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 6).

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.

Public Works' 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.

The purpose of this newsletter is to provide updates to ongoing programs and to explain upcoming enhancement measures that will be implemented on the site. Newsletters are published on a semi-annual basis in the spring and fall.

More information can be found at:
pw.lacounty.gov/wrd/projects/BTWMA

High flows on December 6, 2018 flooded Big T east of the Cottonwood Avenue bluff.

Hydrology and Its Importance at Big T

Hydrology is defined as the study of water. Where it comes from, how it moves, and the different forms water can take on the landscape are all important aspects in its relationship with our environment.

Why is hydrology and its relationship with Big T so important? To start, some of the water that flows through the Big Tujunga Wash is captured and used to perform ground water recharge by both LA City and LA County. During high flows, water from the wash can be diverted to spreading grounds such as the Hansen and Tujunga spreading grounds. Spreading grounds are water conservation facilities built over permeable soils that serve to retain surface water long enough for the water to percolate into and recharge underground aquifers. The groundwater is later extracted from aquifers by the City of Los Angeles Department of Water and Power, treated, and delivered for potable use to the City's residents.

The water that comes from rainfall and snowmelt in the San Gabriel mountains gets collected in the Big Tujunga Reservoir. The Big Tujunga Dam holds back almost 2 billion gallons of water and protects thousands of residents living downstream of its floodplain. The controlled water that comes out of the dam flows through the San Gabriel Mountains, via the Big Tujunga Creek, and eventually into the Big Tujunga Wash. During the rainy season, large storms can cause the wash to flood, bringing high volumes of water, debris, and anything else in its path down the wash and eventually to Hansen Dam. In comparison to the Big Tujunga Dam, Hansen Dam can hold back up to 24 billion gallons of water. The Hansen Dam Flood Control Basin is also known as Hansen Dam Park Lake. This area provides the public with recreational uses such as boating, kayaking, fishing, and swimming.

The Big Tujunga Wash is a 13-mile section of Big Tujunga Creek that starts below the Big Tujunga Dam and leads directly to the Hansen Flood Control Basin formed by the Hansen Dam. The Big Tujunga Wash is a primarily ephemeral creek located in the Big Tujunga Creek Watershed (Hydrologic Unit Code (HUC)-10, 1807010501). This section of the creek turns into an "ephemeral wash" because it is normally dry for most of the year. Surface water flows in the wash immediately following a rain event; however, releases from the Big Tujunga Dam create longer lasting flows throughout the year. The substrate in the wash is made up of a mixture of sand, gravel, and large rocks which supports resilient native plant communities such as mule fat thickets and scale broom scrub, a state and globally sensitive community, that dominate the wash.

Not only is the environment dry and extremely hot in the summer but it can also reach freezing temperatures during winter nights. Plants in this area must be adapted to handle such harsh conditions. Vegetation like scale broom scrub, mule fat, and other mixed broadleaf riparian woodland plants are drought tolerant and can survive with small amounts of water throughout the year. The plants must also be able to quickly establish themselves within the substrate to withstand severe flooding (scour and fill) during the rainy season. The plants that make up these communities are uniquely adapted to germinate and survive

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The trail north of the Tujunga Ponds flooded after heavy rains on December 6, 2018.

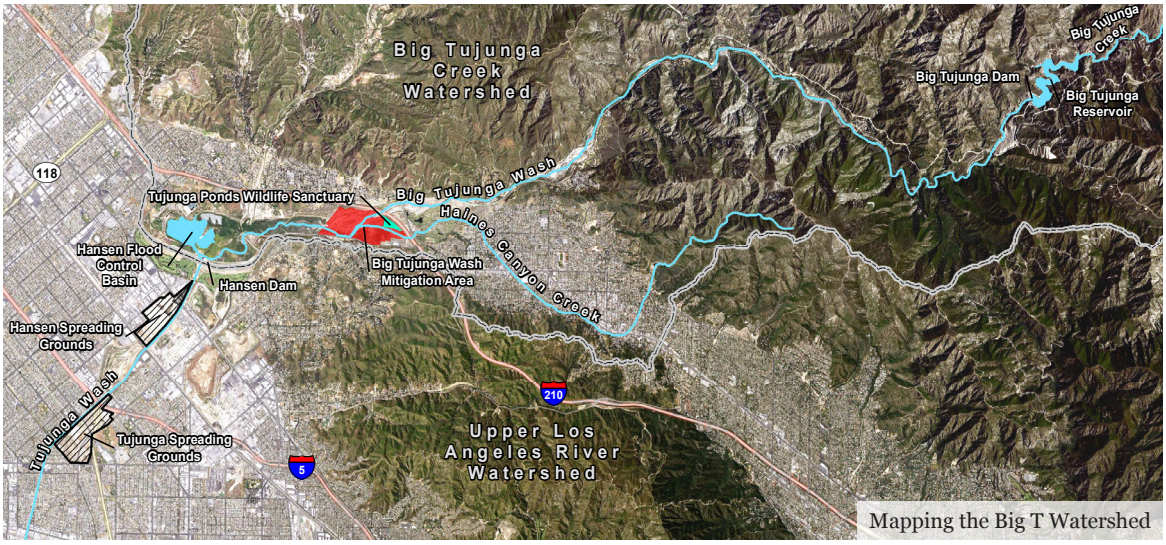
in Big T, and provide valuable food, shelter, and nesting habitat for Big T's wildlife species.

