City of Highland

Erwin Fogerson, Chair
Richard Bowman, Vice Chair
Luis Gardea, Member
Joey Martin, Member
Vacant, Member

Community Trails Committee Special Meeting Agenda

January 8, 2026 at 6:00 PM
City Hall Donahue Council Chambers | 27215 Base Line, Highland CA 92346

Staff

Lawrence A. Mainez, Community Development Director
Kim Stater, Assistant Community Development Director
Travis Trejo, Assistant Planner
Camille Duarte, Administrative Assistant III

Mission Statement

Highland is dedicated to the betterment of the individual, the family, the neighborhood and the community. The City Council and the staff of Highland are dedicated to providing the quality of public facilities and services that its citizens are willing to fund and will do so as efficiently as possible.

In compliance with the Brown Act, any writings or documents provided to a majority of the legislative body regarding any item on this agenda, that are not exempt from disclosure under the California Public Records Act, will be made available for public inspection at City Hall, 27215 Base Line Highland, CA 92346, during normal business hours. Such documents will also be made available on the City's website at www.cityofhighland.org.

In compliance with the Americans with Disabilities Act (ADA), if you need special assistance, please contact the City Clerk's office at (909) 864-6861, ext. 226, at least 72 hours prior to the meeting for any requests for reasonable accommodations, including interpreters.

Levine Act: Pursuant to Government Code Section 84308, any party to a City proceeding must disclose on the record any campaign contributions made to a member of the City Council (or commission) in excess of $500 in the past 12 months. This disclosure requirement includes contributions by the party's agent and aggregated contributions from persons or entities related to the party. Please make the disclosure as soon as possible, but no later than the beginning of the proceeding.

Call to Order

Pledge of Allegiance

Public Comment

To address the Community Trails Committee, please complete a speaker form located at the entrance and give it to the Administrative Assistant prior to the beginning of the meeting. Your name will be called when it is your turn to speak. Individual speakers are limited to 3 minutes each. For those wishing to make public comments by email, please submit your comments by 5:00 p.m. on January 8, 2026, to publiccomment@highlandca.gov. If you are submitting a public comment pertaining to an item on the agenda, please identify the agenda item number.

Community Trails Committee Consent Calendar

1. Minutes - November 13, 2025 Community Trails Committee Special Meeting

   Approve Minutes as submitted.

Business Items

2. Natural Parkland Trail Educational Signage

   Provide staff with the appropriate locations for the new interpretive/educational and directional signage for the City's upgraded Natural Parkland Trails.

Announcements

Adjourn

Certification

I, Camille Duarte, or my designee, hereby certify that the foregoing agenda was posted on our website at www.cityofhighland.org and in the following designated areas: Highland Branch Library (7863 Central Avenue), Fire Station No. 1 (26974 Base Line), and City Hall (27215 Base Line) at least seventy-two (72) hours prior to the meeting per Government Code Section 54954.2.

COMMUNITY TRAILS COMMITTEE
SPECIAL MEETING MINUTES
November 13, 2025

CALL TO ORDER

The regular meeting of the Community Trails Committee of the City of Highland was called to order at 6:00 p.m. by Vice Chair Fogerson at the Donahue Council Chambers, 27215 Base Line, Highland, California.

Present:	Chair	Richard Bowman
	Vice Chair	Erwin Fogerson
	Member	Luis Gardea
	Member	Michael McMillan
	Member	Vacant

Staff Present: Lawrence Mainez, Community Development Director
Travis Trejo, Assistant Planner
Camille Duarte, Administrative Assistant

Pledge of Allegiance led by all members.

COMMUNITY INPUT (ITEMS NOT ON THE AGENDA)

Public Speaker Brent Merideth stated I noticed that the agenda is missing topics I have great interest in which is the Sycamore extension from Sycamore Street to Church Avenue. I noticed that there is an environmental document in CEQA and there is a high interest from many of us in the hiking and biking community. When will we find more information on that topic?

Community Development Director Mainez stated the Sycamore extension will be scheduled in the future.

CONSENT CALENDAR

1. Minutes from September 11, 2025 Special Meeting
   A MOTION was made by Chair Bowman, seconded by Member McMillan, to approve as amended. Motion carried, 4-0.

BUSINESS ITEM

2. Educational and Interpretive signage for the City's Natural Parkland Trail.

   Assistant Planner Trejo presented the staff report.

   All members looked over and approved the educational and interpretive signs for the National Parkland Trail.

ANNOUNCEMENTS

ADJOURN

There being no further business, Member McMillan declared the meeting adjourned at 6:37 P.M.

Submitted by:

Camille Duarte,
Administrative Assistant III

Approved by:

Richard Bowman,
Community Trails Committee Chair

Staff Report

To the Community Trails Committee

Date:	January 8, 2026
From:	Lawrence Mainez, Community Development Director
Reviewed By:	Lawrence Mainez, Community Development Director, Travis Trejo, Assistant Planner
Prepared By:	Travis Trejo, Assistant Planner
Subject:	Natural Parkland Trail Educational Signage

Recommendation:
Provide staff with the appropriate locations for the new interpretive/educational and directional signage for the City's upgraded Natural Parkland Trails.

Fiscal Impact:

Public Notice:
The agenda for this item was posted at the three locations per Resolution No. 2011-047 and on the City's website.

Project Detail:
Construction began on the Natural Parkland Trail in July 2025. The new Interpretive/educational signage has been reviewed by the Community Trails Committee and recently finalized by staff. The sign locations are pending final recommendation by the Community Trails Committee.

It was determined while drafting the grant application that the project would involve the installation of new signs made of similar metal material as a typical street sign with anti-graffiti coating. In total there are seventeen (17) interpretive/educational signage locations and five (5) directional signs (Attachment 1).

Staff is seeking additional guidance and comments from the Community Trails Committee on the appropriate locations to install the new signs. A map has been provided in order to better visualize potential locations for signage (Attachment 2). Staff request each Community Trails Committee member walk the trail at their earliest convenience and prior to the January 8th meeting and mark up the maps with the appropriate sign number and be prepared to share your suggestions at the meeting.

