

EXTREME WEATHER ADAPTATION IN LAS VEGAS NEVADA

ARCGIS ONLINE

ArcGIS Online Interactive

Extreme Weather Adaptation in Las Vegas Nevada

City of Las Vegas Department of Planning

Extreme Weather Adaptation in Las Vegas Nevada

In support of the Western Adaptation Alliance (WAA) mission statement this story map seeks to inform the adaptation strategies of the City of Las Vegas and act as a communication tool for spreading extreme weather adaptation awareness throughout the Southwest by exploring the history of extreme weather adaptation in the City. The map encompasses drought, fire, flood, heat, and wind events and the preparedness strategies utilized to meet these challenges.

Drought & The Colorado River

Fire & Smoke

Flood

Extreme Heat in Las Vegas & the Intermountain Southwest

The map displays the Las Vegas metropolitan area and surrounding regions, including the Colorado Plateau, Grand Canyon, and Mojave Desert. It features several blue icons representing different weather events: a fire icon, a flood icon, and a heat icon. The map includes a search bar, zoom controls, and a scale bar. The City of Las Vegas logo is visible in the top right corner.



Project Description

In support of the Western Adaptation Alliance (WAA) this map seeks to inform the adaptation strategies of the City of Las Vegas and act as a communication tool for spreading extreme weather adaptation awareness. The map was created in ArcGIS online and an ESRI web template was used to show data, photos and information. The ArcGIS Online map and data collection was originally done by Zach Fader WAA (Intern at the City of Flagstaff). The City of Las Vegas Department of Planning recreated the map using an updated ESRI Web template similar to the original created by Zach Fader. Data on the map would be now maintained by the City of Las Vegas Department of Planning.

SOURCE: City of Las Vegas, Planning and Development Department

www.lasvegasnevada.gov - Our City - Maps

1. Interview With Marco Vellella [Telephone interview] (2016, June 23).
2. Nevada Department of Public Safety, Office of Emergency Management. (2013). *The State of Nevada Enhanced Hazard Mitigation Plan*.
3. National Climate Assessment. (n.d.). Retrieved August 25, 2016, from <http://nca2014.globalchange.gov/report/our-changing-climate/heavy-downpours-increasing>
4. LeRoy, S., & Fader, Z. (2014). *Western Adaptation Alliance Extreme Event Database*.
5. LeRoy, S., Gartin, G. (2015). "Dealing with Extreme Heat Risks: A Narrative on Promising Practices for Local Governments and Their Citizens." *Climate Extremes Data and Communication Products for Western Adaptation Alliance Cities in the Intermountain Southwest* [Data spreadsheet; text documents; graphics]. For Collaboration Project in Adaptation/Resilience Climate Extremes. CLMAS, Institute of the Environment, University of Arizona. Accessed [8/24/2016].

GIS maps are normally produced only to meet the needs of the City. Due to continuous development activity this map is for reference only.

Geographic Information System

Planning & Development Dept.
702-229-6301

Printed: Monday, April 03, 2017
Jorge Morteo GISP - Sr. GIS Analyst

Extreme Weather Adaptation in Las Vegas Nevada

City of Las Vegas Department of Planning

Extreme Weather Adaptation in Las Vegas Nevada

Drought & The Colorado River

In the face of the worst drought on record, the Southern Nevada Water Authority seeks to meet projected water demands using the Water Resource Plan which highlights reuse, desalination projects, groundwater development, and asset banking. Because Southern Nevada receives 90% of its water from the Colorado River, drought on the river means drought in the city of Las Vegas. As of 2016, Lake Mead reached its lowest levels on record and was at 37% capacity in May. These conditions have left the

Fire & Smoke

Flood

Extreme Heat in Las Vegas & the Intermountain Southwest

The video player shows a large industrial facility, likely a water treatment plant, with several large structures and pipes. The video is titled "Southern Nevada Water Authority: Reflecting on 25 Years".

Extreme Weather Adaptation in Las Vegas Nevada

City of Las Vegas Department of Planning

Extreme Weather Adaptation in Las Vegas Nevada

Drought & The Colorado River

Fire & Smoke

Wildfire near the City of Las Vegas is increasing primarily because of its impacts on air quality. As the video on the main panel indicates, smoke from nearby fires, such as the Carpenter 1 Fire can billow into the Las Vegas Valley, where it can have serious health impacts on people living there. While the City itself is classified as a low hazard risk for wildfire, the Spring Mountain Range just to the west of the City has the highest frequency of wildfire in all of Clark County. Furthermore, wildfires in Nevada have grown larger, more destructive, and more

Flood

Extreme Heat in Las Vegas & the Intermountain Southwest

The video player shows a large fire with thick smoke rising into the sky. The video is titled "Carpenter 1 Fire: Mt. Charleston, Nevada".

