

Interpretive Elements

Adding Interest and Value to Trails



Presented by:
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Tim Millington
John Huber

What Is Interpretive Design?

Interpretation is a communication process designed to reveal the meaning and relationships of cultural and natural heritage to the public...

Interpretation Adds Interest and Value

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Revealing the "Genius Loci" or Spirit Of Place, the Message on Interpretive Panels Offer Education and Content That Invest the Public in a Trail's History and Significance.



Interpretation Adds Interest and Value

Interpretive Panels Inspire Stewardship In Trail Users By Reinforcing Awareness of Natural and Cultural Resources.



Interpretation Adds Interest and Value

Well Designed Sign Programs Can Foster and Demonstrate Community Pride In Local Heritage.

Interpretation Adds Interest and Value



Interpretive Signage is Self-Sustaining in that it Can Provide a High-quality User Experience Without the Need for Onsite Staff or Extensive Facilities Maintenance.

Interpretation Adds Interest and Value



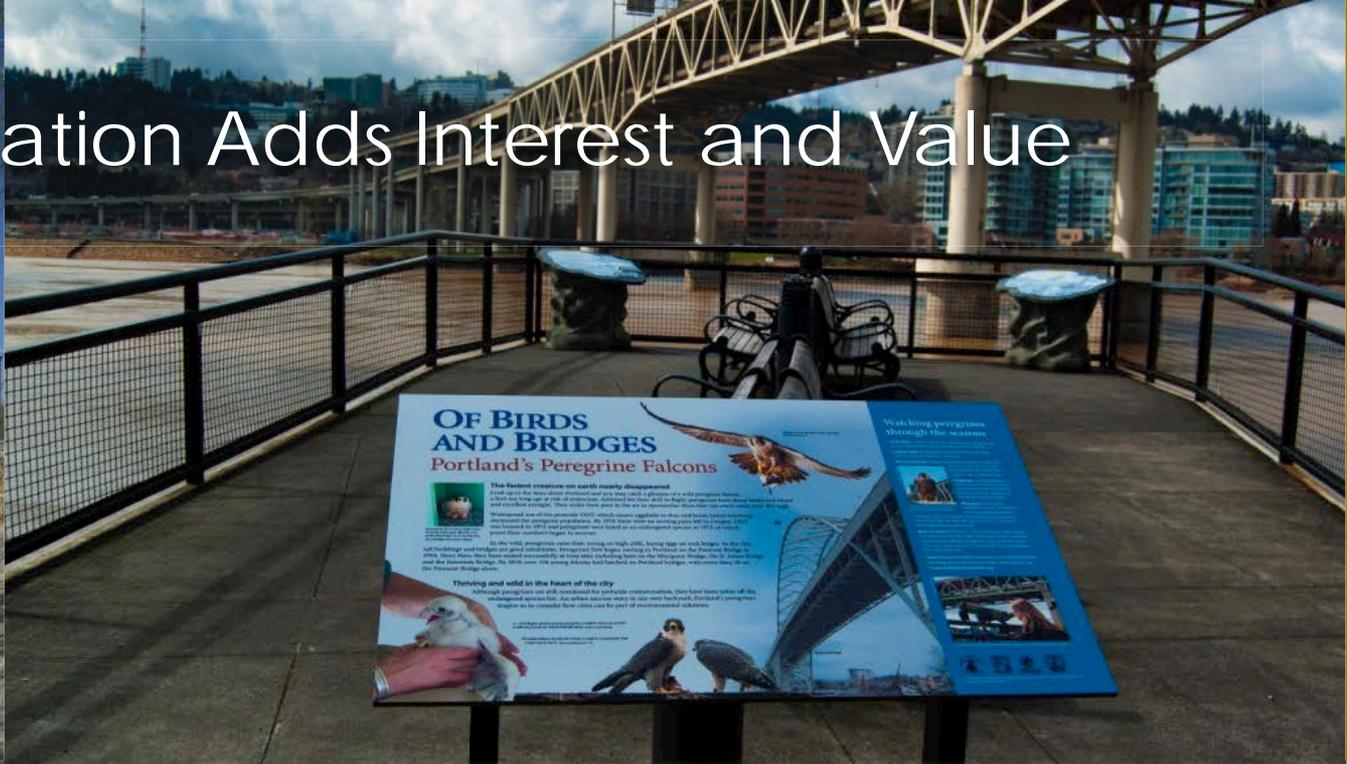
They offer a Consistent Message to Multiple Users at Any Given Time, Can Be Observed At The Users' Convenience, and Are Accessible at Any Time of The Day.



