VERDE RIVER WATERSHED REPORT CARD 2025

SUMMARY

Photo by TNC

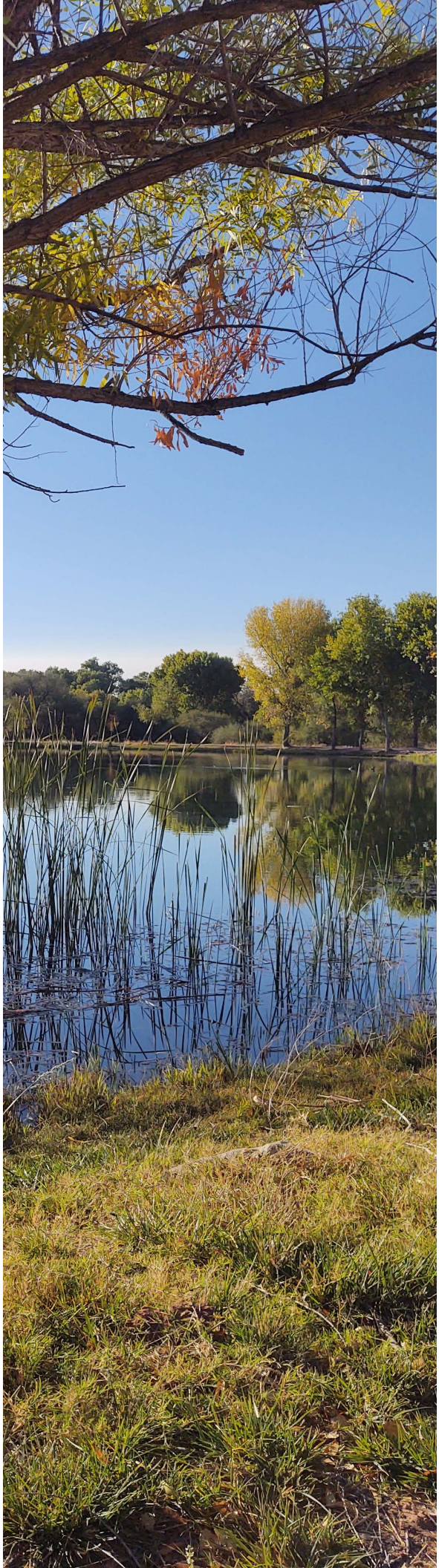
VERDE RIVER
FROM HEADWATERS TO CONFLUENCE

The Verde River is the heart of the Verde Valley – the river and its tributaries wind through our communities supporting ribbons of green across the valley. From its headwaters in Prescott, Granite Creek meanders across mountainous grasslands before meeting the Verde River outside of Paulden marking the start of the perennial flow. As the river flows east and then south, it supports agriculture and recreation throughout Clarkdale, Cottonwood and Camp Verde. Oak Creek passes through the red rocks of Sedona before also meeting the Verde River in Cornville. The river then flows through its Wild and Scenic reaches before becoming part of the water delivery systems for the Phoenix Metro Area.

The river, its tributaries and connected aquifers, support a rich diversity of life including beavers, otters, and bald eagles. The Verde is home to nine species of native fish, and hundreds of birds' species. Large mammals found in the watershed include mountain lions, bears, deer and elk. People have depended on the river since time immemorial and this continue to do so today. Agriculture and recreation in the area rely on the river for irrigation, kayaking, swimming, and fishing.

Drinking water across the region comes from aquifers connected to the river. Our communities continue to work to conserve these resources and find ways to enhance the sustainability and resilience of this water supply. The Verde River supplies water into the Phoenix Active Management area through the Salt River Project's water delivery system that supports millions of Arizonans. The Verde River, part of the Colorado River Basin, defines our local communities and is a critically important water supply within the Colorado River System.

The 2025 Watershed Report documents the status of the watershed today – which reflects past management, climate conditions, and geography of the watershed. Following the 2020 Watershed Report Card, watershed stakeholders identified and implemented specific actions to improve the resilience of the watershed – this includes upland restoration, water quality monitoring, agricultural infrastructure development, invasive plant removal, and stormwater management. These actions improve the natural conditions in the watershed and increase water security for communities, as well as improve economic conditions.



