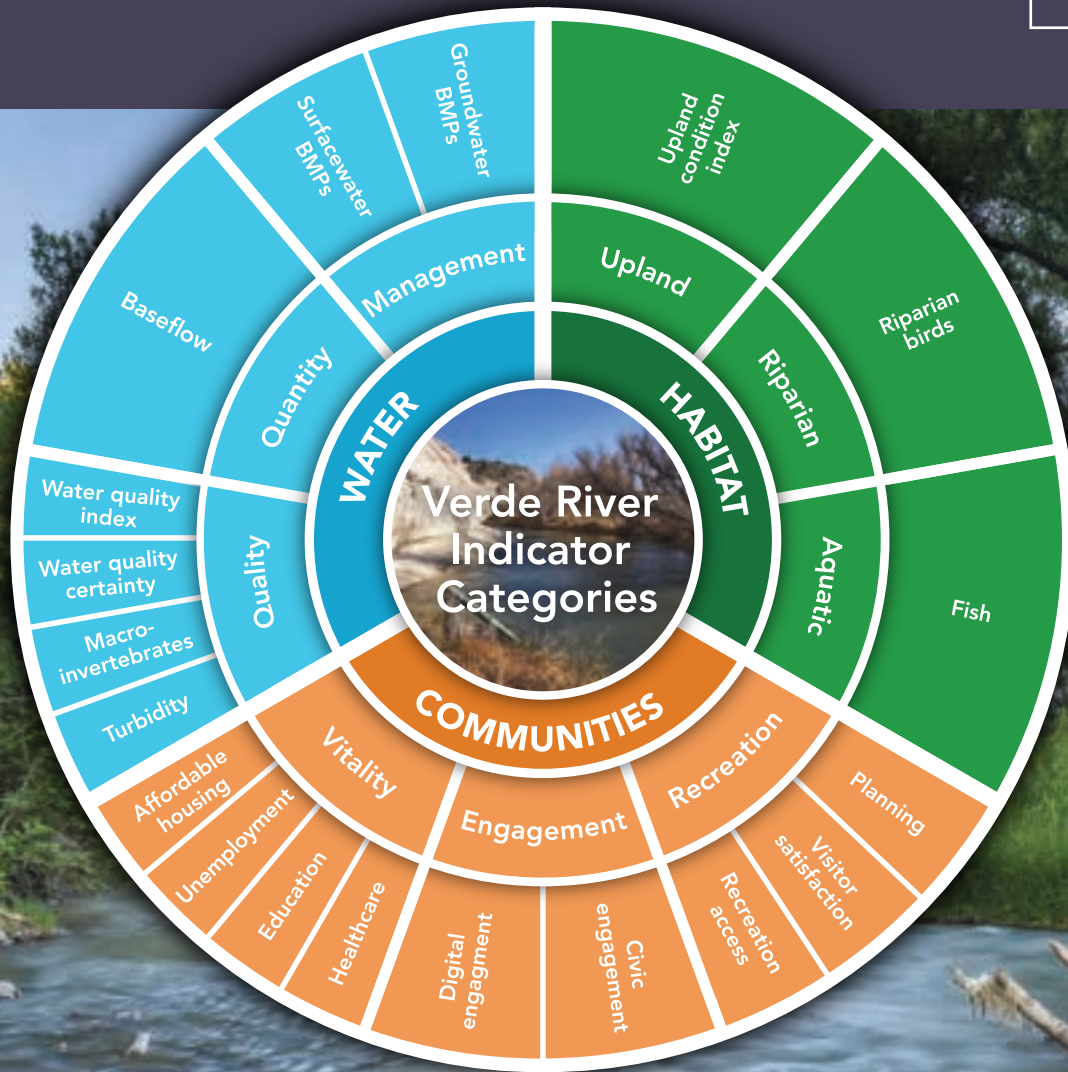


2022 UPDATE

VERDE RIVER WATERSHED

REPORT CARD





The Verde River Needs Your Help

The Verde Watershed Report Card (WRC) brings awareness about the health of the Verde River system across the categories of water, habitat, and community. In 2020, the watershed earned an overall score of C+. For this 2022 limited update, we updated scores for river baseflow, groundwater best management practices, and engagement. We also include stories about some of the actions people are taking to improve watershed conditions and tackle problems facing our communities. Read on to learn more.