Interpretation Adds Interest and Value

Interpretive Signs Enhance The User Perception of a Trail Site, City, Or Region By Calling Attention to The Unique History and Identity of a Trail offering Users a Better Appreciation of The Surroundings and Local Lore.

Interpretation Adds Interest and Value



Engaging Interpretive Signs and Exhibits Can Become Destinations Unto Themselves.

Initial Trail Design
The Agency Perspective

Initial Trail Design

The Agency Perspective



- Intended Purpose
 - Transit, Destination, Connectivity, Education, Protection of Biological, Cultural, Historical Assets
- Establish a Clear Mode of Use
 - Foot, Mountain Bike, Horses, OHV, Multi-Use, Dogs.

Initial Trail Design

The Agency Perspective

Create a Project Description to Meet Trail and Interpretive Elements Goals:

- Change Use Patterns
- Environmental Conservation
- Education
- Habitat Protection
- Public Health
- Historic Preservation
- Recreation

Initial Trail Design The Agency Perspective

Navigation of the Environmental Process:

- Regulatory Influence
- View as an Opportunity
 - *Biologic Study, Cultural Records Search, National Archeological Database.*

Initial Trail Design The Agency Perspective

Assembly of Design Team:

Biologist, Archaeologist, Paleontologist, Local Native American Tribes, Cities, CADFW, USFWS, Historians, Graphic Arts, Landscape Architects.

Initial Trail Design The Agency Perspective

Conduct Research About the Site:

Libraries, Museums, Colleges, Internet, Tribal Leaders, Biological Opinions, Cultural Records Search.

Initial Trail Design

The Agency Perspective

Determine Points of Interest
Appropriate Trail Length:

- Features to Emphasize, and Plan Out Stops:
Theme Throughout, Be Consistent, Match
Design to the Site.

Initial Trail Design The Agency Perspective

Adoption of Emerging Technologies:

- Use of QR Codes
- Beacons - Geo Fence (30-150')



Initial Trail Design

The Agency Perspective

Determine Points of Interest
Appropriate Trail Length:

- Interpretation Extends Beyond The Trail and It's Regional Implications

Discovery and Analysis – What is Unique

Identify & Integrate Interpretation Opportunities



- Flora

Identify & Integrate Interpretation Opportunities



- Flora

Identify & Integrate Interpretation Opportunities



- Fauna

Identify & Integrate Interpretation Opportunities



- Fauna

Identify & Integrate Interpretation Opportunities



- Historical

Identify & Integrate Interpretation Opportunities



- Historical

Identify & Integrate Interpretation Opportunities



- Cultural

Identify & Integrate Interpretation Opportunities



- Cultural

Identify & Integrate Interpretation Opportunities



- Regional

Identify & Integrate Interpretation Opportunities



- Regional

Identify & Integrate Interpretation Opportunities



- Geological

Identify & Integrate Interpretation Opportunities



- Geological

Identify & Integrate Interpretation Opportunities



- Hydrological

Identify & Integrate Interpretation Opportunities



- Hydrological

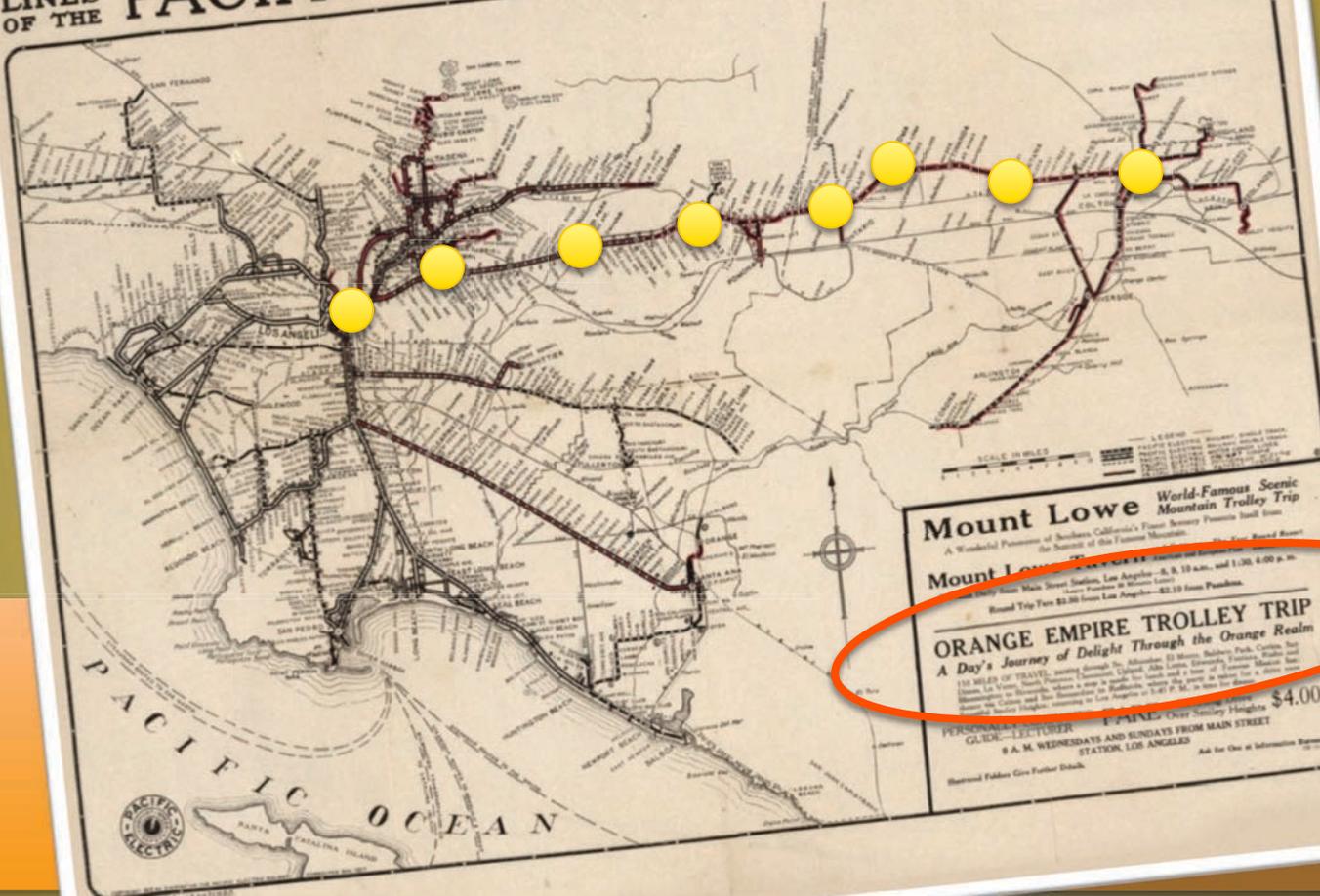
Interpretive Implementation Strategies

Interpretive Implementation Strategies



- Maximize The Use of Each Trails Unique Natural, Historical, Cultural Features
- Connect The Dots Among The Features and Trail
- Map a Graphic Representation of Interpretive Opportunities Along The Route
- Narrow The Focus of The Story – What Stands Out, What Fades Away

LINES OF THE PACIFIC ELECTRIC RAILWAY IN CALIFORNIA



Mount Lowe *World-Famous Scenic Mountain Trolley Trip*
 A Wonderful Panorama of Southern California's Finest Scenery Presented from the Summit of the Famous Mountains.

Mount Lowe *Scenic Trolley Trip*
 Round Trip Fare \$2.00 from Los Angeles - \$2.10 from Pasadena.