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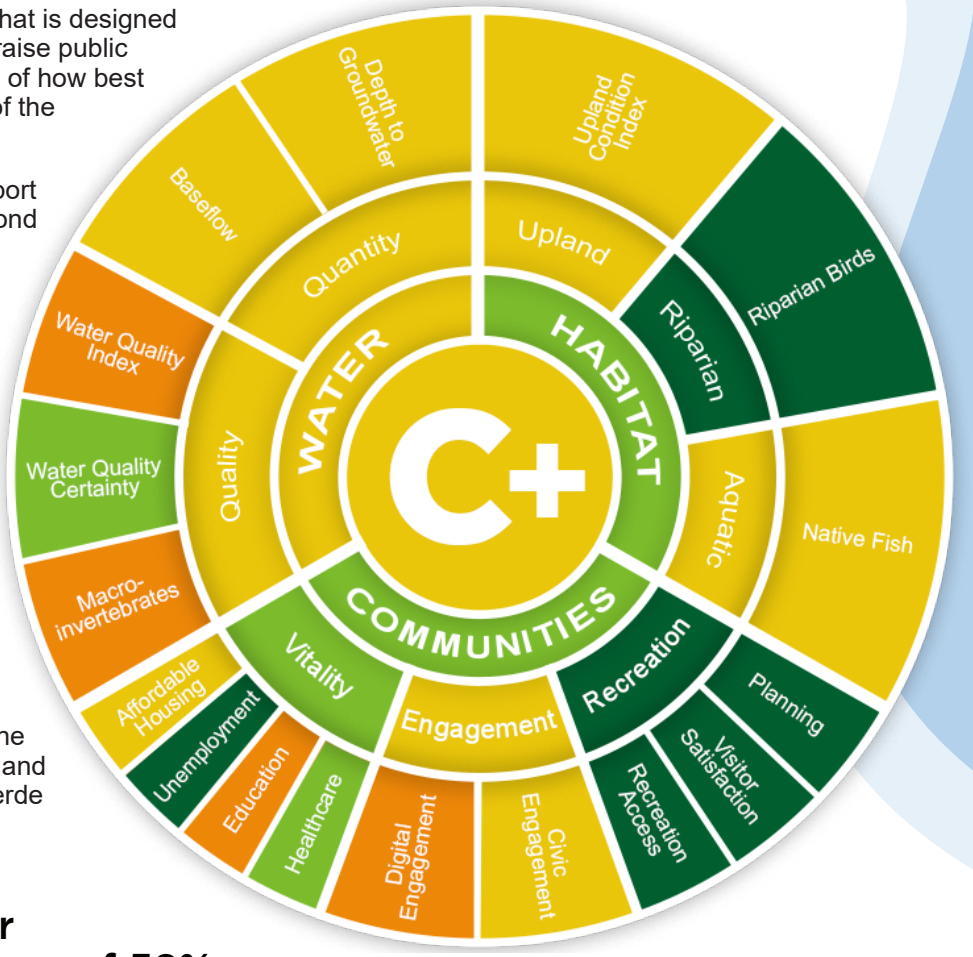
2025 VERDE WATERSHED REPORT CARD

The Watershed Report Card is a tool that is designed to assess the health in the watershed, raise public awareness, and guide decision-makers of how best to support the long-term sustainability of the watershed.

This 2025 Verde River Watershed Report Card constitutes the release of the second iteration of an effort that began in 2020 with the first Report Card.

We have held three targeted stakeholder meetings across the watershed to connect with local experts and community representatives who provided feedback on indicator selection, scoring, and regional priorities. This effort ensures that we incorporated diverse perspectives across the watershed, while also allowing for a more efficient process.

We assessed 17 indicators, across three main categories: Water, Habitat, and Communities. This report reflects the continued commitment of stakeholders and partners to improve the health of the Verde Watershed and those that live within it.



Overall, the Verde River Watershed earned a score of 58% (C+); a one percent improvement since 2020. Individually, the Water category scored 48% (C), Habitat scored 63% (B-), and Community scored 62% (B-) for 2025.

