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SUNDAY

20 YEARS SINCE 9/11 MARKED BY CALLS FOR UNITY

Nation pays tribute to the nearly 3,000 lives lost in attacks

BY MICHAEL GOLD & KATIE ROGERS

The loved ones gathered again in lower Manhattan for moments of silence and the peals of the bells. They paid tribute to those they lost 20 years earlier and listened as Bruce Springsteen sang about memory and loss.

In Pennsylvania, hundreds gathered in a clearing where a hijacked plane had crashed to hear a former president honor their relatives' sacrifice. In Chicago, firefighters too young to remember Sept. 11 climbed thousands of steps to honor emergency responders who didn't live past it. In Nebraska, children sat on the shoulders of their parents and waved American flags to honor the victims of a tragedy that, to them, has only been history.

For two decades, Americans have mourned the attacks of Sept. 11 that killed nearly 3,000 people, a loss so deep it shook the United States to its core. But even as time has passed, and the horrific day has moved from fresh memory into the chronicles of history, the people who gathered across the country and the globe said the wounds from 9/11 have remained fresh.

"Twenty years feels like an eternity," said Lisa Reina, her voice quivering as she held up a photo of her husband, Joseph Reina Jr., who was at work in the north tower of the World Trade Center when the first plane struck. "But yet it still feels like yesterday."

The ceremonies were part of a full day of tearful commemoration across the

SEE **TRIBUTE • A10**

■ **A7** • Images of America remembering the fallen.

FAMILIES PRESS FBI FOR 9/11 SECRETS



JESSICA HILL AP

Brett Eagleson, son of 9/11 victim Bruce Eagleson, wipes off a memorial for his father at the baseball field in Middletown, Conn., where his father once coached.

Victims' relatives want closure, seek documents in suit that may show Saudi support for S.D. hijackers

BY KRISTINA DAVIS

The apartment in Clairemont was devoid of furniture, its two new tenants from Saudi Arabia having just arrived in the United States with few possessions.

Nonetheless, soon after the pair moved in, about 20 men, most of them strangers, packed inside for a party one evening in February 2000.

The party was hosted by a well-connected fellow Saudi. At his direction, another attendee walked around the party with a video camera in hand, documenting what turned out to be the unofficial introduction of two future 9/11 hijackers into their new

community in San Diego.

The video footage has become a much-discussed piece of evidence in understanding the groundwork laid in San Diego and elsewhere for the attacks of Sept. 11, 2001.

The tape is of particular interest to the thousands of families who lost loved ones in the terrorist plot, as they try to prove in a lawsuit that the Kingdom of Saudi Arabia was complicit in the conspiracy.

But when lawyers for the families recently subpoenaed the FBI for the

SEE **SECRETS • A8**

■ **A8** • FBI makes public newly declassified document on 9/11 attacks.



SANDY HUFFAKER

A SOLEMN SALUTE

San Diego firefighting officials at the USS Midway Museum salute as the American flag is carried by during a memorial for victims of the Sept. 11, 2001, terrorist attacks in New York City, Washington, D.C. and Shanksville, Pa. See story, A6.

THOUSANDS OF MEDICAL WORKERS SEEK DOSE EXEMPTION

Health systems say most requests cite religious objection

BY PAUL SISSON

President Biden's new coronavirus vaccination mandate requires all federal workers and contractors, including all health care workers in the nation, to receive their shots or lose their jobs.

But California's evolving experience with its own vaccine mandate shows that there is another path to remain unvaccinated.

Administration officials said Thursday that the new federal vaccination program will allow anyone to request an exemption on "narrow" religious grounds or if they have a qualifying disability, loopholes that are similar in California, which announced a vaccination mandate for health care workers on Aug. 5 that takes effect Sept. 30.

A survey of San Diego County medical providers last week shows that thousands are requesting such exemptions, with

SEE **VACCINE • A12**



U-T FILE

A Cal Fire firefighter hoses down a hillside in North County during the Lilac fire in December 2017. The fire destroyed about 160 structures.

OFFICIAL: COUNTY 'PRIMED TO BURN' AS HEAT, WIND, DROUGHT COMBINE

Firefighters counting on network of data, detection this season

BY GARY ROBBINS & ROB NIKOLEWSKI

Up on Mount Laguna, on a late August day on which the thermometer had hit 92, Talbot Hayes scooped a dead piece of pine tree off the ground and gently gave it a twist.