Big T also contains two ponds, the Tujunga Ponds, that cover almost a full acre. The Tujunga Ponds are part of the Tujunga Ponds Wildlife Sanctuary, a 13-acre mitigation site managed by the Los Angeles County Department of Parks and Recreation since 1978. The ponds were originally borrow-pits (an excavation area for the removal of gravel, clay, and sand for construction projects) and were created as part of the mitigation for a similar area that was impacted during the construction of the 210 Freeway. The ponds are approximately 10 feet deep and support aquatic and wetland vegetation like cattails, muskgrass, and different types of algae. Water is constantly seeping up from underground. The water flows from the ponds down Haines Canyon Creek where it eventually meets up with the Big Tujunga Wash. It is very important to protect the ponds and the creek because they hold surface water throughout the year, allowing native plant and wildlife species to flourish, contributing to a healthy Big T ecosystem.

A normally dry portion of Haines Canyon Creek delivered high flows to Big T on December 6, 2018, flooding the east side of the site.

The Big Tujunga Wash and Haines Canyon Creek are home to sensitive fish species like the federally threatened Santa Ana sucker, and the Santa Ana speckled dace and arroyo Chub which are both California Species of Special Concern. Santa Ana sucker are only found in three watersheds in California! The Big Tujunga Wash is designated by the US Fish and Wildlife Service as critical habitat for Santa Ana sucker from the Big Tujunga Dam to Hansen Dam. Sensitive birds like the federally and state endangered least Bell's vireo and special status plants like Davidson's bushmallow can be found around the ponds, creek, and wash. Wildlife species including the loggerhead shrike, Cooper's hawk, willow flycatcher, yellow-breasted chat, yellow warbler, least Bell's vireo, olive-sided flycatcher, and coastal whiptail are all special status species that have been recently observed at Big T. Hydrology plays a big role in supporting this area's habitat so that these special status species can continue to thrive and be present in the future.

One of the main focuses of restoration at Big T is to protect and enhance the site's hydrology in support of native species that live in and around the area. Restoration crews are helping to restore the Tujunga Ponds and Haines Canyon Creek by removing non-native wildlife species such as largemouth bass, carp, bluegill, sunfish, and red swamp crayfish that negatively affect Big T's threatened and sensitive fishes. These non-native species are predators to native species and compete with native species for resources. Crews are also removing exotic plants and weeds like non-native umbrella plant, giant reed, castor bean, and mustards. Some of these plants take up space in and on the banks of the creek and compete with native plants for food, nutrients, space, and light. Clearing out these invasive plants allows the creek to flow freely without any blockages and allows native fish to swim freely up and down the creek. Restoration crews are also helping remove trash, debris, and man-made dams in the creek and the wash. The public can help restoration crews by following the site rules that are posted around Big T. Some rules include no fishing, swimming, wading, or damming of the creek. Always staying on the trails and following the site rules helps the restoration crews and helps protect Big T's ecosystem and hydrology.



Mapping the Big T Watershed

A battle over air quality

With Big T being next to the 210 freeway and surrounded by busy cities, the area may no longer strike people as a place once famous for its clean air. However, during the 1950's to 1970's, the Sunland-Tujunga area was known as a clean-air haven for those suffering from asthma and other respiratory ailments.