Attachments:

1. Educational Signage Artwork (2)
2. Trail Signage Map

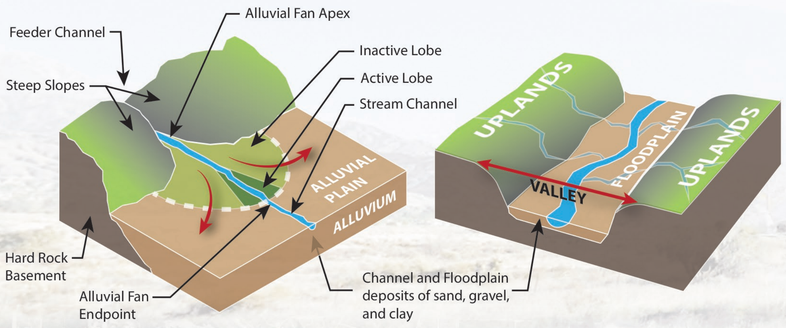
Attachment 1:

Educational Signage Artwork

THE WASH PLAN 1

An Integrated, Collaborative Model for the Upper Santa Ana River

The Upper Santa Ana River Wash Habitat Conservation Plan (Wash Plan) represents over two decades of collaboration among Task Force partners. It provides an integrated approach to manage, permit, and mitigate activities within the Wash—balancing water conservation, wells and infrastructure, aggregate mining, transportation, flood control, agriculture, trails, and habitat restoration to support both community needs and the natural environment.



Alluvial Fan and Flood-Plain

The Santa Ana River once flowed across a vast floodplain (left) and alluvial fan (right), carrying powerful floodwaters that shaped the land and deposited layers of sediment. These natural deposits created ideal conditions for settling basins, where surface water could percolate into the groundwater basin, supplying much of the region's water. The same geologic processes also formed valuable sand and gravel resources, supporting the local building industry and economy.

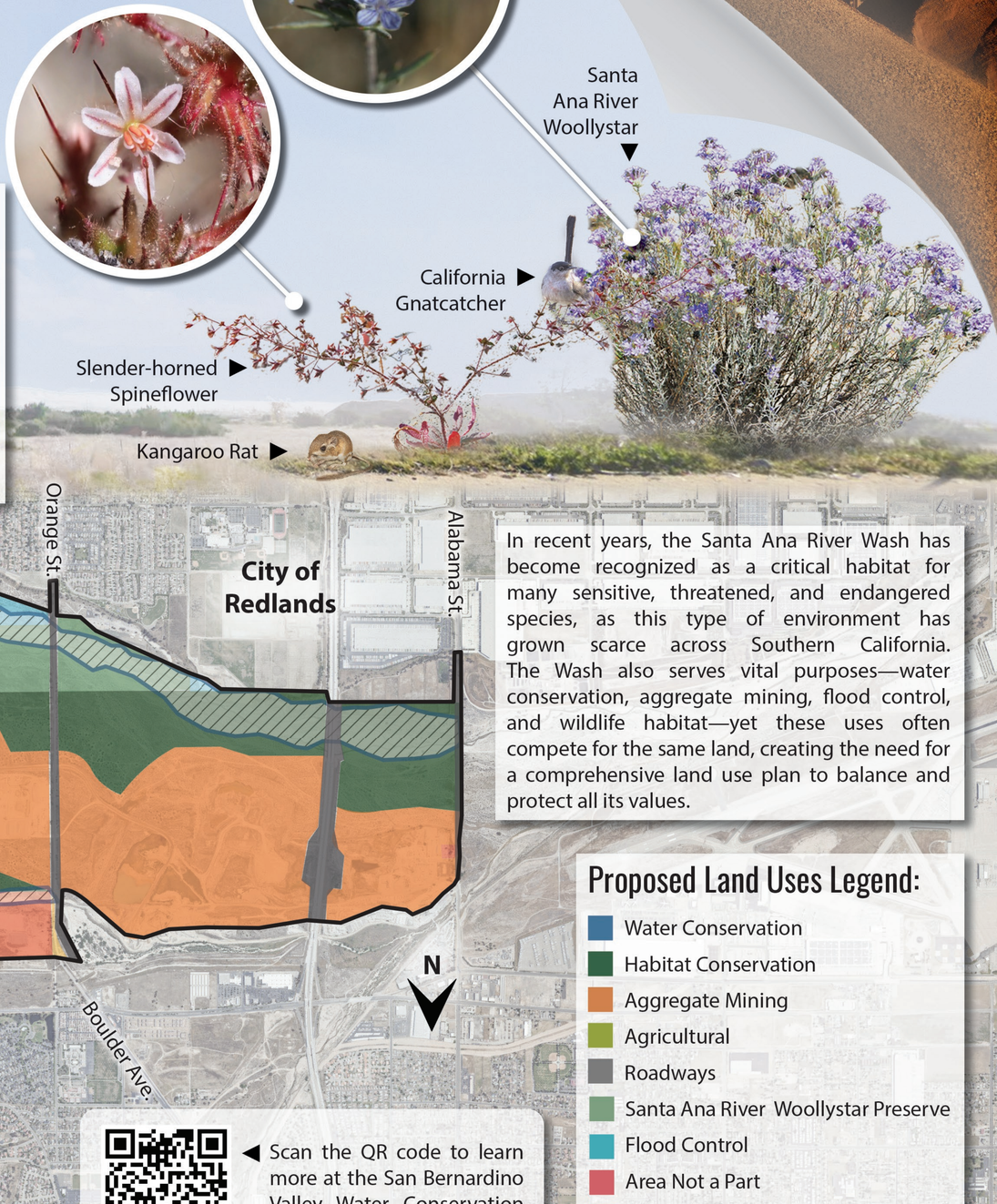
The Wash is used as a mining resource due to its high levels of sediment.

Santa Ana River Woollystar

California Gnatcatcher

Slender-horned Spineflower

Kangaroo Rat



In recent years, the Santa Ana River Wash has become recognized as a critical habitat for many sensitive, threatened, and endangered species, as this type of environment has grown scarce across Southern California. The Wash also serves vital purposes—water conservation, aggregate mining, flood control, and wildlife habitat—yet these uses often compete for the same land, creating the need for a comprehensive land use plan to balance and protect all its values.

The plan groups mining operations within one large area—land already disturbed or directly next to previously mined sites. Habitat conservation areas are placed in large, connected zones of intact natural landscape, supporting wildlife movement and ecosystem health. Meanwhile, water conservation and flood control continue in the areas traditionally used for those essential purposes.

Proposed Land Uses Legend:

- Water Conservation
- Habitat Conservation
- Aggregate Mining
- Agricultural
- Roadways
- Santa Ana River Woollystar Preserve
- Flood Control
- Area Not a Part
- Undesignated/Public Ownership
- Managed Flood Control

◀ Scan the QR code to learn more at the San Bernardino Valley Water Conservation District webpage.

