



# THE BALK BUZZ

THE OFFICIAL NEWSLETTER OF BALK BIOLOGICAL, a DBE, WBE, SLBE/ELBE, and SB/MB company

## This Just In...

- Balk Biological has begun to support our client, Riverside County Transportation Commission, with biological construction compliance monitoring services in the City of Lake Elsinore.
- Michelle is looking for mentors and proteges for the Women in Transportation (WTS) 2022 Small Business Mentoring Program. Please contact Michelle Balk at [mbalk@balkbiological.com](mailto:mbalk@balkbiological.com) if interested in participating as either a mentor or a protege/mentee.



- Jennifer's pumpkin is ripe for the picking just in time for pumpkin spice season!


## Balk's Outline to Outlining the Waters of the U.S.

In addition to harvest time, crisp leaves, cooler temperatures, and pumpkin spice everything, fall is the time we think about wetlands. Wait, you don't think about wetlands more in the fall? We as biologists do since this is the time for annual monitoring of wetland revegetation sites, since generally the main players (willows) have done all their growing for the season but have not yet lost their leaves. But what officially makes a "wetland" anyway? Forge on, dear reader.

A recent field day in Lake Elsinore, CA was full of sweat; luckily no blood or tears. The humidity was heavy, and the temperature peaked at about 95 degrees Fahrenheit. We caravanned to our destination and parked on the side of the



but occur almost always under natural conditions in non-wetlands in the region specified. The ratio of wetland plants to non-wetland plants present determines if the data station is in a wetland. The plants



road, adjacent to a bridge overpass with the San Jacinto River below. Our mission for the day was to collect information about the soils, plants, and water to determine where wetlands begin and end. This process is called a wetland delineation and is performed in accordance with the United States Army Corps of Engineers (USACE) to acquire a section 404 permit. USACE section 404 permits are issued to track environmental impacts to wetlands, offset impacts through compensatory mitigation, and achieve “no net loss of wetlands.” Our equipment for the day included safety vests, notebooks, pencils, data sheets, a shovel, cell phone camera, the Munsell soil color book, and the Pocket Guide to Hydric Soil Field Indicators. We came prepared and got to work right after we found a restroom at a nearby diner.

First things first: field conditions. Field conditions are taken at the start and end of a field survey and include date, biologists, temperature, cloud cover, wind speed, and any helpful notes regarding recent rain events or drought. The field conditions are typically recorded in a field notebook or in a dedicated notes section of my cell phone (such a millennial, I know). Data is recorded on a Wetland Determination Data Form that is specific to wetland delineations performed the arid west region of the United States. This form requests details regarding wetland indicators including vegetation (plants), soil (dirt), and hydrology (water). Several of these forms are filled out during at wetland delineation and are later referenced in the wetland delineation report.


In my opinion, there are never enough photos! Plus, it’s not like we are taking a roll of film to the drugstore to get developed. I started taking photos right away: from the top of the bridge, under the bridge, facing upstream, facing downstream, facing north, facing south, a photo of data collection, and of course a few photos for the ‘gram. All angles were captured with about 155 photos to upload to our shared drive.

Next, we began to put together our plan of

at data station 1 passed the test, and we checked the box on the data form for hydrophytic (or water loving) vegetation present. However, we found the plants at data station 2 did not pass the test!

Next on our list of discovery: soil. This is where the shovel was needed, and not just any shovel. Sometimes referred to as a sharpshooter, this spade has 18” of blade. We dug our pit at the first data station and hit a layer of cobble at 16” deep. I grabbed a handful of soil and wetted it with water to perform the ribbon test; can a thin ribbon be formed by pushing together the the damp soil between your thumb and forefinger? A soil ribbon is shown in the photo above. From a series of additional tests detailed in the Pocket Guide to Hydric Soil Field Indicators, it was determined the soil was loamy sand. Then we busted out the Munsell soil color book to assign a color to the wet soil. Shade check! Rule of thumb is to do the soil color tests with wet soil, no sunglasses, and the sun angled over your right shoulder. I skipped the colors back and forth over the squishy soil sample I held in my hand. Finally, we decided 10 YR 3/1 was the best color match to the soil at data station 1 and a photo of this is shown below. We worked our way through the data sheet and made further observations about the soil. We made notes regarding the mapped soil type (Honcut Cobbly Sandy Loam, 2-25% Slopes) and the Natural Resources Conservation Service (NRCS) soil classification of hydric. We found the soil at data station number one met the criteria for hydric soils and checked our box on the data form.