WATER 48% (C+) ▼

The water category had a slight decrease in score from 2020 to 2025. Water quality certainty saw improvements, while water quality index and macroinvertebrates decreased.

HABITAT 63% (B-) ▲

The Habitat category improved significantly from 2020 (54%) with an improvement of 9% due to improved upland habitat condition (49%) and riparian birds (93%).

COMMUNITY 62% (B-) ▼

The Communities category slightly declined since 2020. Although unemployment rates and recreation planning improved, education scores decreased significantly, likely due to the inclusion of local online high schools in this year's Report Card calculation. These schools have much lower graduation rates than traditional high schools.

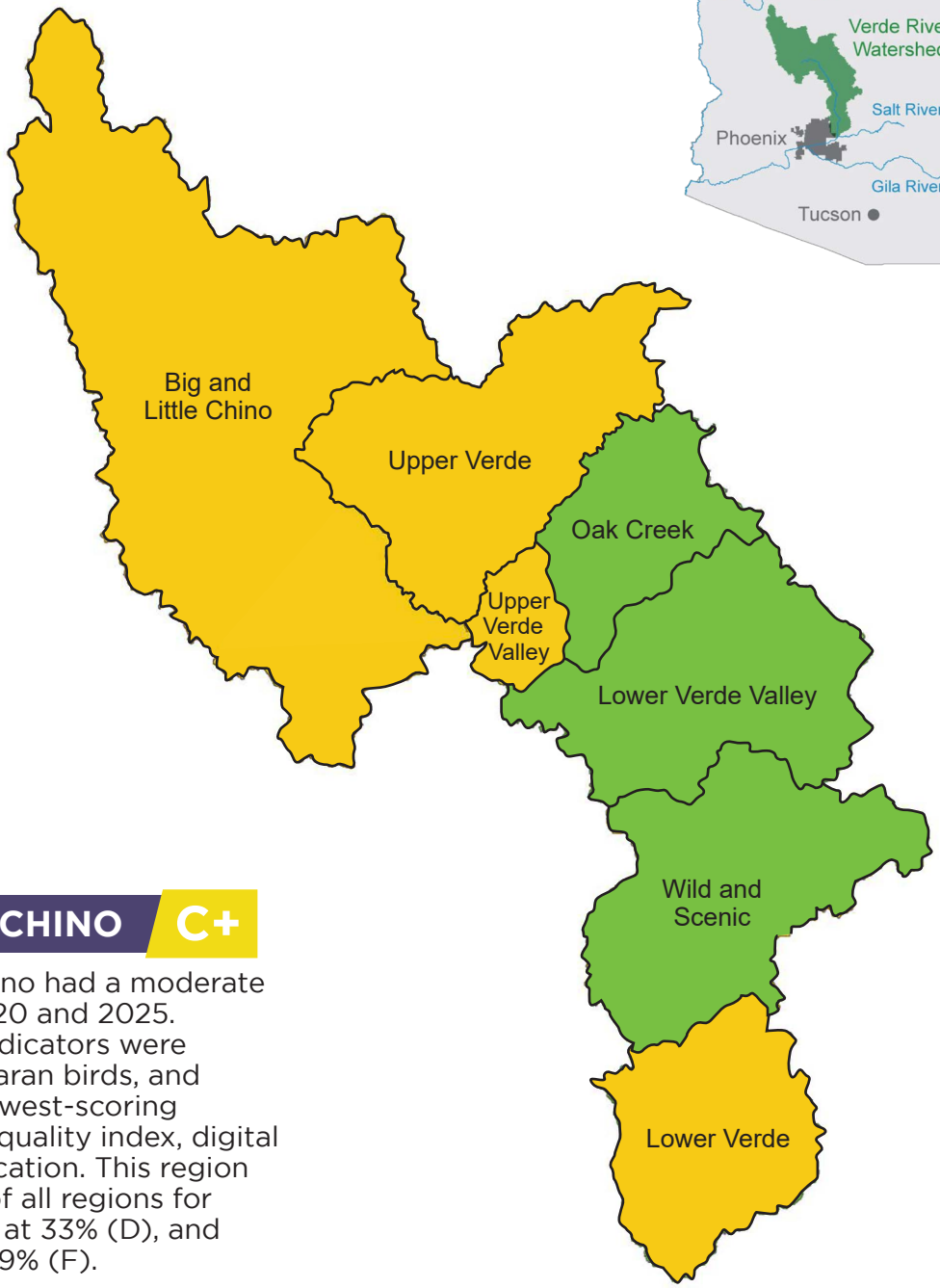
The lowest scoring indicator was macroinvertebrates (IBI) which was 26% (D), mainly due to insufficient data available. There was no data available in 3 of the 7 regions.