Big T has become a second home to many residents and visitors who use the trails for hiking, walking, and equestrian activities. In 1957, the Coronet magazine recognized the Sunland-Tujunga area as one of the healthiest places to live. However, that recognition was in jeopardy due to gravel mining operations, and a battle between community members and a local mining company ensued. To better understand this controversy, we must rewind many decades and look at the history of the area we know today as Big T.

During the 1940s and 50s, the rock and gravel business was booming and was an essential part of the local economy. Gravel pits and mines were being established throughout the Los Angeles area in pursuit of valuable deposits of rock, sand, and gravel. One company in particular, The Rock Company, had been operating for over 20 years in the Sunland-Tujunga area, more specifically, in the Big Tujunga Wash and the area which would later become Big T.

The Rock Company operated a rock, sand, and gravel business in the Big Tujunga Wash and was owned and directed by P. J. Akmadzich. In 1953, Akmadzich sold the operating benefits to Carder B. Livingston, which included a long-term lease on the land that allowed raw materials to be mined. Livingston was the owner of Livingston Rock and Gravel Company. In 1954, Akmadzich requested a zone variance on 149 acres of land north and east of the mining location. The zone variance would allow the new tenants, Livingston Rock and Gravel Company, to have more than enough rock and gravel to process during their long-term lease.

The community was concerned with the health hazards that the gravel mine would generate if the rezoning application was approved, which would allow mining activities to occur at the existing location plus the additional 149 acres. The community claimed that dust generated from the increased mining operations would adversely affect those that had moved to Sunland-Tujunga for health reasons. Protests sprang up around the community that included physicians, community groups, and many others. Doctor Walter MacLaren, M.D. wrote a letter stating that if the zoning application were to be approved the dust generated from the mining activities would adversely affect people with asthma that lived in the Sunland-Tujunga area, fueling the concerns of community members.

However, the concerned business owner would not stay quiet and go without a fight. Livingston argued against what many believed would be a toxic and hazardous environment. On July 28, 1955, Livingston voiced his opinion by purchasing a full page in the local newspaper. In the newspaper, he expressed the importance of the Big Tujunga Wash area to industry and development and provided test results submitted

Excavations at the Tujunga gravel pit using a steam shovel and a pickup truck, around 1935.
From the Engineering notebook of Earnest East, courtesy of the Automobile Club of Southern California Archives.

by the Bureau of Standards and the Health Department. He stated that the Big Tujunga Wash area was a known source of raw materials that had and would continue to provide important contributions to the development of the southland. Livingston also expressed that the building of the Hansen Dam eliminated the availability of many acres of land that contained vital rock, sand, and gravel for development. Livingston explained that mining operations had been going on for close to 20 years, but not a single person expressed concerns about the air quality issues until 1953.

Due to these concerns, air quality data was gathered by the Bureau of Standards and the Health Department, and a progress report was produced which Livingston referenced in his newspaper response. The Bureau of Standards did not feel qualified to advise on the health hazards and requested that the Health Department provide an opinion on the matter. Air samples were taken from several directions on two days with the first samples collected on July 20, 1955 and the second samples collected on July 28, 1955. The results came back showing the highest dust levels were being generated closest to the mining activities. The highest concentration of dust captured was near the crusher, 6.2 million particles per cubic foot of air. The health department believed that this was not an accurate representation of the air reaching the

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The gravel mining operation of Livingston Rock and Gravel Co., Inc. during the 1950s at what is now the present-day Big T.
Courtesy of Little Landers Historical Society, Bolton Hall Museum

neighborhoods because the air was dispersed and diluted even before leaving the property. There was a potential that some people with asthma could suffer aggravation from the dust being produced; however, relatively high concentrations of mineral dust (higher than the concentrations believed to be reaching the neighborhoods) would be needed to cause aggravation to those with asthma. The air sample study results showed that there was no significant increase in the dust content from the Livingston Rock and Gravel Company's mining activities reaching the surrounding neighborhoods. The Health Department summarized its letter by stating that the mining operations produced very little dust, and that some dust was produced by crushing and hauling mined materials but was generally mitigated by keeping the site and surrounding roads watered. Additional research and studies could have provided support on the subject, but the Health Department did not have the time to establish research studies with local universities.