NORTON AIR FORCE BASE 2

An Historic Transition

Named in honor of World War II hero Leland F. Norton, Norton Air Force Base was home to many Air Force families from the late 1940s to the early 1990s. After its decommissioning in 1992, the base transitioned from military service to civilian use. Today, the site continues its legacy as San Bernardino International Airport—marking a new era of growth and innovation for the city.

Image Credit: City of San Bernardino California

◀ Capt. Leland F. Norton

Image Credit:Nick Cataldo, The Sun

Hometown Hero: Capt. Leland F. Norton

On May 7, 1944, during his 16th combat mission, Lt. Norton's A-20 Havoc was struck by enemy fire. He ordered his crew to bail out but remained at the controls to ensure their safety, losing his life when the plane crashed. Lt. Norton was posthumously awarded the Distinguished Flying Cross and the Purple Heart for his heroism.

Aerial views highlight the transformation and similarities of the former Norton Air Force Base into today's San Bernardino International Airport.

★ San Bernardino International Airport Runways

Image Credit: Nick Cataldo, The Sun

Image Credit: City of San Bernardino California

Image Credit: Michel Nolan, The Sun

The Norton Air Force Base Museum is dedicated to celebrating the lives and history of those who served at the former Norton Air Force Base.

Image Credit: Brian Whitehead, The Sun

The San Bernardino International Airport stands as a new hallmark for growth and connectivity.

◀ Scan the QR code for more information on the Norton Air Force Base Museum.

Image Credit: Mark MuckenFus, The Press-Enterprise

Image Credit: Spectrum News 1

◀ From Military to Civilian Flight: Once home to U.S. Air Force Lockheed C-141 Starlifters that supported combat, resupply, and medical transport missions, the airfield now serves commercial and civilian aircraft for everyday travel.

1921
Leland F. Norton was born on March 12, 1921, In San Bernardino, California.

1941
Norton joins the Royal Canadian Air Force and a new Municipal Airport is created two miles east of downtown San Bernardino.

1942
Norton transfers to the U.S. Army Air Force serving on rescue missions.

1943
Norton applies for combat and begins training in the summer untill the end of the year.

1944
Norton served as Deputy Commander of the 640th Bombardment Squadron in the UK, where he was killed in combat.

1948
The Municipal Airport is transferred to the U.S. Air Force.

1950
The San Bernardino Air Force is renamed Norton Air Force Base in Leland F. Norton's honor.

1952
Norton, originally buried outside of France in the U.S. Military Cemetery, is brought back home for reburial.

1992
Norton Air Force Base is decommissioned and plans begin to convert it to a civilian airport.

1994
San Bernardino International Airport Authority is formed to oversee airport development.

2011
The airport receives runway and terminal upgrades.

2022
The first passenger service takes place with Breeze Airways.

POINT OF BEGINNING 3

The Origin of the Road Named "Base Line"

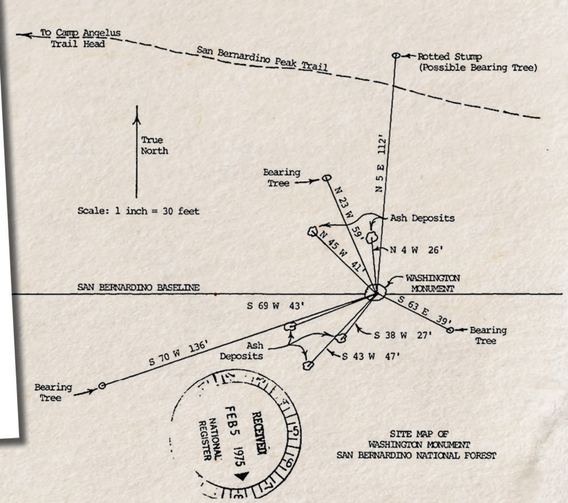
The name "Base line" comes from the east-west line used in the Public Land Survey System (PLSS). The survey reference line is crucial for mapping public lands into townships and sections.

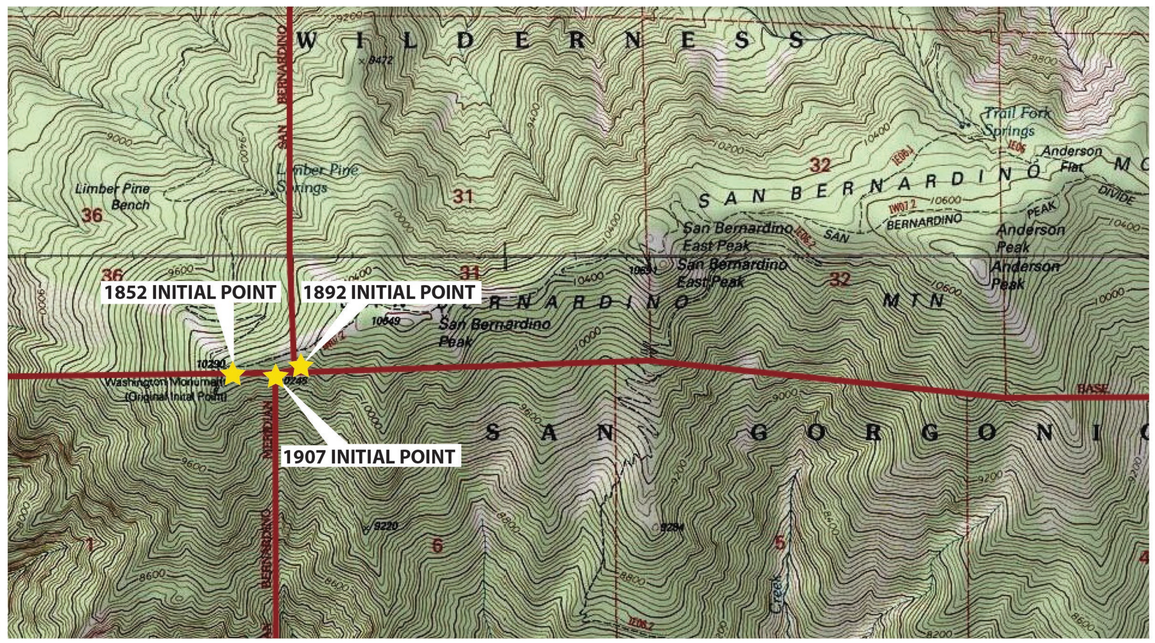
The San Bernardino Base Line was established in 1852 and run along the foothills of the San Bernardino Mountains. The baseline intersects with the San Bernardino Meridian. This intersection is the starting point for land surveys in Southern California. Many streets named "Base Line Road" in California align with the original survey line.

