

# Protecting the Wet Parts of a Dry Park Wild & Scenic Rivers in Grand Canyon

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For those who directly experience the Grand Canyon, the river and its tributaries come to represent the heart and soul of the place. These waterways are largely responsible for carving the Canyon's magnificent landscape over millions of years, and these riparian corridors have evolved into a textbook example of a keystone habitat in that they support an unusually high percentage of the canyon's biological diversity (Barnes 2005a; Stevens and Perla 2008). With estimates of Arizona's remaining healthy riparian habitat being low (Omart and Anderson 1986), Grand Canyon's waterways represent an extensive and relatively intact system of aridland riparian habitat. We also know that these waters have had a formative influence on the cultures that have explored the canyon, from prehistoric hunter-gatherers to hikers and boaters of the new millennium. A living vestige of our southwest natural and cultural heritage, they are prime candidates for Wild and Scenic River (WSR) designation, which represents the gold standard for river conservation throughout the nation and provides long-term protection for those waterways under its wing.

That the Colorado River and its tributaries in and around the Grand Canyon have yet to be honored with WSR designation comes as a surprise to many – even those actively involved in river conservation. One could easily assume that the spectacular Colorado River and its tributaries in Grand Canyon are the southwestern gems of the National Wild and Scenic River System. In fact, WSR designation has eluded a number of our most notable wildland river systems here in the arid Southwest, including the San Pedro, Agua Fria, Hassayampa, and the Grand Canyon's share of the Colorado River system.

## Riparian areas and ecosystem health

Studies show that more than 90% of Arizona's riparian areas are in poor and/or degrading condition due to a century of overgrazing, urban development, groundwater withdrawals, and more (Omart and Anderson 1986; Zaines et al. 2007). In contrast to this bleak piece of news about the state of Arizona, Grand Canyon's river, streams, seeps, and springs have been largely exempt from these nearly ubiquitous impacts. These waterways and canyons represent the largest intact system of nearly pristine riparian areas left in the American Southwest – a living vestige of our bioregional heritage. The Grand Canyon's riparian areas account for only 0.5% of the park's total landscape, yet they provide critical habitat to more than 35% of the plant and bird species and 80% of wildlife species overall (Stevens et al. 1999; Hubbard 1977).

These corridors and patches not only function as habitat for biodiversity, they are also central regulators of the flow of energy and matter through the region's landscapes and ecosystems. Compared to wetter environs, ecosystem processes in arid landscapes such as those of Grand Canyon are more closely tied to the temporal rhythms and spatial patterns of hydrologic cycles (Sowell 2001). Hydrologic cycles exert an ecological ripple effect on the surrounding landscape that is disproportionate to the scarcity of water. As such, these riparian areas function like a keystone species but at the habitat and ecosystem levels (Barnes 2005a; Stevens and Perla 2008). Grand Canyon's riparian areas provide a compelling case for applying the keystone concept at the habitat and ecosystem levels to help guide park policy. Indeed, in aridland parks such as Grand Canyon, riparian systems play a central role in maintaining the ecological integrity of the overall landscape. Unfortunately, even Grand Canyon's springs, seeps, and streams are now threatened, and WSR designation can help save them.

## Wild and Scenic Rivers

The Wild and Scenic River Act (WSRA) provides the most comprehensive legal protection available for the instream flows of river systems. The WSR designation guarantees that enough water stays in a stream to support the values for which it was designated. The WSRA is potentially as significant to the water resources of parks as the Wilderness Act is to our land resources. Wild and scenic river designation would maintain and enhance long-term protection for the Colorado River in Grand Canyon, including its tributaries, seeps, and springs – some of which are clearly threatened by activities beyond the park's boundaries.

WSR designation in GCNP would mandate protection for the exceptional natural and cultural values of the Colorado River main stem and tributaries, particularly those “outstandingly remarkable

values” identified in the eligibility and suitability steps of the WSR study process. Moreover, identifying in the WSR study process the unique wilderness values that enhance river recreation on the Colorado River through Grand Canyon would establish important legislative and management connections between the park’s (currently proposed) wilderness and its wild and scenic rivers. The WSRA also recognizes preexisting types and levels of river recreation where they do not conflict with the existing goals of river management. However, the WSRA does not freeze the status quo in a river corridor when it is designated. Rather, the WSRA codifies a “nondegradation and enhancement policy” for all designated river areas, regardless of classification. These details are mentioned here to elucidate important differences and similarities between the Colorado River main stem and tributaries in regard to how WSR designation could affect their ecology and management. For example, by identifying ORVs along the tributaries that are directly dependent on existing base flows (e.g., riparian vegetation, wildlife, and fish), the WSR study process could help set a legal stage for protecting future instream flows of the seeps, springs, and tributaries in and around Grand Canyon. Because the act acknowledges existing river management goals, designation would not impose any significant influence on the scheduled flows (essentially Glen Canyon Dam releases) of the Colorado River.

The WSRA’s allowance for preexisting types and levels of river recreation, where they do not conflict with the existing goals of the river’s management, could be interpreted to support the controversial status quo of commercial use on the river (including large motorized trips). Moreover, popular interpretation of the WSRA states that WSRs are managed primarily for the values for which they were designated (IWSRCC, 1999). Additionally, the WSRA codifies a nondegradation and enhancement policy for designated rivers and directs administering agencies to improve conditions in river corridors where necessary.

### **Grand Canyon’s Wild Waters**

Managers and conservationists alike cite the fact that the Colorado River and its tributaries, seeps, and springs are already protected by Grand Canyon National Park (GCNP) status as reasonable cause for not pursuing WSR designation. But increasing pressures on our national parks from beyond their political boundaries are very real, as evidenced by the latest resuscitation of a large-scale tourism project in the town of Tusayan – the infamous Canyon Forest Village proposal from the late 1990s (Barnes 1999). If the water required for this development depends on groundwater (which is likely), it will have to be pumped up from the Redwall-Muav aquifer. This aquifer underlies the town of Tusayan *and* the eastern portion of GCNP. Most important, it feeds some of the tributaries, seeps, and springs of eastern Grand Canyon (Barnes 1999). This is where the importance of WSR designation plays into the stewardship of these resources.

The Grand Canyon’s share of the Colorado River system represents the largest intact system of nearly pristine riparian areas left in the American Southwest – a living vestige of our natural heritage. Activities outside GCNP – especially the pumping of groundwater that feeds tributaries, seeps, and springs inside the park – pose imminent threats to the park’s surface waters and associated riparian areas (Barnes 1999). A Grand Canyon Wild and Scenic River omnibus bill would be good public policy and resource stewardship, adding a critical layer of protection focused specifically on this keystone habitat. Grand Canyon National Park is currently in the process of revising its Backcountry Management Plan (BCMP), which represents the best opportunity for gaining WSR status for the Colorado River and its tributaries (visit [parkplanning.nps.gov/grca](http://parkplanning.nps.gov/grca)).

Unfortunately, in the initial phase of the BCMP public scoping (held in fall 2011), WSRs were identified as an issue beyond the scope of the plan (NPS 2011). This is particularly puzzling in light of the fact that, in early 2000s when the Colorado River Management Plan was being revised, the park took this same “beyond the scope of the plan” position and assured stakeholders that WSRs would be included in future plans or processes, most likely in the next BCMP revision (NPS 2002). If the park passes up this chance to designate WSRs, the future possibility of WSRs in Grand Canyon would be uncertain at best. In light of the fact that the park’s original 1980 wilderness recommendation has yet to be forwarded to Congress, we could find ourselves “waiting for Godot” in regard to both wilderness *and* WSR designation in GCNP (Crumbo 1996).

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