

## **Controlling giant reed (*Arundo donax*) within the Tijuana River Valley.**

*Robert W. Hobbs<sup>1\*</sup>, Julie Simonsen-Marchant<sup>1</sup>, Tito Marchant<sup>1</sup>, and John Boland<sup>2</sup>, <sup>1</sup>EcoSystems Restoration Associates, San Diego, CA, <sup>2</sup>Southwest Wetlands Interpretative Association, Imperial Beach, CA. ([robert.hobbs@tcb.aecom.com](mailto:robert.hobbs@tcb.aecom.com) or 619-291-1475 ext 240).*

EcoSystems Restoration Associates (ERA), in cooperation with Southwest Wetlands Interpretive Association (SWIA), has been conducting chemical and physical control of giant reed (*arundo donax*) as well as habitat restoration throughout the Tijuana River Valley Regional Complex for the last three years. In the Tijuana River Valley, giant reed occurs in a patchy distribution in comparison to the large, dense stands that are more typical in San Diego County. Since the habitat surrounding infestation areas was primarily composed of riparian woodland, riparian scrub, and open water, project specifications required that ERA avoid substantial impacts to sensitive biological resources such as the federally listed least Bell's vireo, while cost-effectively controlling this highly invasive species. The control techniques utilized included foliar treatment on intact and trampled stands of giant reed, as well as cut-stump treatment. The foliar herbicide treatments included the application of 4%, 6%, and 7.5% glyphosate over a three-year period. The most effective means of control was achieved thorough foliar application of 7.5% glyphosate, which resulted in complete eradication within four weeks. The 4% and 6% glyphosate application rates resulted in approximately 60-80% suppression of the stands. The cut-stump treatment was overall unsuccessful with nearly 100% re-growth, although these results varied by year. From a cost perspective, using a 7.5% treatment was equivalent to using the cut-stump method. The results ran contrary to original beliefs, but confirmation from the third year of experimentation showed that the cost benefit and effective means were maintained by the using 7.5% application rates.