The highest scoring indicators were visitor satisfaction 95% (A+) and riparian birds 93% (A).

REGIONAL SUMMARIES

Grade scale

- A — Very good (100–80%)
- B — Good (79–60%)
- C — Moderate (59–40%)
- D — Poor (39–20%)
- F — Very poor (19–0%)
- U — Unscored



REGION 1

BIG AND LITTLE CHINO C+

The Big and Little Chino had a moderate score, 53% (C+), in 2020 and 2025. The highest-scoring indicators were visitor satisfaction, riparan birds, and unemployment. The lowest-scoring indicators were water quality index, digital engagement, and education. This region had the lowest score of all regions for depth to groundwater at 33% (D), and water quality index at 9% (F).

REGION 2

UPPER VERDE C+

The Upper Verde had a moderate score, 54% (C+), which is an improvement from 51% (C+) in 2020. The highest-scoring indicators were visitor satisfaction and riparian birds. The lowest-scoring indicators were recreation access, digital engagement, and macroinvertebrates. This region had the lowest score in the watershed for digital engagement and recreation access at 0% (F), likely due to the low human population numbers and remote nature of this region.

REGION 3

UPPER VERDE VALLEY C+

The Upper Verde Valley Region had a moderate score of 54% (C+) in 2025, similar to the 2020 score of 55% (C+). The lowest-scoring indicators were water quality index (0%, F) and digital engagement (2%, F). Indicators with A+ scores included water quality certainty, riparian birds, visitor satisfaction, and recreation access. This region had the lowest baseflow score at 30% (D).

REGION 4

OAK CREEK B

In both 2020 and 2025, Oak Creek was the highest scoring region in the watershed, with a score of 67% (B) (65% in 2020). The region had A+ scores in recreation access, visitor satisfaction, digital engagement, and water quality certainty. This region had the lowest score for education and affordable housing in the watershed.

REGION 5

LOWER VERDE VALLEY B-

The Lower Verde Valley score remained stable, increasing only slightly from 62% in 2020 to 63% (B-) in 2025. This region scores very high in recreation indicators, including recreation planning, access, and visitor satisfaction. The region also has high scores in water quality certainty, riparian birds, and low unemployment rates. The lowest scores in this region were from macroinvertebrates (D-) due to low sampling size, and digital engagement (D-). This region has the highest score for civic engagement in the watershed (B+).