GRADE SCALE

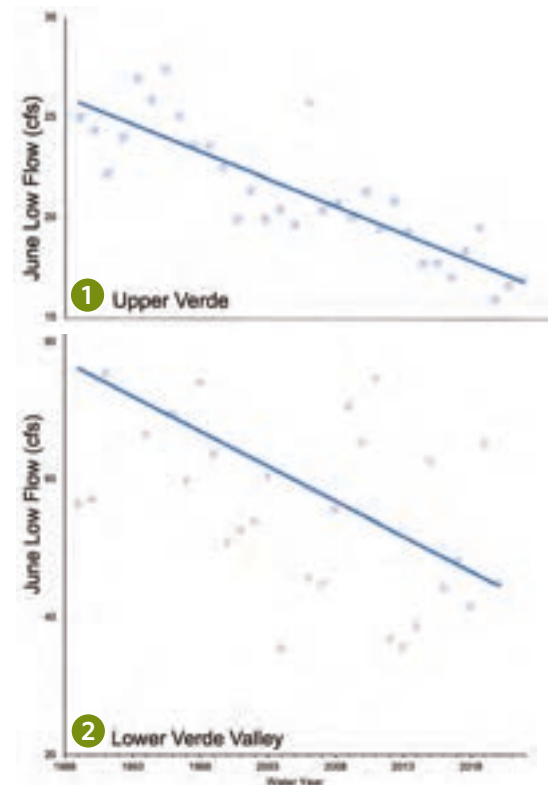
- A** Very good (100-80%)
- B** Good (79-60%)
- C** Moderate (59-40%)
- D** Poor (39-20%)
- F** Very poor (19-0%)
- U** Unscored



River flows continue to decline

Based on long-term records from stream gages installed and monitored by the US Geological Survey, Verde River flows have declined since 1990. River base flow is calculated by analyzing the lowest average seven-day June river flows. From 2019 to 2021, modest declines in flows were observed across the watershed, including at the Paulden stream gage (09503700), while flows at the Camp Verde stream gage (09506000) remained steady.

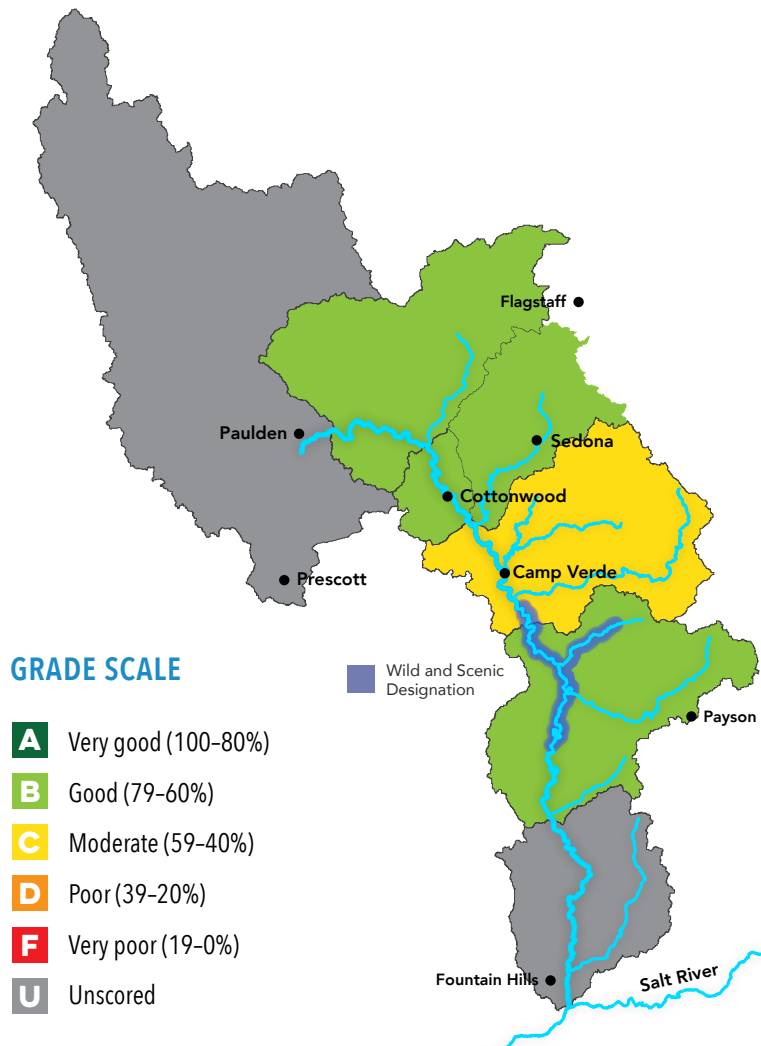
As a result, since the 2020 WRC, scores have worsened for Regions 2 (Upper Verde reach) and 5 (Wild and Scenic reach). The overall pattern indicates less water is flowing in the Verde and its tributary streams each year.