ORANGE EMPIRE TROLLEY TRIP
A Day's Journey of Delight Through the Orange Realm

PERSONALLY CONDUCTED BY **F. FAYNES** - Only Scenic Heights **\$4.00**
 GUIDE - LECTURER
 9 A. M. WEDNESDAYS AND SUNDAYS FROM MAIN STREET STATION, LOS ANGELES

Standard Fisher Give Further Details. Ask for One at Information Bureau.

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Interpretive Implementation Strategies

- Consider The Impact of Drawing Attention to Fragile Resources
 - *Will Bringing Attention to Them Do More Harm Than Good?*
- What Is The Potential For Vandalism
 - *How Does That Inform Your Approach?*
- Storyboard The Route
 - *Interpretive Locations at Appropriate Intervals.*
- Consider Suitable Materials
 - *For The Environment and For The Signs.*
- Create a Unified Motif
 - *Tie The Elements Together.*

Putting it All Together – The Graphic Process

The Design Process – Putting it All Together

Messaging

- 7th – 9th Grade Reading Level
- Relevant to Smart Phone, Digital Generation
- Interpretive Not Instructional
- Cultural Compatibility

Graphics

- Attention Getting
- Tell The Story Visually
- Color and Design Compliment The Trail
- Adds to Understanding of Message
- Spacing
- Less Is More
- Allow Space For Visual Interpretation

Size

- Appropriate For Space
 - Don't Overwhelm, Don't Disappear
- Consider Not Only The Panel, But The Mounting and How All of it Relates and Affects The Graphics