REGION 6

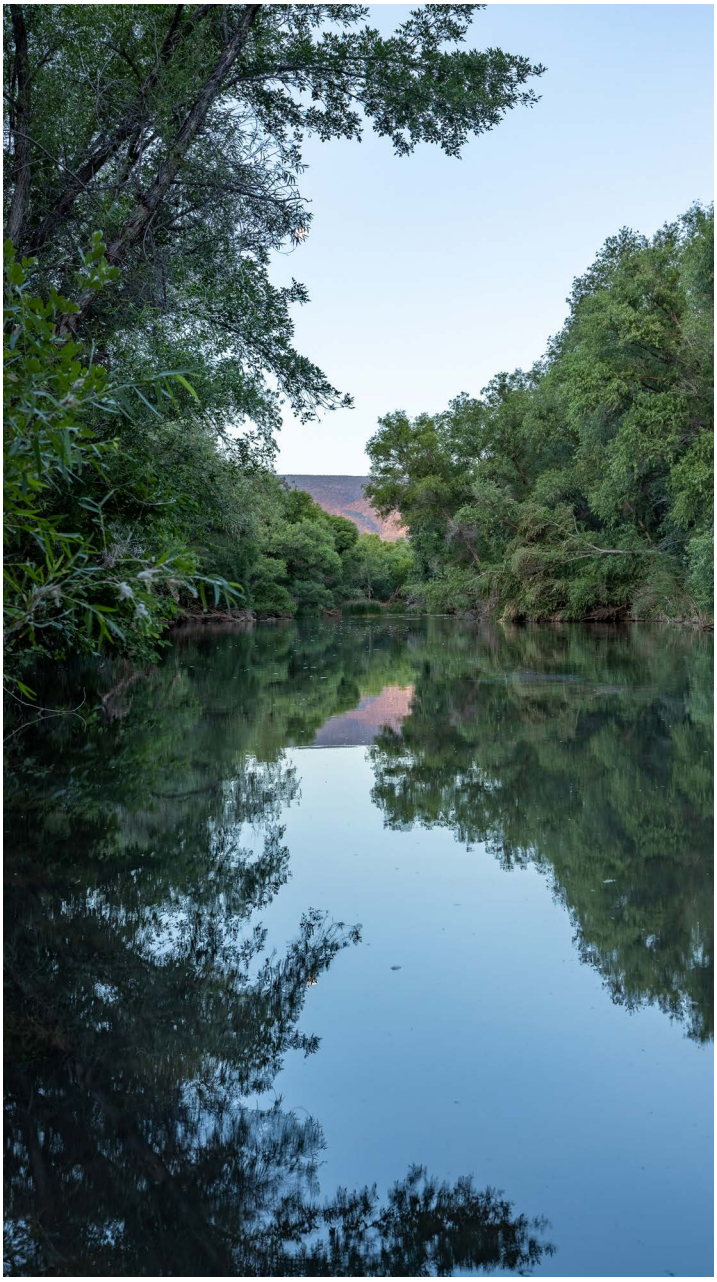
WILD AND SCENIC B-

The Wild and Scenic score increased from 54% (C) in 2020 to 64% (B-) in 2025. Since 2020, increases in scores were seen for water quality certainty, upland habitat, and recreation, highlighting the improved recreation planning since 2020. The highest scores in this region come from riparian birds, unemployment, and recreation indicators. This region has the lowest score in the watershed from civic engagement, highlighting the need for additional outreach.

REGION 7

LOWER VERDE C

The Lower Verde score decreased slightly from 62% (B-) in 2020 to 49% (C) in 2025, partially due to a decrease in the water quality index score. This region had high scores for riparian birds, unemployment, healthcare, and all recreation indicators. This region has the highest scores for healthcare and recreation planning, primarily due to the Tonto National Forest updating their recreation plan in 2023. This region has the lowest score in the watershed for water quality certainty, depth to groundwater, upland habitat, and native fish, highlighting the need for additional work in this region.



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CHANGING METHODOLOGIES

The 2025 Verde Watershed Report Card includes several key methodological changes to improve indicator accuracy and reflect stakeholder input. Depth to groundwater was added as a new indicator under the water quantity category based on stakeholder feedback and scored for both 2020 and 2025. The groundwater and surface water management BMPs indicators were removed due to inconsistent data between areas inside and outside the Prescott Active Management Area (AMA). Similarly, turbidity was dropped because of a lack of available data. The fish indicator was revised to focus on native species rather than nonnative fish, which included stocked sport fish, to better align with ecological goals and stakeholder feedback. Lastly, the Water Quality Index and Certainty indicators were updated based on a new water quality monitoring plan, improving data reliability and scoring transparency. By refining indicators, the report card continues to evolve as a trusted tool for guiding watershed priorities and adaptive management.

INDICATORS OF INTEREST

DEPTH TO GROUNDWATER

Through stakeholder meetings in preparation for the 2025 report card, depth to groundwater was identified as an indicator that was missing in the Water Quantity category. Depth to groundwater indicator methodology was developed with the goal of quantifying groundwater level throughout the watershed, ranging from undesirable to desirable levels. To evaluate depth to groundwater conditions in each region, we used publicly available data from Arizona Department of Water Resources (ADWR) Groundwater Site Inventory (GWSI) to assess changes in groundwater elevation through time. Wells are graded individually and grades are aggregated by regions.

