



Big T Wash Line

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About the Big Tujunga Wash Mitigation Area

“Big T” is a parcel of land located in the City of Los Angeles Sunland area (see Page 5).

The Big Tujunga Wash Mitigation Area (Big T) covers an area of approximately 210 acres of sensitive habitat, encompassing the Big Tujunga Wash and Haines Canyon Creek. The site was purchased by Los Angeles County Public Works in 1998 as compensation for habitat loss for other Public Works projects.

LA County’s implementation of the Master Mitigation Plan for Big T has been underway since April 2000. Big T protects one of the most rapidly diminishing habitat types found in Southern California: willow riparian woodland. The site is home to several protected species

of fish, including the Santa Ana sucker, Santa Ana speckled dace, and arroyo chub. It also contains habitat for sensitive bird species such as the least Bell’s vireo and southwestern willow flycatcher.

This newsletter provides updates to ongoing programs and explains upcoming enhancement measures that will be implemented on the site. Newsletters are published on a semi-annual basis.

For more information, visit:
pw.lacounty.gov/wrd/projects/BTWMA



Flies and Bees

Spring and pollen are in the air. Plants of all shapes and sizes are starting to bloom at Big T.

In just over two years since the Creek Fire burned through the Mitigation Area and surrounding communities, understory vegetation is recovering along Haines Canyon Creek, and many native riparian trees that had been burned are resprouting. These early stages of secondary succession after a fire can be a boon for annual plants. With the reduction in the tree cover comes an increase in light availability, allowing smaller plants to grow vigorously. This improvement in growth conditions favors annual plant species whose seeds require fire to germinate. The increase in light favors both the native and non-native plants along Haines Canyon Creek. Restoration efforts are essential during the earliest stages of succession to limit the spread of exotic plants while competition from native plants is minimal. Pollinators such as bees and flies are rebuilding their populations as well. These insects immigrate from surrounding unburnt areas, attracted by bountiful floral resources.

Different bee and fly species have varied success pollinating the multitude of plants. There are a few features to look out for when identifying different pollinators. Bees have longer antennae and two pairs of wings, though the two pairs of wings are difficult to distinguish as they are attached together with small hooks. Hoverflies in the Syrphidae family can have the similar yellow and black stripes on their abdomen conventionally associated with honey bees. However, flies have much shorter antennae than bees and only one pair of wings. The hoverfly's namesake comes from its tendency to hover and observe its surroundings, unlike the constant meandering path of bees. Bumblebees in the genus *Bombus* are commonly seen earlier in the year during colder weather. They can be observed

buzzing within flowers to dislodge pollen from the flower's anthers. Smaller bees can also make excellent pollinators. Bees in the genus *Andrena* often lack the yellow markings commonly associated with bees, but are quite recognizable once you spot the yellow pollen balls attached to the hairs of their corbiculae (pollen baskets) on their hind legs. These bees will build nests underground, opting to dig into areas of bare soils. One of the most common native bees to encounter later in the spring are those commonly referred to as sweat bees, belonging to the family Halictidae. These bees are attracted to perspiration, and may approach people to sip on human sweat. The metallic green bees of the genus *Agapostemon* are one such example. Although these bees are capable of stinging or biting, the chance of either is unlikely.



Willow catkins are the primary attractant for bees and other pollinators early in the year. Catkins are flower clusters that have an elongated shape similar to a banana, but have a soft, velvety texture due to the dense clusters of hairs and filaments. Willow catkins provide a plethora of pollen to a variety of insects when few other plants have started flowering. Deerweed is a small shrub that can tolerate the drier upland conditions further from Haines Canyon Creek. Deerweed features leaves that are separated into three leaflets, a trait common to the pea family. It is recognizable due to its mix of orange and yellow flowers that start to bloom in mid-February. Its flowers are popular with bumblebees who are capable of navigating past the fused, lower petals that form the keel to access the pollen and nectar within. Intermixed in the upland areas alongside the deerweed is thick-leaved yerba santa. This plant is distinguishable due to the long, dense, gray hairs on its leaves that catch the light, providing a soft glow to its edges. The leaves smell vaguely of strawberries, and its purple tubular flowers provide food to all forms of insects. Some insects will cheat the flower's phonological timing (in plants, the timing of the biological events such as flowering and leafing) by chewing through the bottoms of the petals before the flower has opened to get the first taste of the pollen within.

If you are interested in learning more about the plants and their pollinators around Big T or in your own backyard, visit the website iNaturalist ([inaturalist.org](https://www.inaturalist.org)). iNaturalist is a citizen-science website (and application) in which anyone with a free account may submit observations and identify organisms. It functions as one of the largest publicly available databases of plant and animal populations.