Typography

- Clear and Concise
- Serif Or San Serif Are O.K.
- Avoid Italics, Bold, Overly Decorative – Script
- Limit to 2 – 3 Fonts
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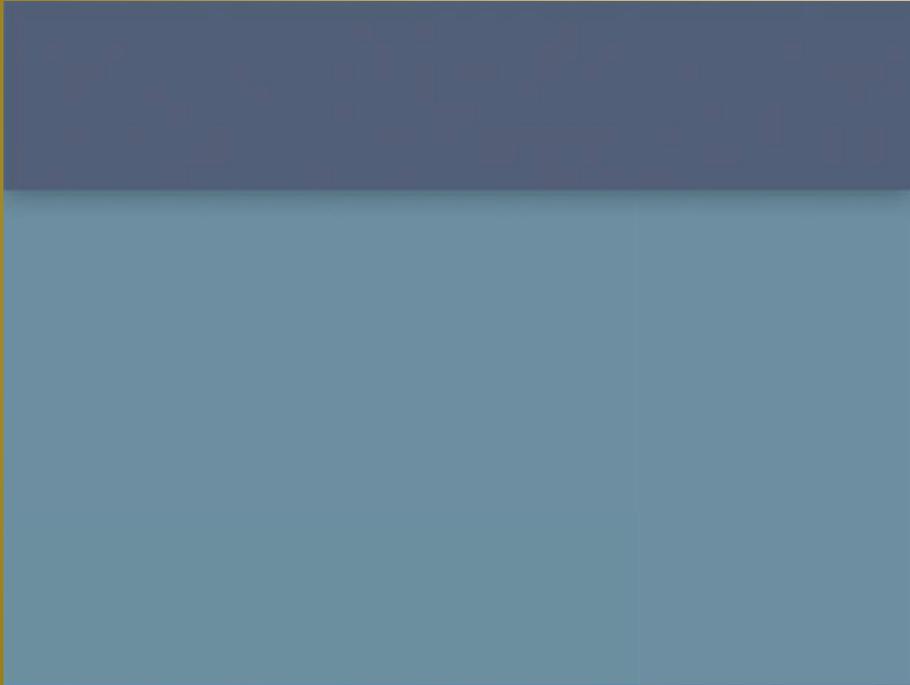