There is a gap in well coverage along the Verde River in the Wild and Scenic region, with the wells in the region clustered near Payson. The Wild and Scenic region was graded at 79% (B+) which indicates that groundwater levels are generally in the upper end of the baseline range near Payson which reflects the recharge at Green Valley Park water reclamation project. The project has recharged approximately 400 acre-feet per year, roughly 25% of Payson's municipal water use. The region's grade may not accurately capture groundwater level conditions closer to the Verde River mainstem.

Watershed-wide scores were calculated for 2020 and 2025, and have improved overall from 47% (C) in 2020 to 51% (C) in 2025.

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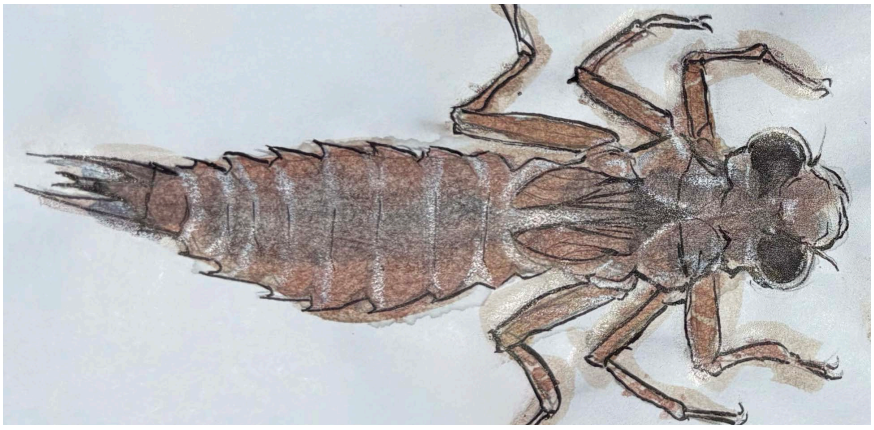
NATIVE FISH INDICATOR

The 2025 Native Fish score for the watershed has remained consistent, with both 2020 and 2025 scores of 47% (C). While certain regions of the watershed, such as the Big and Little Chino (33%, D), Upper Verde Valley (27%, D), and Lower Verde Valley (45%, C) received poor scores due to low diversity of native fish, other regions like Oak Creek (89%, A) and the Wild and Scenic (73%, B) received strong scores due to high diversity of native fish. The strong scores for the Oak Creek and Wild and Scenic regions, which both contain several creeks where native fish were found, speak to the importance of the Verde River's tributaries as refugia for native species. Conversely, the poor scores for other regions highlight the potential for ecological improvements that benefit native fish in those areas.

MACROINVERTEBRATES

Macroinvertebrates are excellent indicators of water quality, with some types of macroinvertebrates only present in clean water. The methodology for this indicator is based on the last five years of survey data from the Arizona Department of Environmental Quality (ADEQ). However, due to staff shortages, COVID-19, and other efforts outside the Verde Watershed, the only surveys completed within the five years assessed here (2019-2024) occurred in 2019. Those surveys were very few and no surveys were conducted in regions 2, 4, 5, and 6, therefore no scores are available for those regions. ADEQ is planning to develop a long term statewide sampling plan.



Drawings coutesy of Cynthia Butler

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TALKING ABOUT HIGH COST OF LIVING

In the 2025 report card, Affordable Housing scored 44% (C-), while Unemployment scored 87% (A) for the watershed as a whole. Since 2020, scores for the Unemployment indicator have improved from 74% (B) to 87% (A), which suggests that unemployment rates have decreased. However, Affordable Housing, a measure of the proportion of residents' income that goes to paying for housing costs, has decreased slightly from 46% (C) to 44% (C-). Low rates of affordable housing indicate that many residents are heavily cost-burdened and are spending a large portion of their income on housing. Unaffordable housing may force workers to relocate, resulting in a lack of qualified workers for available jobs in the watershed. The low rates of unemployment in the watershed, though at first appearing to be positive, may actually be an indicator of a lack of workers to fill available positions.