The base of the San Bernardino Mountains helped define the initial survey point because of their stability and visibility. It was an ideal natural reference point for early surveyors.

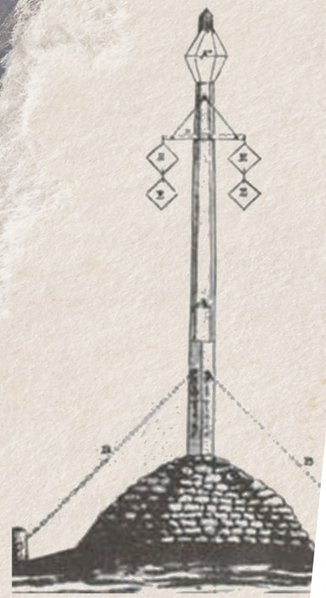
The San Bernardino Base Line and Meridian were essential for expanding settlement, managing land ownership, and developing infrastructure in California during the 19th and 20th centuries.

A half-size replica of Washington's monument was built in a regional park in Yucaipa. The view from the bench lines up the interpretive plaque, the pole, and San Bernardino Peak in the background.





Due to later surveys in 1892 and 1907, Washington's original 1852 Initial Point was shifted twice along the base line—creating a 277-foot "jog" in the San Bernardino Meridian and resulting in three different Initial Points. The base line continues to be uneven to the east.



The Washington Initial Point was built as a 25-foot pole rising from a pile of rocks, with dangling tin reflectors, for higher visibility from below. The original marker built by the surveyor Henry Washington is still there as a jumbled pile of rocks anchoring the remains of the pole.

Images provided by the City

WATER RETENTION 4

The Importance of Local Water Stewardship

A severe drought from 1898–1903 highlighted the need for reliable water in San Bernardino, Riverside, and Orange counties. In 1909, the Water Conservation Association, led by Francis Cuttle of the Riverside Water Company, began storing surface water underground using percolation ponds. The Cuttle Weir, completed in 1914, became a key recharge facility. The District has long operated recharge sites along the Santa Ana River and Mill Creek, replenishing groundwater with local runoff and imported water.

In 2009, nearly a century after its founding, the district reaffirmed its mission to serve the valley. Working with Valley District, it continues improving water collection and spreading ground. Instead of letting valuable surface water flow downstream, and out of the area the district has improved storm-water capture and boosted groundwater recharge by up to 200 acre-feet per day. This method mimics nature and keeps our water supply sustainable.

Today, the San Bernardino Valley Water Conservation District maintains an extensive system of basins, canals, weirs, and gates—over 70 recharge basins across 43 acres—to sustain the region's vital groundwater supply. This is an achievement derived from collaboration with local cities, water agencies, and public partners, which has built resilience in the face of changing water demands and climate conditions.

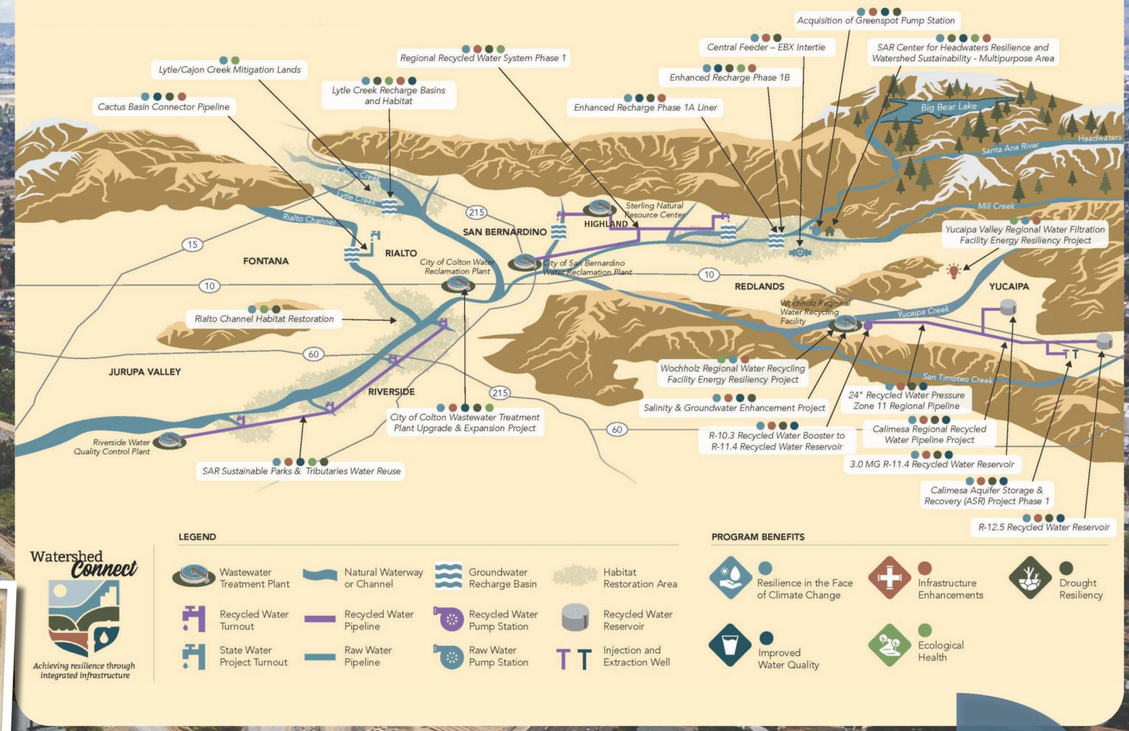
Cuttle Weir Diversion structure Dedication in the 1910s.

Water Department Crew laying out a pipe on 6th Street in the 1930s.

These percolation basins capture water from the Santa Ana River and Mill Creek, letting it soak naturally into the ground to refill local aquifers. This process helps store water for our communities, wildlife, and future generations in the San Bernardino Valley.

Watershed Connect Phase 1 Projects

17 projects being implemented by Yucaipa Valley Water District and 11 projects being implemented by San Bernardino Valley Municipal Water District as part of the Watershed Connect WIFIA program.