The wood turned into crunchy splinters that fell to his feet, creating a puff of orange dust that briefly hung in the still air of the Cleveland National Forest.

"We are primed to burn," said Hayes, who manages a firefighting division for the U.S. Forest Service, which oversees the land. "Things could get really bad."

Runaway wildfires are always a pos-

sibility in the fall, when Southern California is raked by stiff Santa Ana winds that blow across the region's ubiquitous chaparral, the most flammable mix of brush land vegetation in the country.

But this fire season may bring something truly hellacious.

Scientists and fire experts say the extreme drought and record heat that fed huge, destructive wildfires this summer in Oregon, Washington and Northern California could produce similar outbreaks this fall across the parched expanse of Southern California.

Firefighters, scientists and utility

SEE **THREAT • A16**

FALL ARTS PREVIEW



After a year of silence, San Diego's artistic community is ready to make some noise. For the region's countless dancers, musicians, actors and authors, this fall marks a season of new beginnings.

Section E

OUTSIDE UNDER THE STARS!

"THE GLOBE IS MAKING A SPLASH OF A COMEBACK. THE VOICES AND HARMONIES ARE SUPERB—IT'S HARD NOT TO FALL FOR THESE CRAZY KIDS!"
Times of San Diego

HAIR

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THE OLD GLOBE (619) 23-GLOBE TheOldGlobe.org
The cast of Hair. Photo by Jim Cox.

BUSINESS

GRANDER ENTRANCE

The Hotel del Coronado's historic lobby reopens for first time since it was closed for restoration. D1



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NOAH BERGER AP
The Caldor fire burns along both sides of state Highway 50 on Aug. 26 as firefighters work to stop its eastward spread in Eldorado National Forest. On Aug. 30, the fire crested the Sierra Nevada, forcing the unprecedented evacuation of all 22,000 residents of South Lake Tahoe. That evacuation order has since been lifted.

THREAT • Satellites can detect start of wildfires in canyons

FROM A1
workers are working harder than ever to expand and refine a vast system of cameras, sensors and related technology that will give first responders a jump on wildfires.

It's meant to build on the exponential improvement that's been made in the ability of forecasters to determine when the Santa Anas will arrive, where they will hit, and how hard they will blow. Such data is fed into computer models that predict where fires will move and how they'll behave.

The network includes everything from high-resolution fire-watch web cameras to 220 weather stations that San Diego Gas & Electric operates throughout the county to NOAA satellites that can detect the birth of wildfires in remote canyons.

"We can't stop the climate extremes," said Alex Tardy, a forecaster at the National Weather Service in Rancho Bernardo. "But the technology has allowed for some great advances in reducing some of the wildfire threat."

More heat, less rain

Climate change is making the Earth hotter and drier, which not only fuels wildfires but often makes them more erratic. Firefighters worry that they'll have to face more "fire whirls" — wild rotating columns of air and fire that erupt suddenly, throwing off embers that can spark even more fire.

Six of the hottest 10 years in San Diego history occurred from 2014 to 2020. The National Weather Service says that 2014 was the hottest on record. The average temperature for that year was 67.6 degrees. That is nearly five degrees higher than the average for the city dating back to 1876.

At the same time, San Diego's rainfall has been declining at a slow but significant rate.

A century ago, the region received about 15 inches of precipitation during the rainy season, which extends from Oct. 1 to Sept. 30. Today, it averages 12.98 inches. Scientists say the figure could drop further as climate change pulls the jet stream north.

The problem has been compounded by the fact that there have been comparatively few super wet years in recent decades. The last "gully washer" year was the 2004-05 season, when San Diego got 22.60 inches of rain.

The relative dryness has made it difficult for the region to rebound from the big drought that stretched from 2012-16, the weather service says.

Greater San Diego has dodged catastrophic wildfires in recent years. But that has not been the case statewide. The eight largest wildfires in California history occurred between De-

cember 2017 and July 2021.

It recently took a heroic effort by firefighters to prevent the Caldor fire from burning through South Lake Tahoe in the Sierra Nevada.

Experts say the terrain is so dry that wildfires sometimes burn against the wind, devouring vegetation that lies just ahead.