DIGITAL ENGAGEMENT

For Digital Engagement, we saw decreases in scores for every region except Oak Creek. Oak Creek scored 100% (A+) while all other regions scored 0-37% (D+ to F). This is likely because the digital engagement indicator score for each watershed region is scored relative to the other regions. Oak Creek is by far the most popular tourist destination and therefore, its increasing popularity is resulting in lower scores for the remaining regions. This highlights the need to distribute recreation activities to other areas within the watershed to reduce overuse within the Oak Creek region.

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DEVELOPING A WATER QUALITY MONITORING PLAN TO IMPROVE SCORES

The methodology for water quality has changed significally since the previous Report Card. In 2020, the score was based on a calculation that was determined by ADEQ who has since discontinued that calculation. In response, Verde Watershed stakeholders worked to determine a comparable score with input from ADEQ.

The Water Quality Certainty score is based on the proportion of perennial and intermittent streams within the watershed that are categorized as assessed for water quality by ADEQ. This score does not grade the water quality itself, but rather how confident we are in our understanding of water quality in the watershed.

Despite years of water quality sampling efforts from conservation groups within the watershed, such as the Sierra Club,Verde River Institute, Friends of the Forest, and Oak Creek Watershed Council, the water quality certainty score was the lowest score on the 2020 report card at 27% (D). This low score highlighted the need for a coordinated effort across organizations throughout the watershed. In response, the Friends of the Verde River secured funding to begin a water quality monitoring effort within ADEQ's Community Science Alliance water quality monitoring program.The Verde Watershed Restoration Coalition (VWRC) partners worked together to develop a watershed wide water quality monitoring plan. This plan has guided VWRC coordination of sampling in partnership with ADEQ's Community Science Alliance.

Thanks to these collaborative efforts, the watershed wide score has improved greatly from 27% (D) in 2020 to a 79% (B+) in 2025.

Verde Water Watcher volunteers sampling

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UPLAND CONDITION SEDIMENT REDUCTION WORK

The Upland Condition Index scores have improved from 36% (D+) in 2020 to 49% (C) in 2025. The 2020 scores helped to identify a project gap which resulted in shifting of project priorities for land managers and their partners. Since the release of the 2020 Watershed Report Card, land managers and partners have funded and implemented upland restoration projects throughout the watershed.

PROJECT HIGHLIGHTS

MUNDS DRAW

Humans created changes to the landscape, including unauthorized, user-created roads and overgrazing, can lead to accelerated erosion and gully formation. Process-based restoration heals the landscape by mimicking naturally occurring hydrologic processes. By understanding how water will flow, we can install structures to slow the water down, allowing sediments to settle and regrade incised systems. This keeps soil and water on the landscape - building resiliency, reducing erosion, improving wildlife habitats, and reducing sedimentation downstream.

The Prescott National Forest identified Munds Draw as a priority subwatershed in need of upland restoration and brought this project to VWRC. Project implementation began in 2020 and included juniper thinning in grassland habitats and installing rock structures and juniper slash into gullies to reduce erosion. Since the 2020 Report Card, restoration crews and volunteers have installed, repaired and monitored 288 structures, and thinned 575 acres at the Munds Draw site.

FLOWING SPRINGS

The Flowing Springs project on the Tonto National Forest involved installing pipe rail fencing to close a riparian and upland area to vehicles. This area was experiencing gullying and habitat degradation. The first step in a restoration project is to remove the stressor, in this case the vehicles. Now that the stressor is removed VWRC partners will work to identify next steps.

Gully Busters is a community science program developed by VWRC, and led by Friends of the Verde River and Coconino National Forest. Community scientists collect data about accelerated erosion on the landscape. Their data informs land management decisions and identifies locations for erosion control structures.