Groundwater Use in Southern California

- Groundwater is the safety net — when imported water (from the State Water Project or Colorado River) is cut back, cities pump more from local aquifers.
- Overdraft risk: Many Southern California basins (San Bernardino, Chino, Central Basin, San Gabriel) are in long-term decline — leading to land subsidence and higher pumping costs.
- Supports planning: Water agencies use these visuals to justify recharge projects, recycled water programs, and public conservation campaigns.

45% Municipal & Domestic
Cities and households (drinking water, landscaping, sanitation)

30% Industry & Commercial
Manufacturing, cooling, processing

<5% Environmental / Managed Recharge
Groundwater replenishment basins, wetlands, riparian support

20% Agriculture
Irrigation for crops, nurseries, and dairies

Images provided by the San Bernardino Valley Water Conservation District

SAN ANDREAS FAULT 5

Shaping our Southern California Landscapes

Highland sits at the southernly edge of the San Bernardino Mountains. The mountain range was formed through the process of tectonic uplift along the San Andreas Fault Zone. Various geological events have shaped the mountainous landscape, including volcanic activity, faulting, and erosion, leading to numerous peaks and valleys.

You may have noticed visible signs of the Fault in Highland including Fault Scarps, Sag Ponds, and Shutter Ridges.

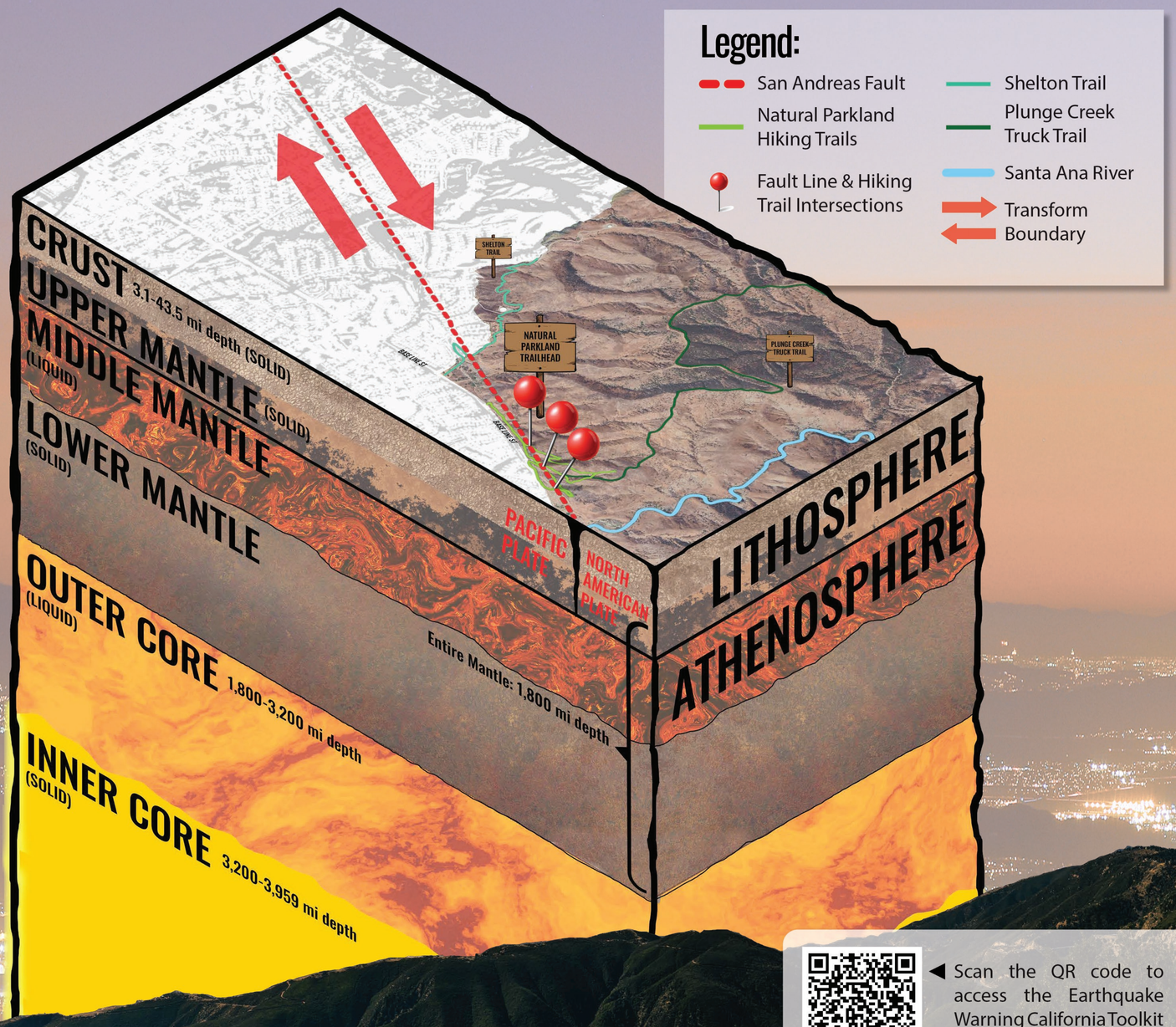
Since the beginning of the 20th century, the tectonic plates along the San Andreas Fault have been recorded to shift approximately 1.5 to 2.5 inches per year. Some parts of the fault line have moved as much as 21 feet during significant earthquakes. The San Andreas Fault has displaced approximately 200 miles horizontally since it began moving 28-30 million years ago. (Britannica)

1906 SAN FRANCISCO EARTHQUAKE

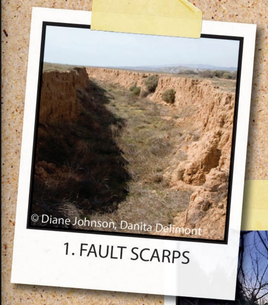
◀ Known as the 1906 San Francisco earthquake, the tectonic movement along the San Andreas Fault near the Northern California Coastline resulted in a 7.9 magnitude earthquake. This led to the eruption of fires in San Francisco and caused 3,000 deaths and the destruction of 80% of the city. (USGS)

1989 LOMA PRIETA EARTHQUAKE

◀ This earthquake measured 6.9 magnitude and was centered 10 miles northeast of Santa Cruz. It resulted in the collapse of a portion of the Nimitz Freeway (Interstate 880) in Oakland, CA. The collapse caused 42 deaths and the earthquake caused 63 deaths overall. (USGS)



SIGNS OF TECHTONIC MOVEMENT:



1. FAULT SCARPS

2. SAG BASINS/PONDS

3. SHUTTER RIDGES

Earthquakes are constantly molding and reshaping the California Landscape. This movement often results in geological features that you can identify on your hike! Look out for...