"It looks green in the mountains," said Tony Mecham, a unit chief with Cal Fire and head of the San Diego County Fire Authority. "But about 90 percent of that stuff is dead. The overall dryness is separate and worse. I've never seen it this bad. And this is my 36th year with Cal Fire."

It's possible the landscape will get even drier.

There's a 70 percent chance that, for a second straight year, a La Niña will develop in the Pacific Ocean, according to the National Oceanic and Atmospheric Administration. La Niña is a periodic climate pattern that sometimes results in below average rainfall in Southern California. Scientists believe that the La Niña that arose last fall contributed to a mostly dry winter in San Diego.

There's also great concern about what appears to be a distinct shift in the timing and duration of the Santa Ana wind season.

"When I moved here in 2001, Halloween was my favorite holiday," said Neal Driscoll, a geophysicist at UC San Diego's Scripps Institution of Oceanography. "It kind of marked the end of the Santa Anas and the onset of rainfall here in San Diego. Then it kind of became Thanksgiving. And then Christmas. The Santa Ana conditions appear to be sliding later and later into the fall and early winter."

He likens Santa Anas to "an atmospheric mosquito that sucks moisture out of the air as they descend."

Counteroffensive

The Santa Anas were especially fierce on Dec. 7, 2017, gusting through parts of northern San Diego County up to 66 mph. The vegetation was dry and the temperature was above normal.

A wildfire erupted near Bonsall, forcing about 10,000 people from their homes and knocking out power to roughly 20,000 San Diego Gas & Electric customers. Close to 160 structures were destroyed.

But the Lilac fire, as it came to be known, could have been much, much worse.

Firefighters had access to live fire-watch cameras on nearby peaks, enabling them to pinpoint the location of the blaze and better determine which way it was moving. The information helped crews to prevent the fire from spreading to Oceanside.

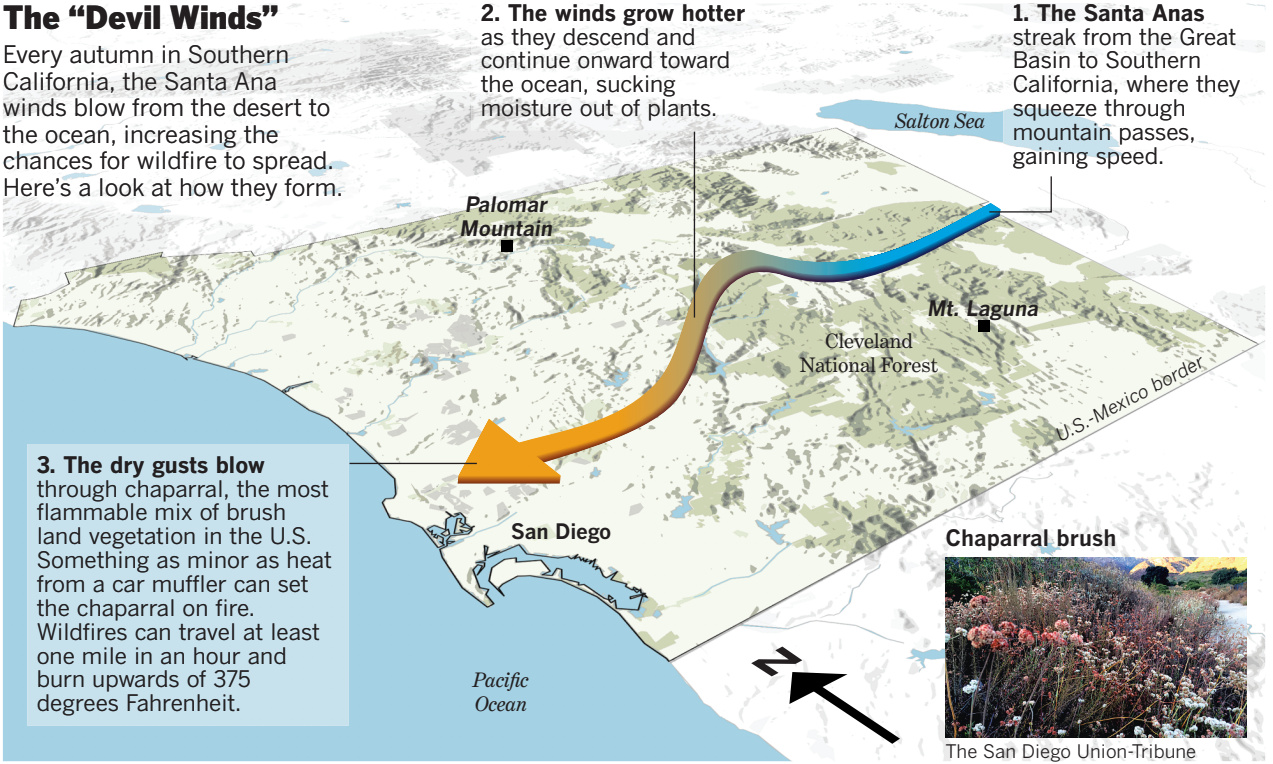
Such cameras have become the foundation of a