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THANK YOU STAKEHOLDERS AND PARTNERS

A healthy Verde Watershed means different things to different people. For some, it's the chance to watch birds along a flowing creek or paddle beneath sycamore trees. For others, it's the water that nourishes farm fields and supports local food production. It also means clean, reliable drinking water and landscapes—forests and grasslands—where wildlife can roam safely and the risk of catastrophic wildfire is reduced. However you define a healthy Verde Watershed, achieving it requires collaboration and action on the ground. We can only highlight a few of the many projects across the watershed, so please visit ***verdereportcard.org*** to learn more and connect with our partners!

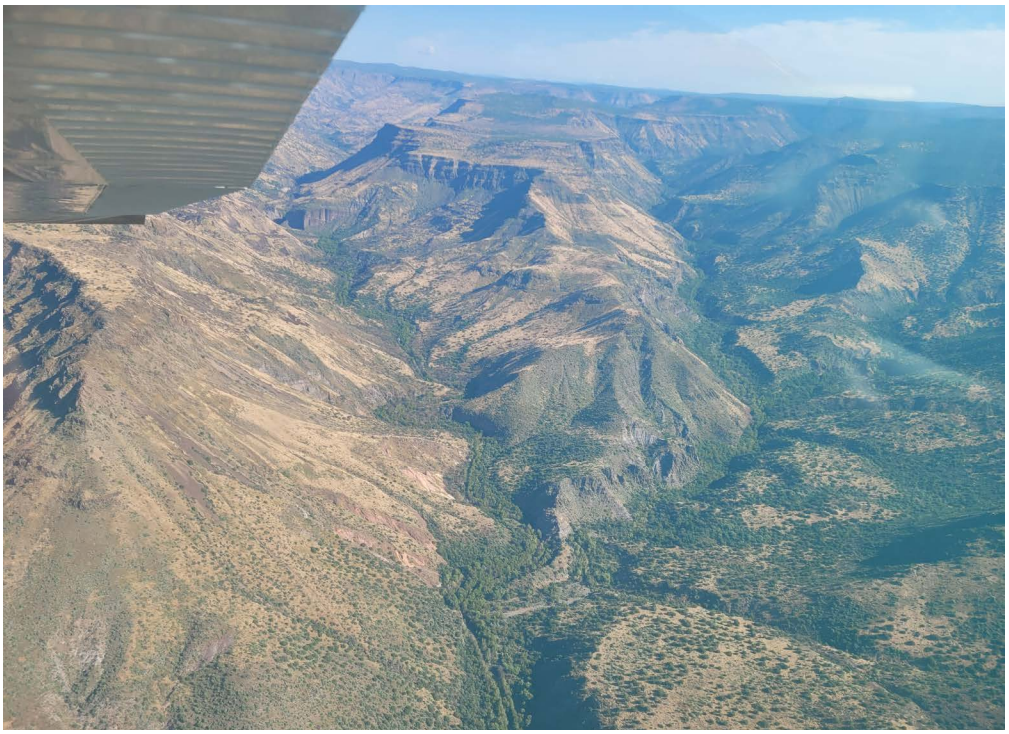
FUNDERS:

- Nina Mason Pulliam Charitable Trust
- Yavapai County
- City of Sedona
- City of Cottonwood
- Town of Camp Verde
- Town of Clarkdale

The Verde Watershed Report Card remains a critical shared tool for tracking progress and guiding decisions that ensure a resilient, vibrant watershed for future generations.

Friends of the VERDE RIVER

The Nature Conservancy



STAKEHOLDERS:

Arizona Department of Environmental Quality

Arizona Department of Water Resources

Arizona State Parks

Arizona Wildlife Foundation

Babbitt Center & Lincoln Institute

Bureau of Reclamation

Center for the Future of Arizona

City of Cottonwood

City of Phoenix

City of Prescott

Coconino National Forest

Fort McDowell Yavapai Nation

Keep Sedona Beautiful

Lincoln Center

Natural Resources Conservation Service

Prescott National Forest

Salt River Project

Sierra Club

Southwest Decision Resources

Spring Stewardship Institute

The Wildlife Society

Tonto National Forest

Town of Camp Verde

Town of Chino Valley

Town of Clarkdale

Town of Prescott Valley

US Bureau of Reclamation

Verde Valley Regional Economic Organization

Yavapai-Apache Nation

Yavapai County

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