NATURAL AND GREEN INFRASTRUCTURE IN THE COLORADO RIVER BASIN

NATURAL AND GREEN INFRASTRUCTURE

Natural infrastructure projects restore nature's processes to provide key services and ecosystem functions. It refers to projects that use existing or restored natural landscapes and features such as forests, floodplains, wetlands to increase resilience to drought and climate impacts. Natural infrastructure is a subset of nature-based solutions, or the use and emulation of natural systems to provide societal and environmental benefits. Green infrastructure is also under the umbrella of nature-based solutions, and generally refers to the use of engineered systems that mimic natural processes or work in concert with natural systems.

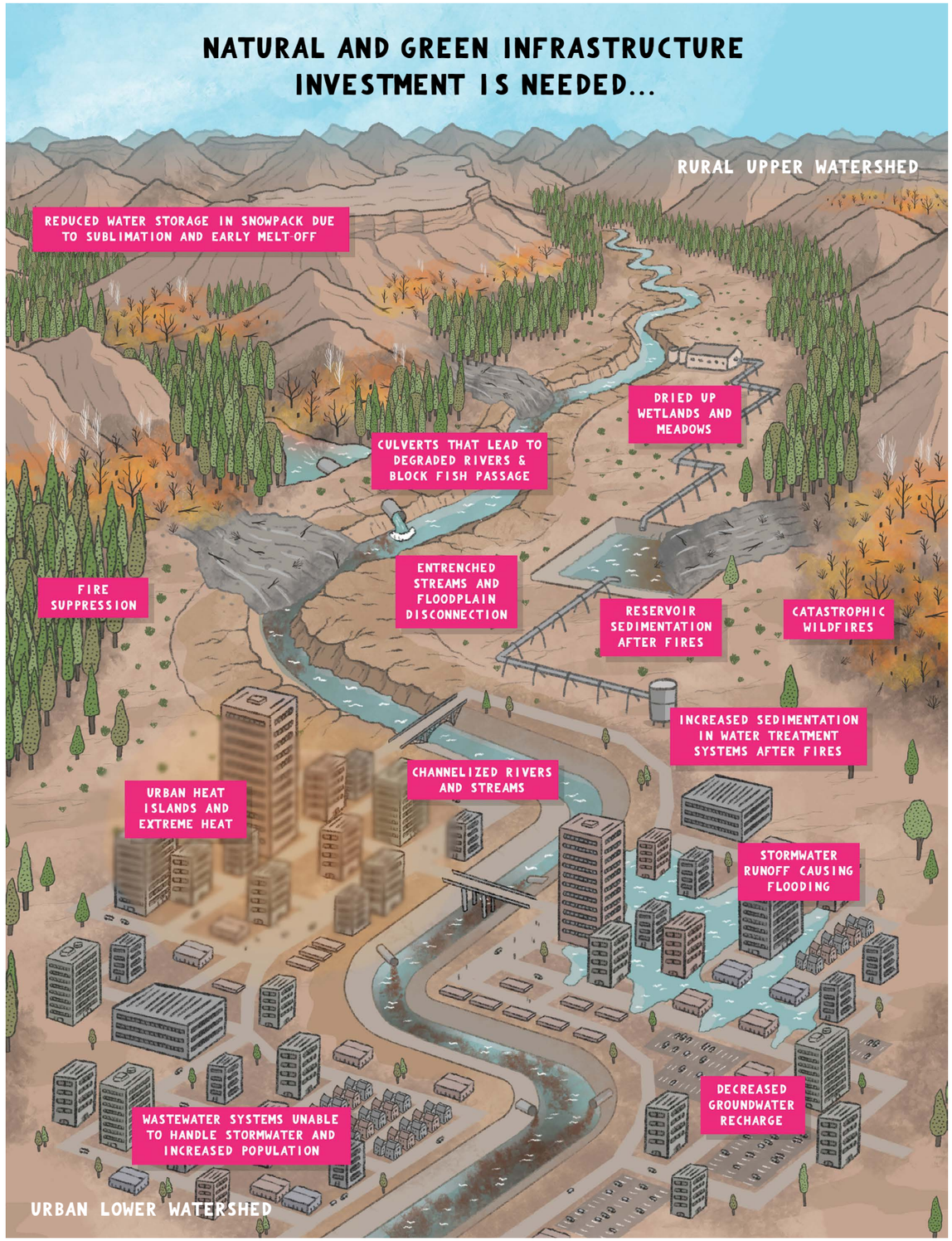
Trout Unlimited/Nick Walrath

The Nature Conservancy/Audrey Wolk

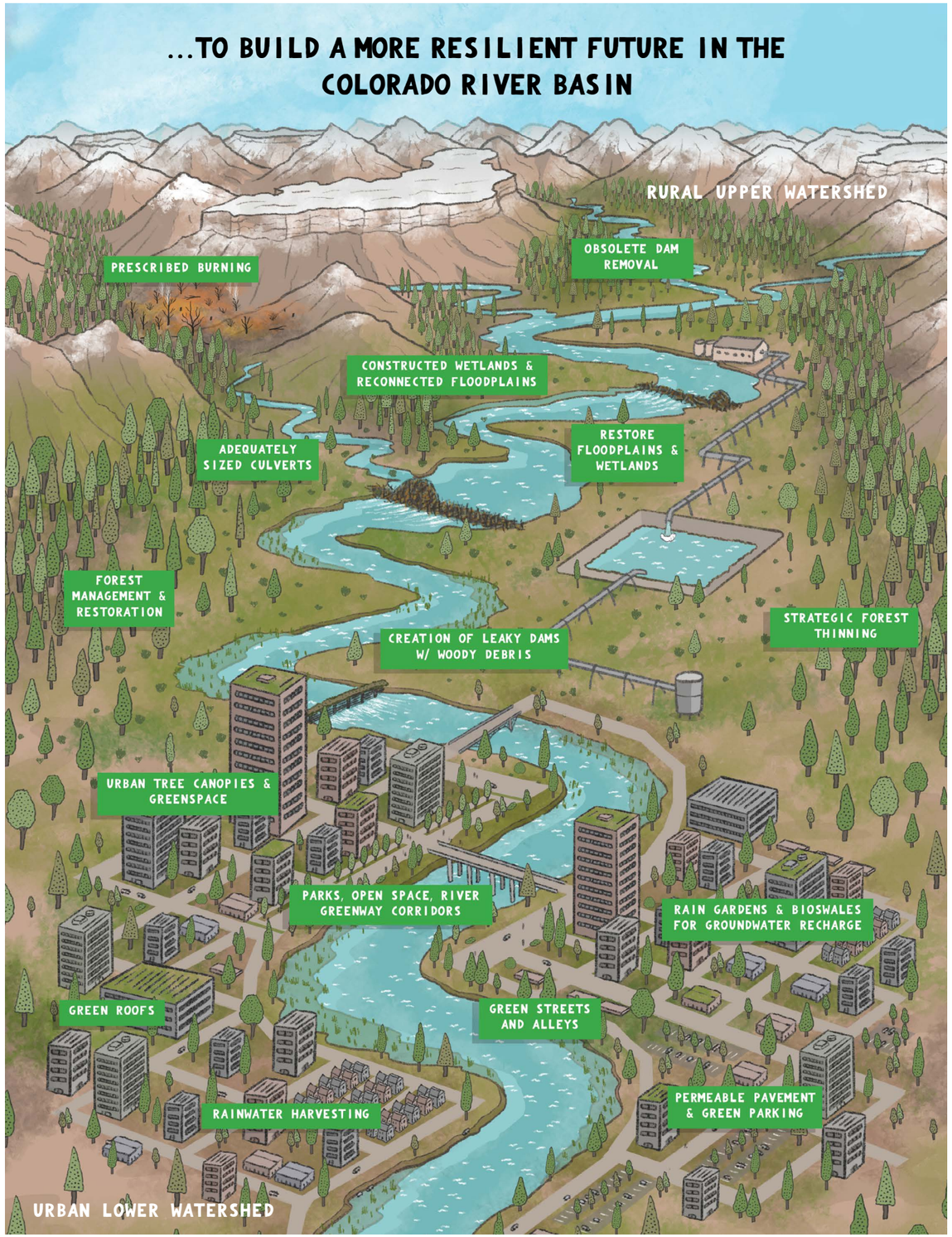
INVESTMENT IN NATURAL AND GREEN INFRASTRUCTURE