- *Cliff-like formations where a large area of land has risen higher than the surrounding areas [see 1. Fault Scarp]*
- *Depressions in the earth that sometimes fill with water when below the water table [see 2. Sag Basins/ Ponds]*
- *Rock ridges that have collided with other landscape features and possibly redirected bodies of water, like at Lake Temescal [see 3. Shutter Ridges]*

(Thoughtco)

◀ Scan the QR code to access the Earthquake Warning California Toolkit and Resources.

SHARING A SPACE WITH WILDLIFE 6

Trail Wildlife and Safety Tips

◀ Scan the QR code for more information from the USFS San Bernardino Mountain Front Country webpage.

Keep your eyes peeled for furry and feathered animals that may be sharing the trail. The front country of the San Bernardino Mountains is home of varied species including the Gray Fox, Wood Rat, Coyote, Bobcat, Mountain Lion, Red-Tailed Hawk, and North American Black and Brown Bear. Always be on guard and watchful of your surroundings. Keep dogs on a leash and do not feed the wildlife!


Mojave Rattlesnake


Western Rattlesnake


King Snake


Gopher Snake

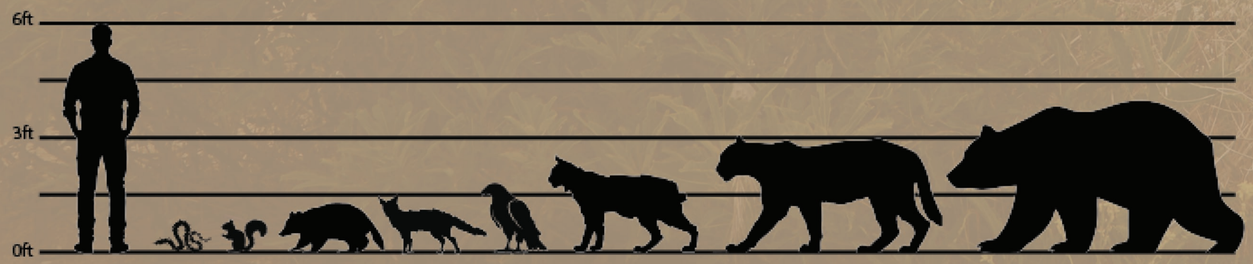
Watch Your Step!

Walking trails are home to venomous and nonvenomous snakes. No matter the distinction, it is best to avoid them altogether. Stay on well used trails. Avoid tall grass, weeds, and brush. Check rocks, stumps, or logs before sitting down. Do not let dogs off leash. Dogs are at increased risk when sniffing the ground near brushy areas. Do not try to touch or handle a snake, dead or alive. Dead rattlers may still inject venom shortly after death.

In the Event of a Snake Bite:

- Stay calm, but act quickly.
- Remove any items that may restrict swelling, such as rings or watches.
- Call 911 and seek medical attention immediately for both people and pets.
- Do not apply a tourniquet, cut the wound, or attempt to suck out the venom.
- Transport the victim to the nearest medical facility as soon as possible.

How do you size up?



Red -Tailed Hawk ▶

◀ North American Black Bear

Mountain Lion

Bobcat

Northern Raccoon ▶

Golden Mantled Ground Squirrel ▶

Gray Fox ▶

FIRE ON THE MOUNTAIN 7

Living with Wildfire in Highland

Wildfire has long shaped Highland's chaparral-covered hillsides. In the past, small, low-intensity fires helped clear old vegetation and renew the land. Today, decades of fire suppression and a warming climate have made these slopes dense and dry—ready to burn. Be prepared. Create and maintain defensible space around your home, and use fire-resistant materials to reduce the risk from flying embers, flames, and heat. Preparation today protects your family, your home, and your community tomorrow.

◀ Burning 91,000 acres, in 2003 the Old Fire destroyed 993 homes, claimed six lives, and caused over $1.2 billion in damage. It stands as one of the most devastating wildfires in San Bernardino County's history.

◀ In 2024, the Line Fire ignited in Highland, creating extreme danger for residents and property. The fast-moving blaze led to evacuations across parts of the city and burned a total of 43,978 acres, leaving a lasting mark on the community and landscape.

The Role of Fire in Nature

Natural wildfires help keep ecosystems healthy. Fire clears away dead plants, returns nutrients to the soil, and opens space for new growth. Some plants, like certain pine trees, even depend on fire to release their seeds. By preventing overgrowth and disease, wildfires help maintain balance in the natural landscape.

Fire Hazard Severity Zones (FHSZ) Legend:

- City of Highland
- Very High
- High
- Moderate

◀ Scan the QR code for more information on the City of Highland's updated Fire Hazard Severity Zone Map.

The Start of a Wildfire

Most wildfires are started by people—from unattended campfires and equipment sparks to cigarettes and power lines. Lightning can also ignite fires during dry, windy weather. Each fall, the Santa Ana winds bring the most dangerous fire conditions to the San Bernardino region. In Highland, areas north of Greenspot Road and east of Weaver Street are especially at risk. Steep hillsides and dense brush can cause flames to spread fast—stay alert and practice fire safety at all times.

Wind and thermals can carry sparks and firebrands downwind of fires, greatly increasing spread rates.

The type of vegetation growing along with the fuel moisture content, physical properties, and chemical properties play a role in fire behavior and how fast fires spread.

Slope steepness affects fire behavior in a similar way as wind by changing the flame angle. Elevation and aspect are also important in determining how fires spread.

Wind speed has a huge affect on fire intensity and how fast fires travel. Wind pushes the flame forward and closer to the fire. Temperature, humidity, and precipitation are also important in determining how fires spread.

Fire is a Natural Force but Prevention is our Responsibility

Fire plays an important role in this ecosystem, but safety depends on prevention and smart land management. Stay alert, follow fire restrictions, and report any smoke or flames immediately. Every action helps protect Highland's people, homes, and natural open spaces.