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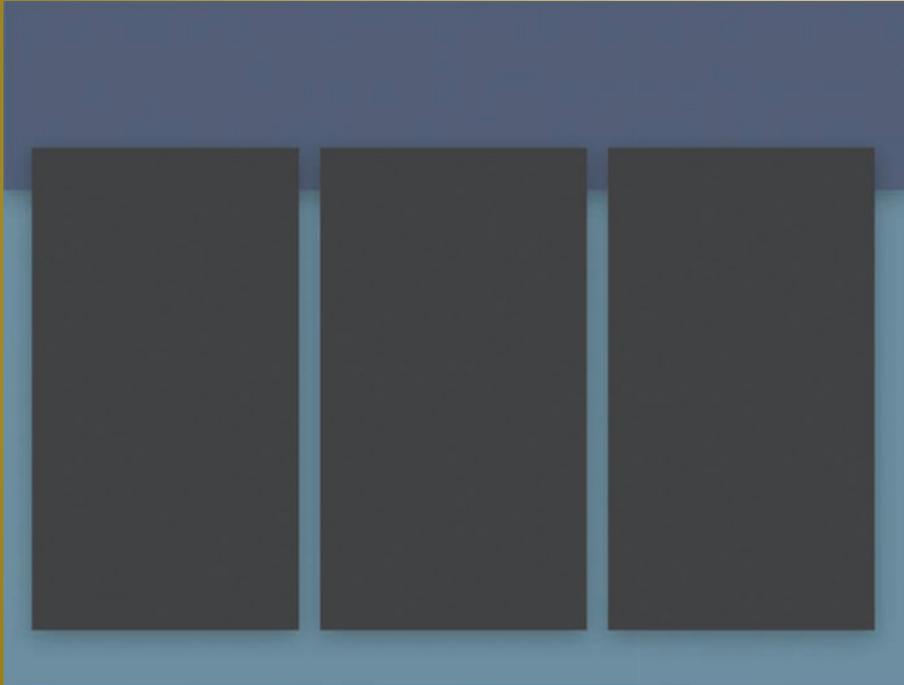
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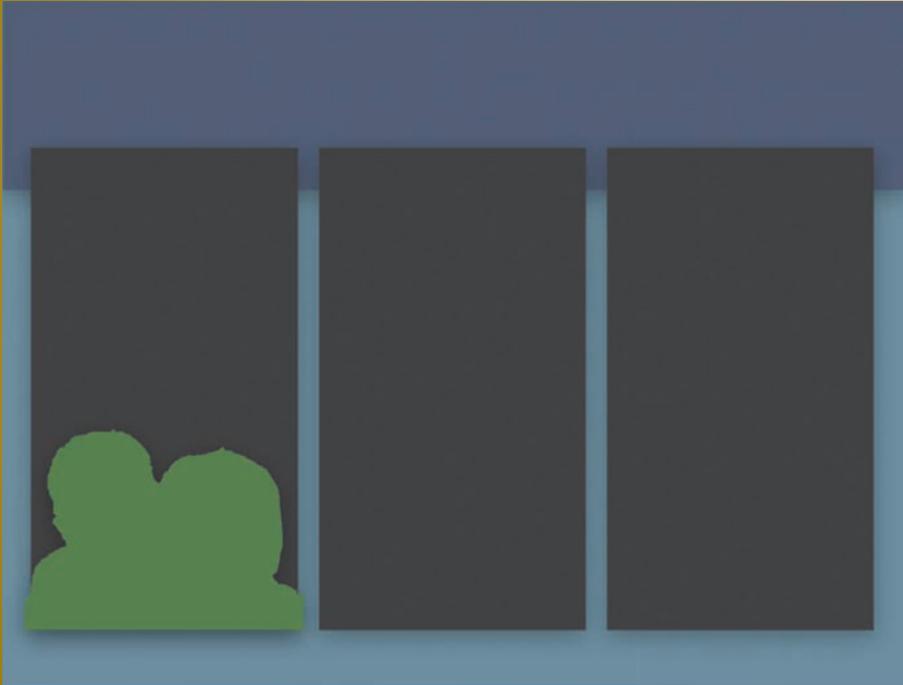
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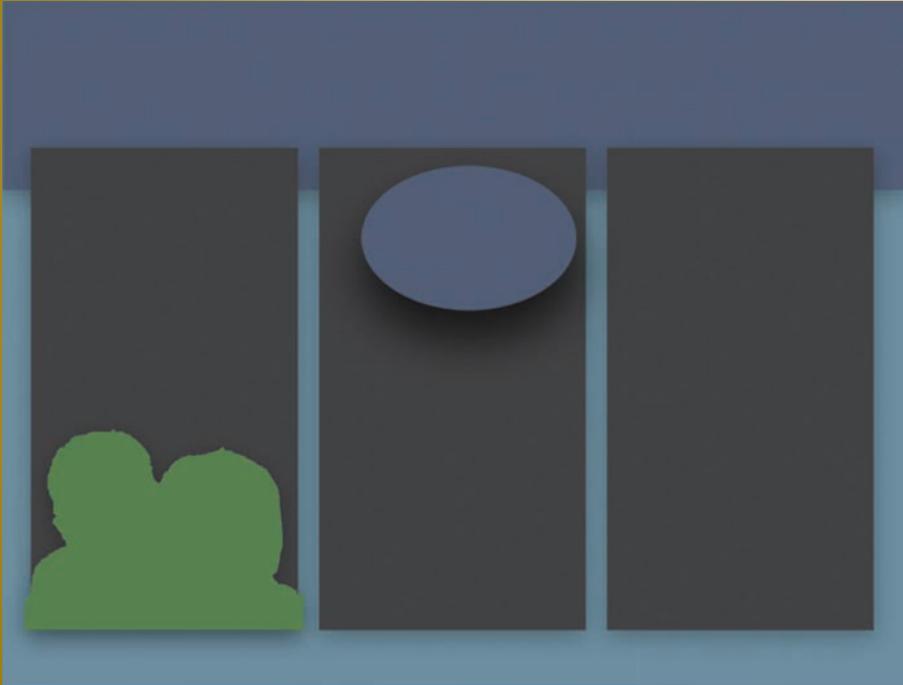