Extreme Weather Adaptation in Las Vegas Nevada

City of Las Vegas Department of Planning

Flood

Clark County accounts for the second most flood insurance claims in the state of Nevada, second only to Washoe County. Meanwhile flooding leads the nation in associated property damage for all natural disasters. The Las Vegas Valley has experienced dozens of flooding events in modern recorded history with varying degrees of property damage, injury, and loss of life (several of these events are described in more on the first main panel). Two flood types affect the state of Nevada: they are wet weather storms and dry weather storms, also

Extreme Heat in Las Vegas & the Intermountain Southwest

Extreme Wind

Resilience & Climate Preparedness

Footnotes

The video player shows a flooded street with several cars. The video is titled "Clark County accounts for the second most flood insurance claims in the state of Nevada, second only to Washoe County. Meanwhile flooding leads the nation in associated property damage for all natural disasters. The Las Vegas Valley has experienced dozens of flooding events in modern recorded history with varying degrees of property damage, injury, and loss of life (several of these events are described in more on the first main panel). Two flood types affect the state of Nevada: they are wet weather storms and dry weather storms, also".

Extreme Weather Adaptation in Las Vegas Nevada

City of Las Vegas Department of Planning

Flood

Extreme Heat in Las Vegas & the Intermountain Southwest

Las Vegas leads the state of Nevada in the average number of days over 100 degrees Fahrenheit with 74.6. As the hottest place in the state, the City must adapt to extreme heat in a way that Northern and Central Nevada do not. In Southern Nevada, extreme heat is a serious health hazard that has led to well over one hundred cases of heat-related illness and death since 1992. Las Vegas is number one in most intense urban heat islands in the past ten years and may be up to 24 degrees hotter than nearby rural areas. Not only does extreme heat have adverse

Extreme Wind

Resilience & Climate Preparedness

Footnotes

The video player shows a wildfire and a drought sign. The video is titled "BY 2100, SUMMERS IN GREAT BASIN NATIONAL PARK ARE PROJECTED TO BE 12 DEGREES HOTTER." and "WILDFIRE" and "DROUGHT".

Extreme Weather Adaptation in Las Vegas Nevada

City of Las Vegas Department of Planning

Flood

Extreme Heat in Las Vegas & the Intermountain Southwest

Extreme Wind

Extreme winds impact the City of Las Vegas in many different ways, causing millions of dollars of damage, injuries, and deaths since 1960. Extreme wind can cause storm surges on Lake Mead, sometimes as high as six feet, leading to overturned boats, detached docks, and drowning fatalities. Several such events are described more extensively in the first main panel. Another way wind affects the residents and infrastructure of Las Vegas is through dust storms. Dust storms can bring air and local traffic to a grinding halt, impact air quality causing respiratory

Resilience & Climate Preparedness

Footnotes

The video player shows a city at night with a dust storm. The video is titled "Extreme winds impact the City of Las Vegas in many different ways, causing millions of dollars of damage, injuries, and deaths since 1960. Extreme wind can cause storm surges on Lake Mead, sometimes as high as six feet, leading to overturned boats, detached docks, and drowning fatalities. Several such events are described more extensively in the first main panel. Another way wind affects the residents and infrastructure of Las Vegas is through dust storms. Dust storms can bring air and local traffic to a grinding halt, impact air quality causing respiratory".

Extreme Weather Adaptation in Las Vegas Nevada

City of Las Vegas Department of Planning

Fire & Smoke

Flood

Extreme Heat in Las Vegas & the Intermountain Southwest

Extreme Wind

Resilience & Climate Preparedness

Preparing for extreme weather is vital to a resilient community. In a future of uncertain climate, the Intermountain Southwest can utilize its many resources to ensure the environmental success of future generations by putting in place measures to mitigate and adapt to drought, fire, flood, heat, and wind events that risk lives and livelihoods every year.

Footnotes

The video player shows a highway sign that says "Prepared Community". The sign is green and yellow with the text "EXIT 1A", "Prepared Community", and "EXIT ONLY".