascot challenged Sparky. With students, alumni, and the public voting, Sparky won by 11,122 to 3,141 to remain the school mascot.

Sparky Today

As many as four anonymous student acrobats wear the Sparky costume today. Sparky has developed a bit of an attitude as one of the Sparky-students notes:

“I’m in a totally different frame of mind when I’m Sparky. I feel indestructible, like I can go anywhere and do anything.”

A Cultural Center

From its very start, the Territorial Normal School provided a social and cultural outlet for Tempe.

“The older college, it did have an auditorium And it had a pretty good sized stage and wasn’t badly equipped, and of course it was used for all those events on campus: from baccalaureate and faculty assemblies to concerts and plays.”

“We felt very strongly that our mission was to provide good theater for the community.... we always felt that we were not just a school, we were a part of the cultural scene of the Valley.”

James Yeater (First head of ASU’s Drama Department)

“And I always thought that Channel 8 did a good job of representing the university to the community. And it’s been a two-way feedback, programming into the community and the community back into the station.”

Bob Ellis (Former station manager of KAET Channel 8)

“I think ASU has become the cultural center, not just for Tempe, but the Phoenix metro area. There was a time when Gammage Auditorium was about the only major auditorium in the area...”

Elmer Gooding (Former Associate Dean of the College of Business and interim Vice President and President)

KIDS IN TEMPE

Being a kid during the early days of Tempe meant working hard and playing hard. Young Tempeans spent their time attending school, helping with the farm chores, delivering newspapers, riding bikes down country roads, swimming at Tempe Beach Pool or in the local irrigation canals, and drinking milkshakes at the soda fountain in the Laird and Dines drugstore. Kids had a lot of responsibilities, but still found creative ways to have fun.

“I was just a little guy when I learned to milk cows... I’d get up real early in the morning and bring the cows over and milk them before I rode a horse to school.” – **Floyd Gomez, who grew up on a Tempe ranch.**

“Selling newspapers up and down Mill Avenue for five cents was a great business venture. After a good day, we enjoyed a milk shake at Laird and Dines Drug Store.” – **John W. Trimble, who moved to Tempe as a child in 1929.**



The Hilgeman Children, circa 1946

“My parents...ran a dairy. It was my job to deliver the butter in town. At five I was driving the old horse named Sam into town on my own.” – Ken Clark, who grew up in Tempe.

“Children would pick cotton too...they’d keep children out of school to pick cotton.” – Irene Bishop, from a pioneering Tempe farm family.

Tempe was a good place to grow crops. The farmers had plenty of space to plant seeds. They had lots of sunshine, and water from the river to help the seeds grow. Children helped their parents feed the plants and when the crops were ripe, families worked together to pull carrots and potatoes from the ground, pick cantaloupes from the vines and corn from the stalks. They also picked fruit from the tree branches.

After all this hard work they had food for their families and enough left over to sell. The money was used to buy clothes, hats, shoes, flour, sugar, tools, schoolbooks, and other necessities – everything their families needed.