San Diego County braces for severe wildfire season

Prolonged drought and record temperatures could produce extreme wildfires when the Santa Ana winds return this fall. Scientists will use everything from outdoor cameras and specialized weather stations to research aircraft and mapping software to locate and fight the blazes.

The "Devil Winds"

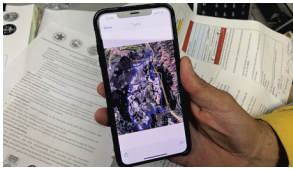
Every autumn in Southern California, the Santa Ana winds blow from the desert to the ocean, increasing the chances for wildfire to spread. Here's a look at how they form.



New tech



Cameras
37 ALERT Wildfire cameras in San Diego County detect and monitor wildfires.



Mobile tracking
Software programs enable incident commanders to track wildfires in real time.



FIRIS
The Fire Integrated Real-Time Intelligence System aircraft from Los Alamitos collects data from active fires and feeds it to first responders and scientists.



Weather stations
SDG&E's network of 220 weather stations monitor the Santa Ana winds and help forecast where they could spread fire.

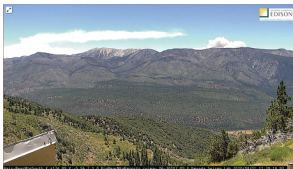
Fire progression

ALERT Wildfire network cameras helped confirm the presence and location of the Apple fire near Cherry Valley in Riverside County. Incident commanders used the images to figure out how best fight the blaze. Each camera takes 86,400 images a day, many of which are used predict where the fire will go.

Apple fire on Aug. 1, 2020



12:15 p.m.



12:20 p.m.



12:35 p.m.



12:55 p.m.

Sources: UC San Diego; Scripps Institute of Oceanography; University of Nevada Reno; Harvard University; National Weather Service; U.S. Forest Service; Cal Fire; San Diego County Fire Authority; San Diego Gas & Electric

GARY ROBBINS & MICHELLE GUERRERO U-T

larger effort by scientists, engineers, utility companies and NOAA to battle wildfires.

Special credit is being given to ALERT Wildfire, a vast and growing network of high-resolution, near-infrared fire cameras created by UC San Diego and other universities. The system has 930 cameras in five western states, including 850 throughout California, 37 which are in San Diego County.

Driscoll, a co-director of ALERT, added about 150 cameras in California in just the past year. The cameras are typically used to confirm a report of a wildfire. But they're also constantly monitored by fire agencies.

The network played a key role in battling the Dixie fire, which is burning in Northern California, where it has consumed more than 927,000 acres.

"We are all about trying to

fight fire in the incipient phase," said Driscoll, who has seen wildfires flare up from his home in the Escondido area. "Once it gets away from you, you go from offense to defense."

The cameras, which can be remotely operated by firefighters, each take 86,400 frames per day. Each frame is composed of 2 million pixels. In addition to what can be seen with the naked eye, the frames contain extraordinary amounts of information that can be extracted by software.

The frames "tell us something about the terrain, the vegetation level, hydration level, cloud cover, the plume, even some of the ecosystems," said Falko Kuester, a UC San Diego engineer and computer scientist who collaborates with Driscoll on ALERT.

"We need this for situational awareness, data that shows what's happening

right now."

The information also is used by Ilkay Altintas, director of the university's WIFIRE lab, which blends it with other data to create maps that, among other things, predict the movement of wildfires. This kind of software can now be called up on mobile devices by firefighters working a blaze.