This leads into the third and final section of the data form, hydrology. This step requires detailed observations. If enough specific hydric criteria are met, it can be said that wetland hydrology is present at the data station. For example, we observed cracks on the surface of the soil. These cracks are due to pooling water that quickly evaporated. We also observed a clam shell which indicates enough water is present throughout the year to sustain aquatic life. Surface cracks and aquatic



attack. We made general site observations: a main channel containing an island, a secondary braid, concave landform, locations of the bed and bank of the river, etc. From these observations we decided we would need to collect data at about eight or nine locations, also known as data stations. The idea is to pick data stations that prove where the wetland begins and where non-wetlands end. This can be done by picking paired locations; one above the ordinary high-water mark and one below. We chose our first data station to be on the south side of the river, just below the ordinary high-water mark. The second data station was also on the south side of the river, just above the ordinary high-water mark.

The first step in data collection at a data station is to record the plant species. Correct species identification is important because each plant species has been classified into one of five indicator categories: Obligate (OBL): Occur almost always under natural conditions in wetlands; Facultative Wetland (FACW): Usually occur in wetlands but occasionally found in non-wetlands; Facultative (FAC): Equally likely to occur in wetlands and non-wetlands; Facultative Upland (FACU): Usually occur in non-wetlands but occasionally found in wetlands; Upland (UPL): Occur in wetlands in another region,

invertebrates are primary indicators of wetland hydrology; therefore, we were able to check the box for “wetland hydrology present” on our data form.

Let’s recap our findings at data station 1; vegetation, soils, and hydrology all passed the wetland test. With these three parameters all affirming a wetland, it is safe to say wetlands exist at data station one. This process was repeated at eight additional data stations and a wetland polygon was mapped. The findings of the wetland delineation are then summarized in a report that is used to write the biological technical report, apply for permits to impact the areas if needed, and, sometimes, integrated into the construction plans. Wetland delineation reports are rooted in the scientific method and serve as the main tool to inform projects and ultimately to achieve “no net loss of wetlands.”



## HELLO FROM SOME OF OUR TEAM



It was a hot and humid day delineating wetlands in the San Jacinto River, but someone

had to do it. Shelley (left) and Michelle (center) flashed their pearly whites, while Brian (right) was lost in deep regret of joining these two cheese balls in the field!

## RECENT BLOG POSTS:



### Queen of the Night

My love for plants started at a young age with orchids. Growing up, I would spend a lot of time with my great aunt Frieda who grew all kinds of orchids.

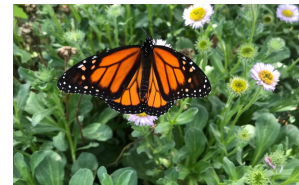
Read more  
[www.balkbiological.com](http://www.balkbiological.com)



### New Species Discovered in Carlsbad

In case you missed it: Botanists Jessie Vinje (Conservation Biology Institute) and Margie Mulligan (San Diego Natural History Museum Botany Department Associate)...

Read more  
[www.balkbiological.com](http://www.balkbiological.com)



### Mad About Monarchs

I've recently planted milkweed in my yard in hopes of attracting one of the largest and most beautiful butterflies in North America to feed and lay eggs in my garden - the monarch butterfly.

Read more  
[www.balkbiological.com](http://www.balkbiological.com)

## MICHELLE'S RARE PLANT CORNER

One of my favorite jogging or walking trails is on the north side of the Batiquitos Lagoon, in Carlsbad. I have logged countless miles on this trail over the years. So it is with embarrassment that I admit that it took me several years to notice the very rare Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*) growing along the trail near the visitor's center. I'd like to blame it on the fact that this shrub is relatively non-descript and nestled within a stand

### Upcoming Holidays

**October 1** International Coffee Day

**October 21** National Reptile Awareness Day

**November 10** National Forget-Me-Not Day

**November 23** National Cashew Day

of coastal goldenbush (*Isocoma menziesii*), which is often blooming while Palmer's goldenbush is, and not a general lack of observational skills.

Palmer's goldenbush is a medium-sized (up to approximately two meters tall) shrub in the Asteraceae (Sunflower family). It is a California Rare Plant Rank 1B.1 plant (rare, threatened, or endangered in California and elsewhere; seriously threatened in California [over 80% of occurrences threatened / high degree and immediacy of threat]). It generally blooms between September and November and can be found in mesic (moderately moist) chaparral and coastal scrub from 100 to 1,970 feet in elevation. It has small yellow flower heads and thread-like leaves. The plant is known only from San Diego County and Baja California, Mexico, generally in coastal and foothill locations.



Palmer's goldenbush at the Batiquitos Lagoon Trail in Carlsbad, CA in full bloom on September 28, 2021. The lagoon and I-5 are visible in the background.

## Where to Find Us

**October 7th:** Association for Environmental Professionals (AEP) annual awards (virtual)

**October 28th:** Women in Transportation (WTS) awards dinner/cocktail party



Close-up of flowering Palmer's goldenbush branch, showing structure of inflorescence and thread-like leaves. (Hand shown for scale).



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