In 1962, the City of Los Angeles upheld banning the gravel mine. The dispute had been ongoing for more than three years by the time it was finally decided that the mine would no longer be active, thus ending the mining work at the Big Tujunga Wash. Interestingly, one of the conditions imposed by the City of Los Angeles and accepted by the Livingston Rock and Gravel Company read as follows: "After ten years after excavations were discontinued, the owner may transfer the property to the City of Los Angles to be filled by the City and used for park and recreation purposes." This condition imposed by the City of Los Angeles may have helped pave the way to what we now know as Big T.

Sources

Livingston, C. B. The OTHER SIDE of the rock and gravel controversy. Public letter published in a local newspaper. July 28, 1955. Accessed online at https://digital-collections.csun.edu/digital/collection/SFVH/id/1207 in April 2021.

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The Los Angeles Times. City Ban Upheld on Tujunga Gravel Pit. Pg 47. April, 13, 1962. Accessed online at https://latimes.newspapers.com/image/381197616/ in April 2021.

Sunland-Tujunga residents protest the proposed expansion of Livingston Rock and Gravel's mining operation on June 6, 1955.
Courtesy of Little Landers Historical Society, Bolton Hall Museum

Kid'S Corner

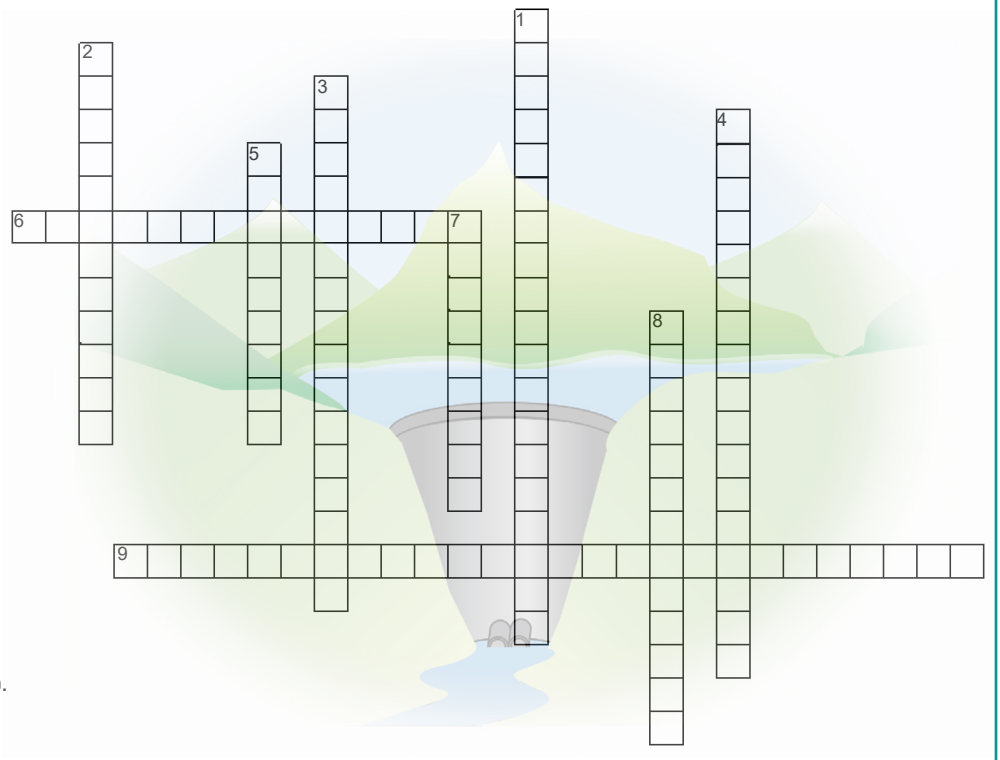
Use the clues to fill in the words. Words can go across or down. Letters are shared when the words intersect.

ACROSS

6. A 13-mile section of Big Tujunga Creek.
9. This area provides the public with recreational uses such as boating, kayaking, fishing, and swimming.

DOWN

1. Rainfall and snowmelt from the San Gabriel mountains get collected here.
2. Man-made water bodies that cover almost a full acre and receives water from an underground seep.
3. These facilities serve to retain surface water long enough for the water to percolate into and recharge underground aquifers.
4. Home to sensitive fish species including the Santa Ana sucker, Santa Ana speckled dace, and arroyo chub.
5. Holds back up to 24 billion gallons of water.
7. The study of water.
8. Holds back almost 2 billion gallons of water.



Report emergencies and incidents such as fire call 911

- *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*