Learning from disaster

San Diego Gas & Electric has also become a key player, in the wake of a disaster sparked by downed lines belonging to the utility and to Cox Communications.

In the fall of 2007, the Witch, Guejito and Rice wildfires combined to kill 10 people, destroy more than 1,700 homes, injure 40 firefighters and force more than 10,000 to seek shelter at Qualcomm Stadium.

In the aftermath, investigators determined SDG&E had not properly trimmed

trees and other vegetation growing near its backcountry power lines. The fires spawned nearly 2,600 lawsuits that were eventually settled.

Since then, SDG&E has spent more than \$3 billion in ratepayer funds on a variety of wildfire safety measures. That includes replacing wood poles with fire-resistant steel poles and, in high-risk fire areas, placing power lines underground or putting extra layers of protection on overhead lines to help prevent them from igniting a wildfire when it's extremely windy.

Perhaps more notably, SDG&E built a wide-ranging wildfire prevention program, virtually from the ground up. It includes:

- 220 weather stations that provide temperature, humidity and wind readings every 30 seconds.
- 105 high-definition

SEE THREAT • A17

THREAT

FROM A16
cameras to help determine a wildfire's location.

- Artificial intelligence to improve weather forecasting and reduce the number of Public Safety Power Shutoffs, the procedure in which utilities cut off electricity in specific areas during high winds to avoid downed power lines sparking a wildfire.
- A live weather map that includes temperature readings, wind direction, the highest gusts in the county and a Fire Potential Index.

Working alongside the Forest Service and UCLA, SDG&E created a Santa Ana Wind Threat Index that looks at weather and fuel moisture conditions 24/7 and estimates the likelihood of rapid fire growth when Santa Anas blow through Southern California.

The utility hired four meteorologists to monitor severe weather and track wildfires from SDG&E's Emergency Operations Center at its headquarters in Kearny Mesa.

The team is headed by Brian D'Agostino, SDG&E's Director of Fire Science and Climate Adaptation. A self-professed weather nerd, D'Agostino lives just 4 miles from the operations center, so he can get to the office in a hurry.

This year's combination of exceedingly dry conditions and high temperatures has D'Agostino on edge, especially when he remembers the Lilac fire, which sprang up so late in the fire season that it stunned some longtime wildfire observers.

"We say Sept. 1 is when the playoffs start," D'Agostino said. "That's kind of how we rally the team, saying, 'We've been good all year but what we do over the next few weeks defines our entire season.' This is the time we have to be as perfect as we can be."

Recent measurements show moisture in the vegetation, or fuel load, in San Diego County hovering around 50 percent. That's 10 percent lower than what is typically labeled "critical."

Last year when conditions were similar, the Valley fire burned more than 17,000 acres and destroyed at least 30 homes in towns southeast of Alpine.

D'Agostino's team says rainfall in the coming weeks could greatly reduce risk of wildfire ignition.

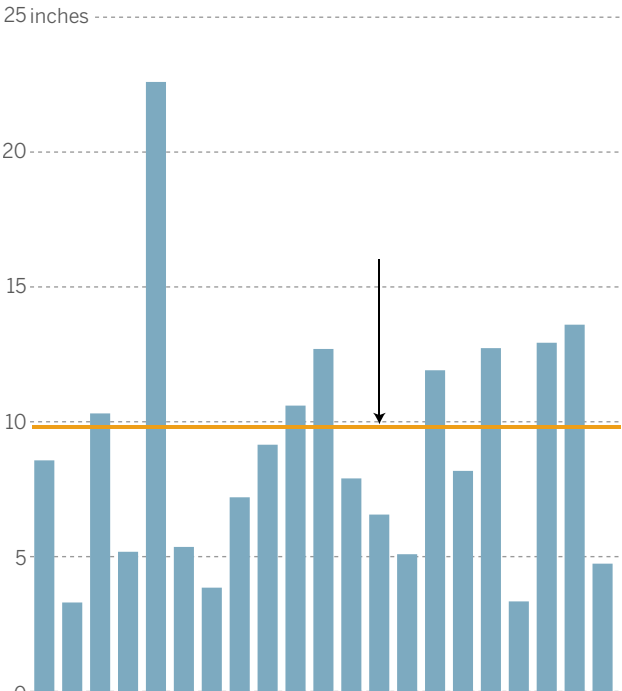


EDUARDO CONTRERAS U-T FILE

More than 1,600 homes were destroyed during the October 2007 wildfires in San Diego County, which were largely triggered by SDG&E equipment.