Examining best management practices for groundwater across the Verde River Watershed

Groundwater provides drinking water and sustains the flows of our rivers and streams. Groundwater Best Management Practices, or BMPS, are strategies a local water system operator can use to help preserve the available water. Some examples of Groundwater BMPs include measures to limit lost and unaccounted for water by monitoring and repairing leaks; raise public awareness of water conservation; and provide assistance, resources, and education to residents.

Across the watershed, Community Water Systems could do more to educate and train customers, incentivize efficient water use, and reduce water loss. Regions 1 and 7 (Big and Little Chino and Lower Verde) were not graded in this analysis, because over 90% of their populations live within Active Management Areas where community water operators are not required to report their implementation of BMPs.



GRADE SCALE

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Measuring Engagement

CIVIC ENGAGEMENT

Civic Engagement scores declined in every region except for Regions 6 and 7 (Wild and Scenic and Lower Verde) where they remained the same. We measure civic engagement using data from town and city council meeting minutes, tallying and analyzing how many times Verde River Watershed-specific keywords were mentioned in meetings.



DIGITAL ENGAGEMENT

The Digital Engagement indicator is a measure of awareness and knowledge, as indicated by how often people search online for popular Verde Watershed-related sites. Since the first WRC was issued, scores did not increase or decrease substantially, and the top five search terms (Fossil Creek, Oak Creek, Bartlett Lake, Watson Lake, Montezuma Castle) remained the same. Terms that increased in search frequency include Sheeps Bridge and Phon D Sutton, while terms that decreased include Montezuma Well and Needle Rock. This pattern might be an effect of pandemic lockdowns encouraging solo exploration of public access sites.



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Solutions at Work

Erosion Control at Munds Draw

IMPROVING UPLAND HABITAT

Erosion gullies result when soil is washed downstream, uprooting plants, polluting rivers, and reducing the ability of the ground to hold water. The Munds Draw Gully Stabilization Project controls erosion by installing rock and juniper structures in gullies to slow down water, allowing it to soak in. Sediment (or soil) is also deposited behind the structures, decreasing sediment delivery to the Verde River. Gully stabilization builds up the land's capacity to hold water, promoting regrowth of native vegetation and reducing the risk of downstream flooding. Since 2020, Friends of the Verde River, working with Verde Watershed Restoration Coalition partners, has improved over 600 acres in the Munds Draw system.



A gully in the project area before, during, and after treatment.



© Friends of the Verde River



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Affordable Housing

IMPROVING COMMUNITY SCORES

The WRC identified Affordable Housing as an area of concern. Since the WRC's release, conditions have only worsened across the Verde Valley. According to municipal representatives from Camp Verde and Cottonwood, there is simply not enough housing for the demand. Healthy rivers need healthy communities, which includes affordable housing. Yavapai County and the local municipalities contributed to a regional

assessment and action plan on affordable housing, completed in 2021. The assessment determined that in the next five years, over four thousand units will need to be built to satisfy current and expected demands. Examples of strategies in use include tax incentives for developers to include affordably-priced units in developments, initiatives to provide financial assistance to first-time homebuyers, changes to municipal rules for suitable building parcels, and campaigning for legislation that allows local control over short-term rental units.

Verde Water Watchers

IMPROVING WATER QUALITY AND CERTAINTY

The WRC identified significant gaps and a high level of uncertainty in existing water quality data on the Verde and its tributaries. Spurred by the Report Card's findings, Friends started a community science water quality monitoring program. Volunteers test lower Oak Creek monthly for bacteria, pH, water clarity, and other parameters. Results from sampling are shared with the Arizona Department of Environmental Quality (ADEQ). Resource and land managers then use this information to determine where projects - such as bathrooms, social trail closures, and pet waste stations - are needed. Since 2020, Friends has established the Verde Water Watchers, training over 60 people, including local students. We currently work with ADEQ to monitor 8 sites along lower Oak Creek and plan to add additional sites in the near future.



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ACKNOWLEDGEMENTS

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Friends of the Verde River (Friends) is a 501(c)3 non-profit organization. Friends envisions a healthy, flowing Verde River and tributaries that support our natural environment, vibrant communities, and quality of life for future generations.



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How can we help the Verde River?

You can practice a river-friendly lifestyle!

- Certify your home, business, or development through River Friendly Living to help offset your water use, implement water conservation strategies on your property, learn about innovative ways to keep water in the watershed, and more. VerdeRiver.org/River-Friendly-Living.
- Volunteer with Friends! Visit VerdeRiver.org/Volunteer for more information.
- Every donation helps keep the Verde flowing. VerdeRiver.org/Donate



Reduce your water use to protect the river, lower costs, and use less energy.



Be a part of your community, stay informed, attend meetings, and make your voice heard.



Volunteer and donate with one of the many river-focused organizations.