Exotic Plants

Last year was significant for weed removal at Big T. Several exotic plant species which harm the environmental function and resilience of the property were targeted for removal. Following last year's wet winter, many of these exotic weeds were very abundant.

Mustard

Mustard was one of the target weeds last year. Large areas of the site were filled with mustard plants that had grown following last year's wet winter (below photos). These yellow-flowered plants look lovely when they are blooming, but very quickly dry out and turn into a lattice of dead twigs and seed pods. Every mustard flower has the potential to produce over a dozen seeds, and each mustard plant can grow dozens



BEFORE

The area beneath the Equestrian Center at Big T is an example of how mustard forms fields of dry vegetation that connect living vegetation. Fire can easily spread between shrubs and trees.



AFTER

After mustard is removed, there is no longer a bridge between living shrubs and trees.



Mustard plants were hauled off-site after removal.

of flowers. Because mustard plants produce many seeds, they can quickly and easily take over an area.

One of the goals when removing mustard was to collect as many mature seeds as possible before they could enter the "seed bank", a term referring to the accumulation of seeds that build up in the soil year after year. If environmental conditions do not support the seeds' sprouting (for example, if there is not enough rain or if it is too cold), those seeds remain in the soil until favorable weather encourages them to grow. This year's relatively dry winter did not encourage much mustard growth so far, but mustard seeds can survive in the soil for many years before sprouting. So, the lack of mustard this year does not mean that Big T will not be covered with mustard again in the future.

With sustained weeding efforts, weeds are removed every year before they produce seeds, so the total number of weed seeds left in the seed bank will decrease. Eventually, the areas that were once filled with weeds will no longer need as much effort to maintain. This is the overall goal of habitat restoration: to restore an area back to a native plant community that can survive on its own.

Another goal during mustard removal is to reduce the amount of potential fire fuel on the property. After mustard matures, the plants dry out leaving behind a thicket of dry twigs. These dry mustard plants form fields that connect shrubs and trees that would otherwise not likely be exposed to low-burning flames (left photos). The dry twigs act as tinder which allows fires to start and spread quickly and stoke flames that would not normally burn hot enough to set fire to living shrubs and trees.

The restoration crew cut down and collected as much of the dead vegetation and mature seeds as possible (top right photo). The vegetation and seeds were collected in garbage bags and removed from the property. Community members who noticed the large pile of garbage bags along Cottonwood Avenue last year will have an idea of how much dry fuel was collected!

Continued on next page...



Crew members used shovels to remove umbrella plant from the Tujunga Ponds.

Umbrella Plant

Another exotic weed removal target last year was the umbrella plant that grew thickly along Haines Canyon Creek and the Tujunga Ponds (top left photo). Umbrella plant forms thick patches of reeds along creeks and bodies of water and can easily crowd out native plants. As umbrella plant grows, its root system expands outward, so just a few individuals can take over an entire creek bank.

The umbrella plant is also harmful to the natural areas at Big T because its extensive roots solidify the creek banks and do not allow the sediment to shift. The creeks and arroyos at Big T naturally change their flow and location following big flood events, providing water to larger areas from year to year. The cottonwood and willow trees within Big T require a lot of water to grow to the large sizes that provide shade for riders/hikers and habitat for various wildlife species. When the creek is allowed to shift its course, larger areas are provided with enough water to help these species grow.

While working along Haines Canyon Creek the restoration crew discovered large areas of creek that had been entirely dominated by umbrella plant, to the point where no other plant species could grow. In order to remove the umbrella plant, the restoration crew had to use shovels to dig out this extensive network of roots. Areas of creek that once grew thick with umbrella plant are now open for willow and cottonwood seedlings to grow (top right photos).

Eupatory

An exotic weed called eupatory was also removed along Haines Canyon Creek. This weed forms long vines that climb over other vegetation and competes with native plants for light and water (bottom right photo). Eupatory is a particularly invasive weed because its roots secrete a chemical that stops the seeds of other plants from sprouting. By outcompeting native plants for resources, and stopping new individuals from sprouting, eupatory can easily take over the edges of creeks.