In the Colorado River Basin, natural infrastructure can strengthen climate resilience by enhancing water security, reducing drought impacts, mitigating floods, and reducing wildfire risk. Investment in natural infrastructure solutions is essential in the face of reductions in streamflow. Snow accounts for two-thirds of the inflow into major storage reservoirs in the Basin, and snowpack has declined across 90% of monitoring sites. Proactive forest and wet meadow restoration and management can improve snowpack retention, prolong snowmelt and runoff, by helping soils slow runoff, so that rivers flow longer into the dry season. Additionally, investment in forests, floodplains, agricultural practices, urban green spaces, and urban infrastructure will ensure a climate resilient future in the Basin, by providing multiple economic, environment and social benefits to communities that need functioning infrastructure and a healthy environment.

NATURAL AND GREEN INFRASTRUCTURE INVESTMENT IS NEEDED...



...TO BUILD A MORE RESILIENT FUTURE IN THE COLORADO RIVER BASIN



BENEFITS OF NATURAL AND GREEN INFRASTRUCTURE

Nature is a smart, long-lasting solution to help meet the nation's infrastructure needs. Just like traditional infrastructure, such as roads, bridges, and reservoirs, our natural infrastructure — wetlands, healthy forests, functioning stream floodplains — provide critical services to our communities. For example, 88% of the water in the Colorado River starts in the forested headwaters of Wyoming, Colorado, Utah, and New Mexico. Protecting these and other healthy natural systems and restoring degraded ones is an effective, economical, and sustainable investment. This approach is especially important for communities on the frontlines of climate change in the Colorado River Basin–primarily lower-income communities, communities of color, and Tribal Nations and Indigenous communities–who are often under-resourced and less equipped to prepare for, or recover from, the effects of drought, climate change, and reduced water levels.

These natural solutions efficiently safeguard and manage water in ways that improve quality of life. They can even eliminate strain on traditional infrastructure. For example, wetlands located upstream of communities naturally absorb and hold water, releasing it more slowly and making it available later in the season. Urban rain gardens and bioswales provide a similar function. These natural approaches are cheaper to build than pipes or holding ponds and reduce both the burden on existing piped water systems and the impact on downstream natural systems associated with runoff.

In addition to helping reduce risk and increase resilience, natural infrastructure projects can support local economies by providing important sources of employment. For every $1 million invested in natural infrastructure projects, 17.4 jobs are created, a higher job return than the same amount invested in the health care, energy, and military sectors.

SIMPLY PUT, NATURAL INFRASTRUCTURE STRATEGIES CAN:

- **Reduce drought impacts on communities and natural systems**
- **Store and convey water while improving water quality**
- **Improve the job market while restoring our landscapes**
- **Improve air quality and reduce heat island effects in urban centers**
- **Improve forest health and avoid greenhouse gas emissions**
- **Avoid increased operational costs at wastewater treatment plants**
- **Create energy cost savings**
- **Enhance property values**
- **Increase groundwater recharge and increase water availability during dry summers and falls**
- **Reduce flood insurance rates in flood prone areas (FEMA's Community Rating System)**
- **Keep people and structures out of harm's way from floods and fires**
- **Reduce threats of catastrophic fires**
- **Reduce erosion and sedimentation**
- **Provide greenspaces, greenways, and recreational opportunities**
- **Provide habitat for fish, wildlife, and pollinators**