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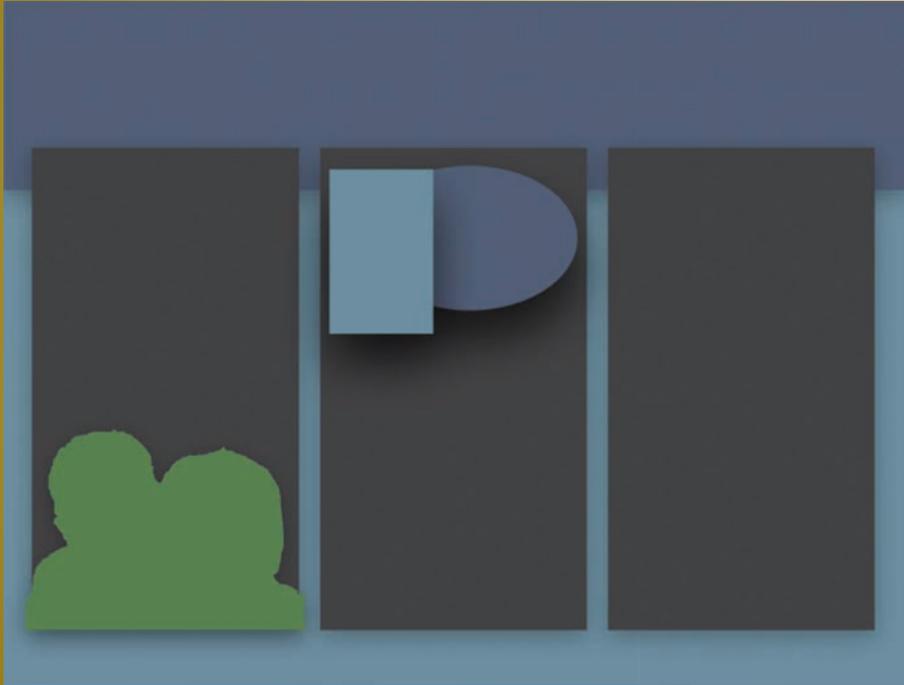
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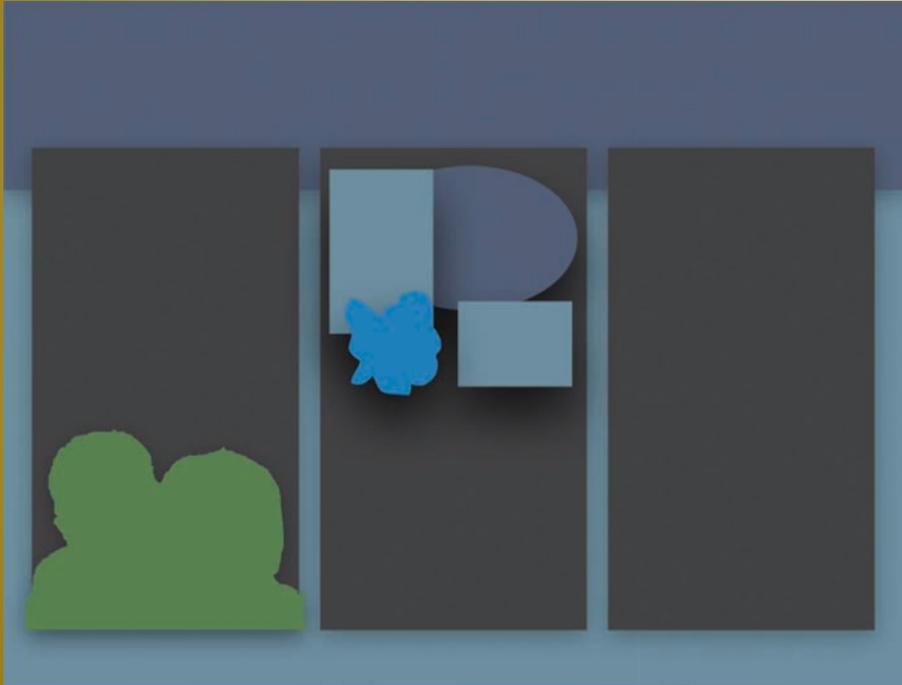
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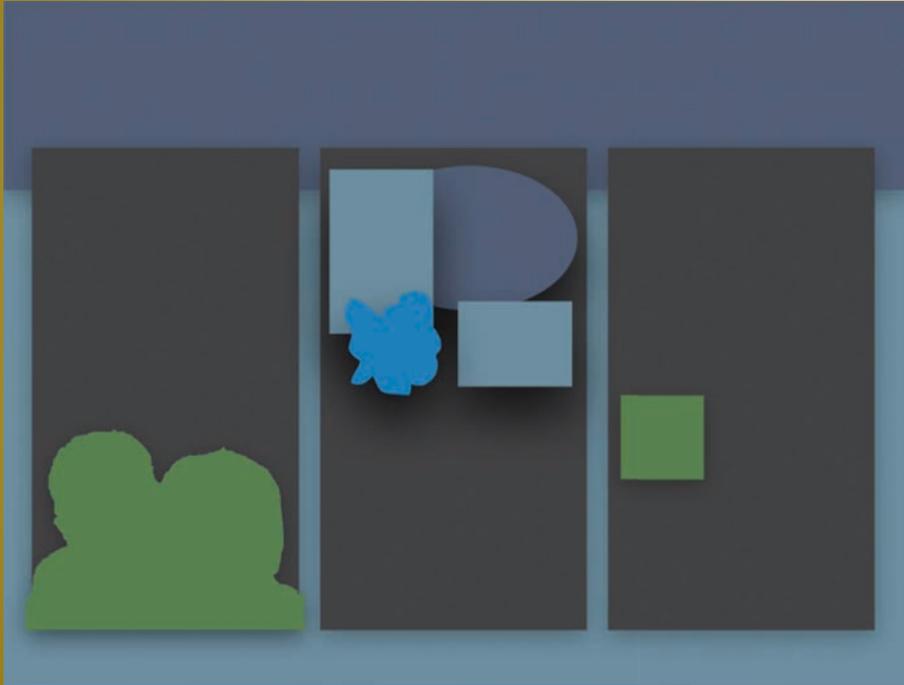