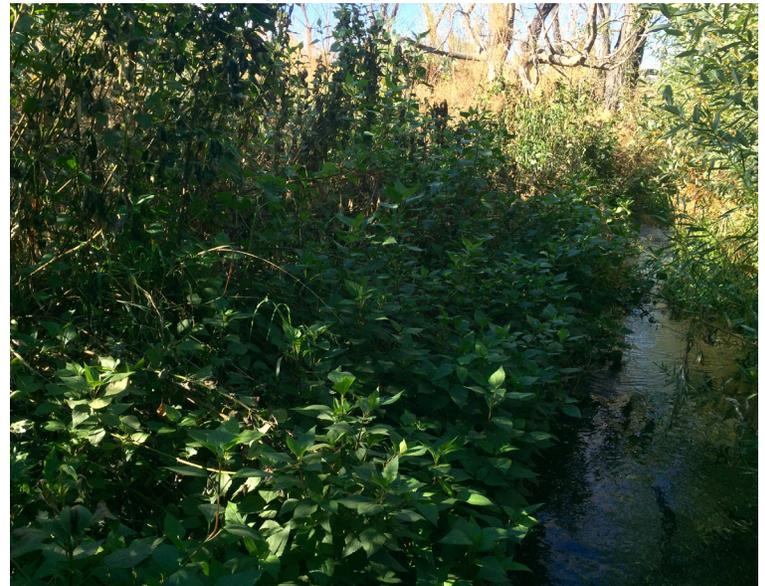
Last year's weeding efforts were a big success! The restoration crew cleared large areas of the Mitigation Area that were previously overrun with weeds, providing native plants and trees the space and water they need to thrive. As a result, Big T is now more resilient to potential fires and environmental degradation caused by invasive weeds.



Umbrella plant grew thickly along many sections of Haines Canyon Creek.



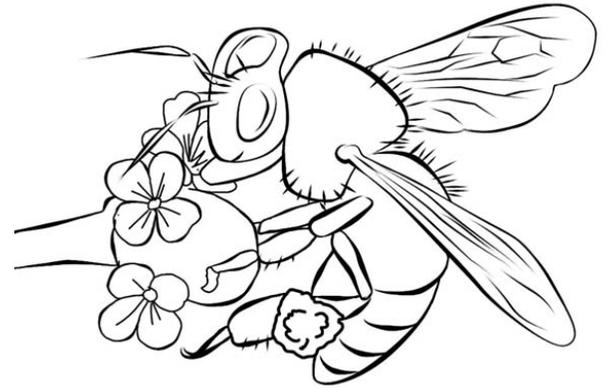
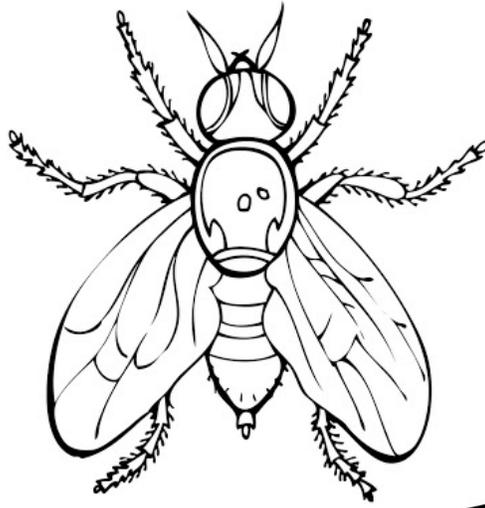
Biologists removing Umbrella plant from Haines Canyon Creek



Eupatory grows as a vine and was found overgrown along sections of Haines Canyon Creek.

KID'S CORNER

Color the pollinators!



Can you tell which one is the fly?

EMERGENCIES? INCIDENTS? QUESTIONS?

CALL 911 TO REPORT ANY EMERGENCY SUCH AS FIRE OR ACCIDENT

- To report minor incidents or regulation infractions contact Los Angeles County Sheriff's Department, Parks Bureau Trails Team at (323) 845-0070. (Please DO NOT use 911.)

- Do not attempt to enforce regulations yourself; please allow law enforcement to handle the situation or incident.

- For emergency follow up or to report minor incidents, obtain information, or get questions answered (8 a.m. to 5 p.m., Monday through Thursday), please contact:

Los Angeles County Public Works

900 S. Fremont Ave
Alhambra, CA 91803
Email: BTWMA@pw.lacounty.gov
Phone: (626) 458-6158

Where is the Big Tujunga Wash Mitigation Area?

Downstream of Big Tujunga Canyon, right in Lake View Terrace and south of the 210 freeway, there is a native riparian (water loving plant) natural area filled with cottonwoods, willows, and pools of water that support many native aquatic species.

Check out the Big T website for more information at:

- pw.lacounty.gov/wrd/projects/BTWMA

