Southwest HYDROLOGY
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Invasive Species

Southwest Hydrology
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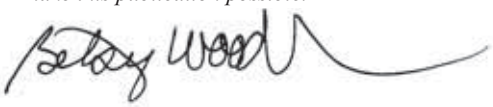
Southwest HYDROLOGY
The Resource for Semi-Arid Hydrology
A bimonthly trade magazine for hydrologists, water managers, and other professionals working with water issues.

From the Publisher

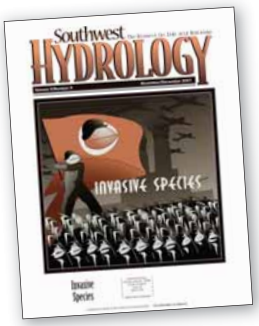
South Americans, Europeans, Southeast Asians, Eurasians, and Ukranians. Immigration is an issue for more than just the human population. Non-native species—plants and invertebrates—are changing many ecosystems in the Southwest. Some were intentionally imported, initially welcomed for providing benefits such as soil stabilization or control of another invader, while others hitched a ride on the bottom of a ship. In their new environments, away from natural predators, many non-native species have proliferated, becoming invasive and crowding out native populations or otherwise upsetting the ecological balance of their adoptive homes. Invasive species also impact water resources and water quality, and that is the focus of this issue's feature articles.

We received many comments both praising and criticizing our last issue, on the water-energy nexus. That was a tough issue to produce due to the myriad of perspectives, obscure and incompatible units, and the mind-boggling intersection of gallons/KWh and KWh/gallon required just to get a drink of water or turn on a light. One reader was critical of including lakes Powell and Mead evaporation in hydroelectric costs, while another thanked us for pointing out what a huge number it is. True enough, the lakes have many uses, and also true is that some costs are often overlooked in our interdependent infrastructure. Many would consider it disingenuous to imply hydroelectricity comes without water costs, but how to calculate those costs?—there's the rub. For these reasons we require authors to be specific about how their determinations are made and the assumptions that go into them. We welcome the discussion and diverse viewpoints; please send us yours.

Thanks to the contributors to this issue, and as always, to our advertisers who continue to make this publication possible.



Betsy Woodhouse, Publisher



The quaggas are coming...and Arundo and more! Can they be stopped? Check out this issue's feature articles. Cover illustration by Mike Buffington.

Southwest Hydrology

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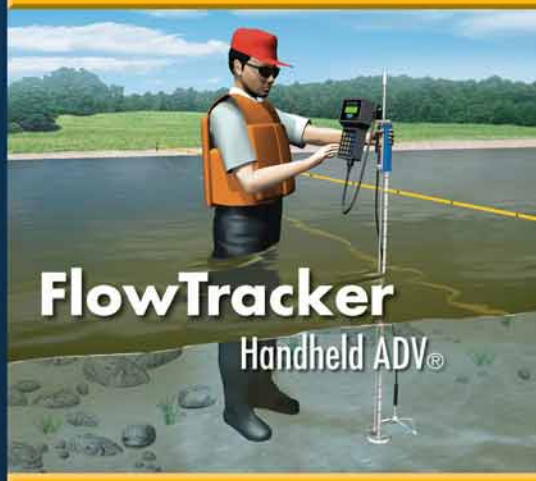

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Invasive Species

Invasive species invade: therein lies the problem. Floating and submerged plants such as hydrilla, water lettuce, water hyacinth, and giant salvinia form dense mats that literally cover waterways, shutting out light and restricting flow. Giant reed obstructs flood flows, crowds channels, consumes three times the water of native vegetation, and spreads fire. Saltcedar thrives at the expense of native cottonwood and willow in the Southwest, particularly in the many riparian environments that have been affected by human activity. The newest arrival to the area, the quagga mussel, hasn't taken over yet, but wildlife managers and water providers need only look at the problems this mollusk has caused in the Great Lakes region to know what may await them. With all of these invaders, we're not likely to be able to get rid of them. The best we can hope for is to manage our ecosystems to keep the populations of newcomers in line with other species.

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