San Diego rainfall

The city averages just under 10 inches of precipitation during the rainy season, which extends from Oct. 1 to Sept. 30. San Diego fell far shy of that amount 12 times from 2000 to 2020. It is expected to finish the current season on Sept. 30 with less than 5 inches.



Source: National Weather Service

MICHELLE GILCHRIST U-T

Hottest years on record

Six of the 10 hottest years in San Diego history have occurred since 2014. The data goes back to 1876. The city's average annual temperature for that period is 62.8 degrees.

Rank	Year	Temperature	Departure from average
1.	2014	67.6°F	+4.8
2.	2015	67.5°F	+4.7
3.	1984	67.2°F	+4.4
4.	1981	67.1°F	+4.3
5.	1983	67.0°F	+4.2
6.	2018	66.3°F	+3.5
6.	2016	66.3°F	+3.5
8.	1978	66.2°F	+3.4
9.	2017	66.1°F	+3.3
10.	2020	66.0°F	+3.2

Source: National Weather Service

MICHELLE GILCHRIST U-T

that will pretty much keep our heads down for the next three months."

The utility recently launched a Vegetation Risk Index of the highest risk trees in its service territory, which includes all of San Diego County and part of Orange County.

"We use SDG&E's weather network every day," Cal Fire's Mecham said.

Ratepayers may consider it costly, but SDG&E's fire mitigation network is considered state-of-the-art and

has been held up as a model for the two other big investor-owned utilities in the state — Pacific Gas & Electric and Southern California Edison.

The 2018 Camp fire killed at least 85 people and nearly wiped out the entire Butte County town of Paradise. A faulty PG&E transmission line started the fire and the utility pleaded guilty to 84 counts of involuntary manslaughter.

The Thomas fire in December 2017 in Southern

California Edison's service territory burned for more than a month, ripping through nearly 282,000 acres, leveling 1,063 structures and killing two, including firefighter Cory Iverson, who worked out of Cal Fire's San Diego unit. The Ventura County Fire Department determined the fire started when two utility lines made contact with each other in high winds.

Powering down

The data collected by D'Agostino's team helps SDG&E decide when and where to de-energize power lines in specific areas. In those Public Safety Power Shutoffs, or PSPS, utilities cut off power in the hopes of keeping electrical lines and other equipment from falling and igniting a wildfire.

The shutoffs are a last resort and commonly lead to complaints from backcountry residents who may need electricity to pump well water on their properties and customers who are dependent on electrically-powered medical devices.

Alternately, Pacific Gas & Electric was harshly criticized for not turning off the power when the deadly Camp fire blazed through Northern California three years ago.

SDG&E will start strategizing ahead of a Cal Fire Red Flag Warning, which includes sending electrical workers — most of whom live in the areas affected — out into the field to monitor conditions.

"Is there big movement on the electric lines?" D'Agostino said. "Are you seeing any flying debris? Have you seen any damage to the trees? Is there anything that you're seeing that is an indicator that the system is becoming unsafe?"

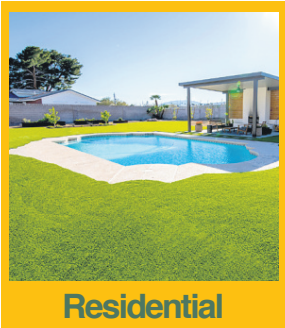
The utility has established a baseline wind speed for each of the areas covered by its weather stations. When the wind hits a predetermined peak, SDG&E considers cutting off power. The staff also contacts the California Governor's Office of Emergency Services, fire agencies, food banks, the Red Cross and other agencies.

Since 2007, the San Diego area has avoided the catastrophes seen in the past few years in other parts of the state. The next few weeks will determine whether that streak holds up.

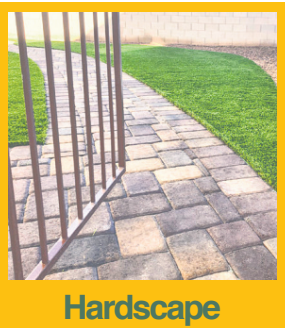
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