WITH NATURE IN MIND 8

For some residents, wilderness begins at the back door

Living close to nature results in remarkable experiences. Wildlife comes close for viewing and natural landscapes lend a different sense of beauty to a home. At the same time, getting close to nature can be a challenge. Wildlife sometimes arrives without an invitation and wildfire ignores neighborhood boundaries.

Fire is a naturally-occurring event in Southern California. For thousands of years it has played a role determining California's native landscape. Some plant communities have co-evolved with fire, benefitting from its intense heat to open seed coats and release nutrients into the soil.

But fire destroys before it renews. The fire scars you see from the 2003 Old Fire remind us of its fury.

Where neighborhoods meet natural areas is called the wildlands-urban interface. A complicated set of conditions here results in increased risk of wildfire.

Creating defensible space around structures and landscaping with fire in mind can save your home.

PROTECTING OPEN SPACE

9

It takes all of us to care for this land

Highland lies at the foothills of the San Bernardino Mountains and stretches across two watersheds. While its western urban edge borders the City of San Bernardino, its eastern edge features large tracts of open space, including the Natural Parkland and Trail. Even as development plans seek to transform certain areas, the City of Highland continues to champion natural landscapes. In fact, the General Plan requires that at least 20 percent of the City be designated as open space.

It takes vision to establish open space and it takes science and grit to protect it. Rare species and visitor activity alike need to be monitored. Runoff, erosion, and invasive species need to be managed. Habitats need to be restored and trails maintained.

To some degree we all share this responsibility. The steps we take on this land and the hands we lend for its care can all make a difference. What difference will you make today?

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© Paul Rhus, Stone Imagery

© Ben Rigby

A RESTLESS LANDSCAPE

The San Andreas Fault has carved this land

10

Long before settlers and farmers began shaping Highland, geologic forces were at work folding and faulting this land. Like many communities in California, Highland sits on the San Andreas fault, the boundary between two gigantic "plates" of Earth's crust. The Pacific Plate to the west slowly moves northwest past the North American Plate. Most days, we don't detect the movement. Sometimes it hits us with a jolt.

The view before you is a reminder of Earth's dynamic nature. The surface of the San Andreas fault may be subtle, but the results of its movement are blatant. Folded and thrust, the land rises sharply from the valley floor and creates the escarpment you see today.

© George Retseck

The San Andreas fault stretches 810 miles through California. Its southern section begins near the Salton Sea, runs along the base of the San Bernardino and San Gabriel Mountains, and veers north past Frazier Park. The central segment begins at Parkfield; the northern section begins at Hollister.

© Jennifer Rigby, The Acorn Group

From this vantage point you can also see the R on Keller Peak. Created in 1913, the massive letter is a significant symbol for the University of Redlands. Students still visit it today.

© Ben Rigby

STORIES ON THE LAND

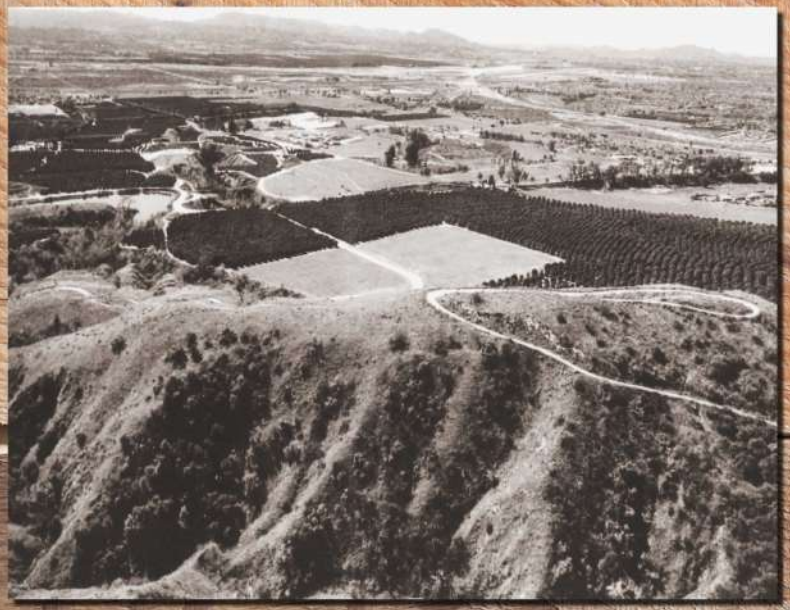
The valley floor reveals Highland's history

11

Imagine the valley over 100 years ago. Young citrus trees dotted the valley floor and foothills. Rivers and creeks bisected the land, some as natural courses and others as channels and ditches. While the Santa Ana River remains a principal water course today, the Mill Creek *zanja* and North Fork Ditch were equally important in years past.

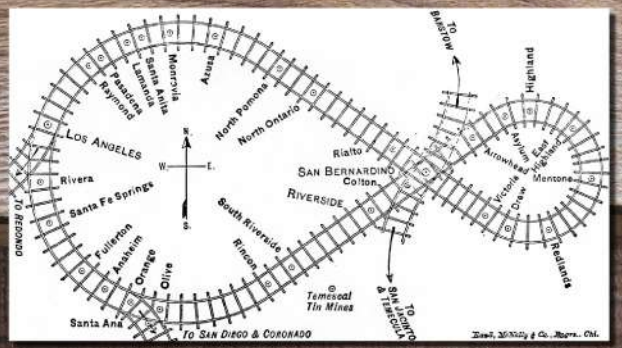
From this vantage point you can see the foothills and mountains that frame the valley below and various features that anchor its history. The valley floor is criss-crossed with more than irrigation ditches. Railroad tracks became a part of the landscape once the Santa Fe Railroad extended its line from San Bernardino east. While the ditches brought water to the fields, the rail line brought people to the inland valley. Called the Kite Shaped Track, the line made a scenic loop, stopping in various towns including Highland and Mentone. By the late 1880s some trains rolled in with tourists and others rolled out with crates loaded with citrus.

The valley landscape has changed dramatically over the years. Housing tracts and industrial parks stand where citrus once did. Still, protecting natural landscapes remains a priority for Highland. More than 20 percent of the City is designated as open space.



To the west, what was once Norton Air Force Base is now San Bernardino International Airport. The San Gabriel Mountains rise in the distance.

To the south the community of East Highland is in the foreground. Box Springs Mountains rise in the distance.



To the east Mill Creek flows from the San Bernardino Mountains. What water isn't diverted to the zanja eventually flows into the Santa Ana River and into spreading basins.

OF WATER AND WEIR BOXES

Early ranchers channeled water as well as prosperity.

