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ARIZONA

Nature is hard at work for Arizona. Nature-based approaches are the most cost-effective ways to protect Arizonans from the threats of droughts, fires, and extreme heat. Arizona's forests, grasslands, waterways, farms, and open spaces all support local livelihoods. With strategic conservation and thoughtful management, Arizona's natural infrastructure can do even more to protect public safety and provide economic benefits in the future.

NATURE IS PUBLIC SAFETY INFRASTRUCTURE.

Droughts, wildfires, and extreme heat pose significant risks to Arizonans. Nature-based solutions play a critical role in reducing risks.¹ Nature-based solutions encompass land and water conservation; best management practices for agriculture and forestry; native habitat revegetation and urban tree planting; floodplain, river, wetland, and riparian restoration; as well as aquifer recharge. All of these approaches can help reduce the threats described below.

Reducing Threats from Drought. A Drought Emergency Declaration has been in effect in Arizona since 1999. The Colorado River system, which supplies 36 percent of Arizona's total water use, has experienced extensive drought conditions for the past 19 years.² Risks posed by droughts include:

- Reduced groundwater tables, causing dangerous concentrations of metals and minerals in well water and other drinking water supplies. Rural residents with private wells are particularly vulnerable to this risk. Wildfires or floods that are exacerbated by droughts can also impact water quality in aquifers and wells.
- Drought can intensify heatwaves and wildfires, increasing the risk of heat-related illnesses, and cause respiratory distress from wildfire smoke, dust storms, pollen, and other airborne particles. Poor air quality

can exacerbate chronic respiratory conditions such as asthma and chronic obstructive pulmonary disease.

- Drought can also increase the risk of diseases, including Valley fever and West Nile virus.³

Reducing Catastrophic Wildfires. Catastrophic wildfires are extremely costly, but investments in wildfire resilience and sound forest management can reduce the damage. In Arizona, 31% of buildings are at risk of wildfires and the expected annual losses from wildfires are \$195.3 million.⁴ A recent study shows that every \$1 invested in forest restoration for fire resilience returns over \$7 in benefits.⁵

Reducing Dangerous Heat. Drought and extreme heat are intertwined.⁶ Unusually high temperatures can contribute to drought severity, and drought can intensify the health effects of extreme heat, such as heat exhaustion or heat stroke. In 2023, there were 4,298 heat-related illness emergency department visits and 990 heat-related deaths recorded in Arizona, occurring predominantly in Maricopa, Mohave, Pima, Pinal, and Yuma Counties.⁷ Green space and trees can mitigate warming, providing cooling benefits important to reducing energy consumption, and improving human health.⁸ This is especially important for households that lack access to air conditioning.⁹ Heat waves are particularly dangerous for seniors, people who work outdoors, and other vulnerable populations.¹⁰

NATURE IS INFRASTRUCTURE FOR WORKING LANDS.

Healthy lands support farmers and ranchers. Arizona's ranchers and farmers are leaders in protecting and stewarding working lands to maintain the state's nearly \$161 billion food and agriculture economy.¹¹ From 2017 to 2022, over 600,000 acres of agricultural land were lost to development.¹² In the face of threats to farms and ranch