12

This trail guides you through the remnants of a historic irrigation system. Keep an eye out for concrete-and-river rock flumes and weir boxes along the way. Some date back before the 1930s. The weir boxes directed the flow of creek water into channels that irrigated citrus groves far afield.

Although this area may appear dry, Plunge Creek traverses the Parkland and has carved a substantial canyon in its path. In the mid-1800s, early ranchers and farmers irrigated their thirsty orchards by channeling water from it, as well as the Santa Ana River and City Creek. Flowing into ditches and smaller rock-lined channels, the water cultivated more than crops. It quenched the thirst of the small but swelling community called East Highland.

The Santa Ana river watershed begins in the San Bernardino Mountains where snowmelt seeps into creeks fed by storm runoff. Streamlets become creeks and creeks become the river which still provides us with water today. It travels westward before being retained by Seven Oaks Dam and, later, Prado Dam until release.

TRAILS THROUGH TIME

Welcome to the City of Highland's Natural Parkland and Trail

13

Winding through the foothills of the San Bernardino Mountains, this trail offers a window to the past. For at least 3,000 years Serrano and Cahuilla Indians crossed this land during hunting, gathering, and trading expeditions. The trail's plants and wildlife, and water from Plunge Creek helped sustain them on their journey.

Around 1858 settlers and farmers began setting down agricultural roots in the area. The parkland's trail was once an access road to their citrus groves. Plunge Creek and the Santa Ana River were their sources of irrigation water, channeled through rock-lined weir boxes and ditches that still stand today. As you walk the trail, think back 100 or 1,000 years. Whose footsteps will you be walking in?

The Natural Parkland and Trail is comprised of 87 acres of protected and natural open space. The trail is an easy 1.5 mile loop that winds through sage scrub and chaparral, offering spectacular views along the way.

SUBTLE BEAUTY

In spring and fall coastal sage scrub surprises us with color

14

Coastal and alluvial fan sage scrub blankets the slopes of the Natural Parkland. Unlike the woody plants of the chaparral, sage scrub plants are soft and aromatic. After winter rains, green seeps into their grey palette. White sage, black sage, elderberry, monkeyflower, and other plants burst into color—purple, lavender, yellow, and red. Keep an eye out for the tall flower stalks of yucca. Its blossoms appear like creamy-white bells. Watch also for the delicate flowers of chia and other plants that grow low to the ground.

During the blistering summer months, color drains from the scrub. Some plants even shed their leaves to conserve water. Come fall, buckwheat and chia blush wine red as their seeds ripen. The palate shifts into autumn tones as plants wait for the winter rains.

© Justin M. Wood

Alluvial sage scrub is a rare variant of coastal sage scrub. It occurs on the flood plains that lie at the base of our local mountains. Plants that live here, like the slender-horned spineflower and Santa Ana River woolly star, cope well with periodic flooding and erosion.

© Ken Corey/USFWS

© Jennifer Rigby, The Acorn Group

Coastal sage scrub is California's most threatened habitat and many species of plants and animals depend upon it. Some, like the coastal California gnatcatcher, rely on it exclusively.

© Ben Rigby

THE RISE OF CITRUS

Highland's orange trees and citrus industry thrived

15

Navel and Valencia citrus once grew behind the old stone wall you see. Their blossoms sweetened the scent of sage scrub and their fruit transformed East Highland Orange Company into a citrus-producing powerhouse. By the early 1900s the citrus industry cultivated a demand for planters, pruners, pickers, and packers. The groves inspired various projects, including a year-round irrigation system and new rail lines. Trains roared into the region to load packing crates. They roared out with fresh citrus for national and even international markets. By the early 1900s boxcars boasted all-new refrigeration. They were insulated, and ice bunkers sandwiched the orange crates at both ends. By the 1950s the East Highland Orange Company was shipping over a million boxes of oranges each year. This truly was the "gold buckle of the citrus belt."

But the buckle snapped in the 1960s. Leaves began withering and the trees fell victim to infection. Unknowingly, they had been budded on root stock that was susceptible to a viral infection. Old trees were pulled; new trees were planted. Some groves endured; others evolved as new communities sprang up.

Yet the spirit of East Highland Orange Company endures today. You can see it in the heritage groves, the irrigation channels, and even the soil under your feet. They all stand as a testament to Highland's citrus heritage.

In 1902, a pound of Highland's finest Gold Buckle brand oranges cost about four cents.

SANTA FE STREAMLINER ENTERING SOUTHERN CALIFORNIA THROUGH THE ORANGE GROVES

PROTECTING THE RARE

Many species call this Natural Parkland home

16

This is a special place where songbirds gather and small mammals graze. It is home to the loud and gregarious–like quail and coyote–and to the quiet and reclusive–like kangaroo rats. All of them need this land. It offers food and shelter, nesting space and a resting place for many species. Keeping this habitat healthy makes life easier on them, many of which depend on very particular conditions for their survival.

These plants and animals are important members of an intricate ecosystem. They help make the Natural Parkland a special place. As you walk along the trail today, be alert for other things as well. Be careful around stinging nettle whose green serrated leaves grow fuzzy with thousands of tiny glassy barbs. And if you hear a raspy buzzing sound, it could be a Southern Pacific rattlesnake. Give it distance and respect!

Dr. Lloyd Glenn Ingles © California Academy of Sciences

With cheek pouches, large hind feet, and a tail that helps it balance, the San Bernardino kangaroo rat is well adapted for foraging for seed in sandy washes. Without the region's alluvial fan sage scrub, we stand to lose this endangered mammal.

© Benjamin Smith

Without the coastal sage scrub of the Natural Parkland, coastal California gnatcatchers would no longer greet you with their cat-like mews. The gnatcatcher is a specialist, so when sage scrub habitat disappears, so does this rare bird.

© Ben Rigby

Attachment 2:

Trail Signage Map

Natural Parkland Trail Signage Locations

1. The Wash Plan
2. Norton Air Force
3. Point of Beginning
4. Water Retention
5. San Andreas Fault
6. Sharing a Space With Wildlife
7. Fire on the Mountain
8. With Nature in Mind
9. Protecting Open Space
10. A Restless Landscape
11. Stories in the Land
12. Of Water and Weir Boxes
13. Trails Through Time
14. Subtle Beauty
15. The Rise of Citrus
16. Protecting the Rare
17. Future Yuhaaviatam Sign