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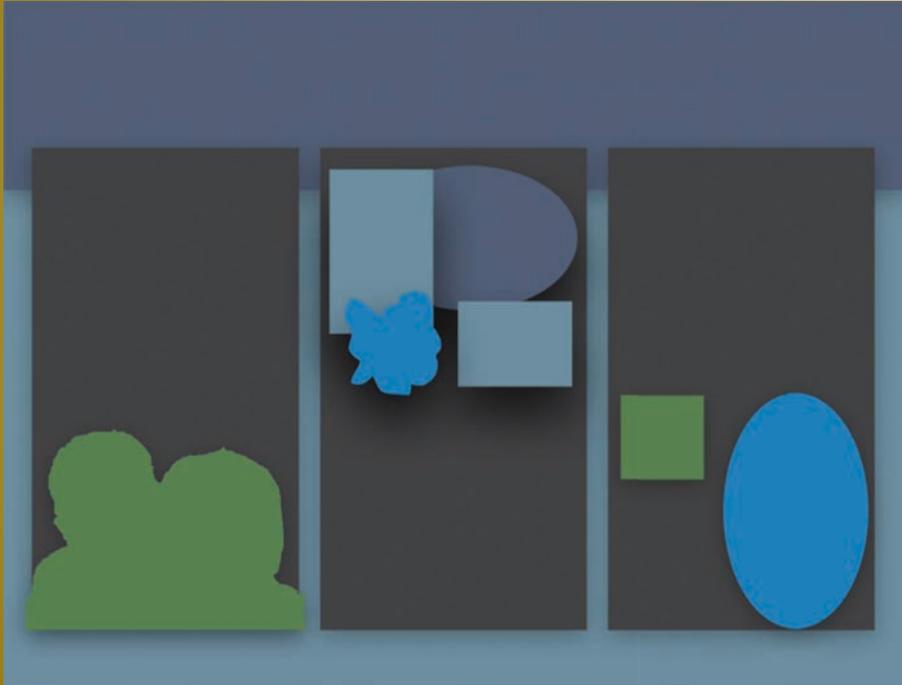
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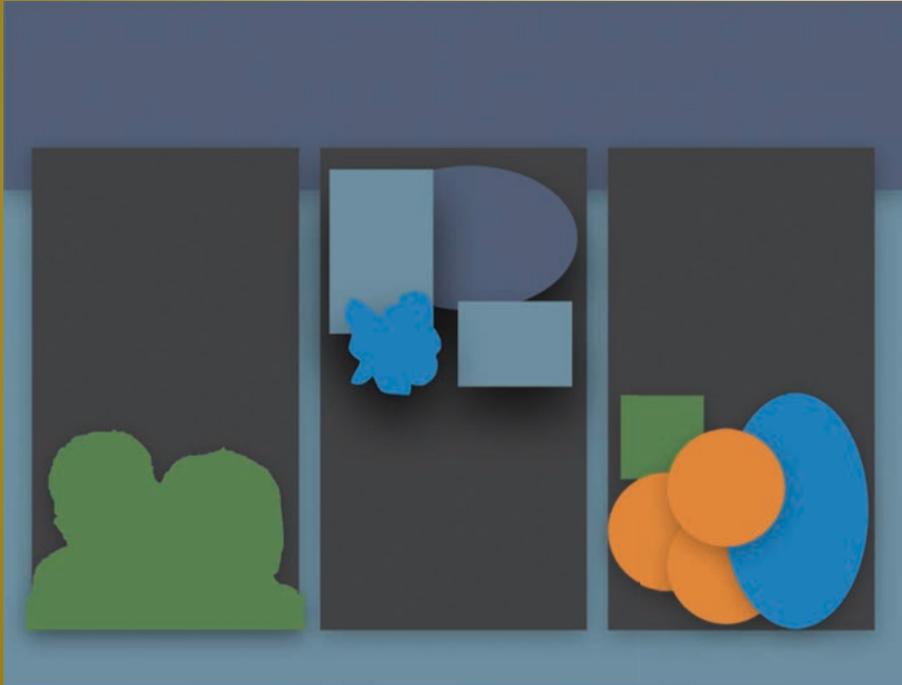
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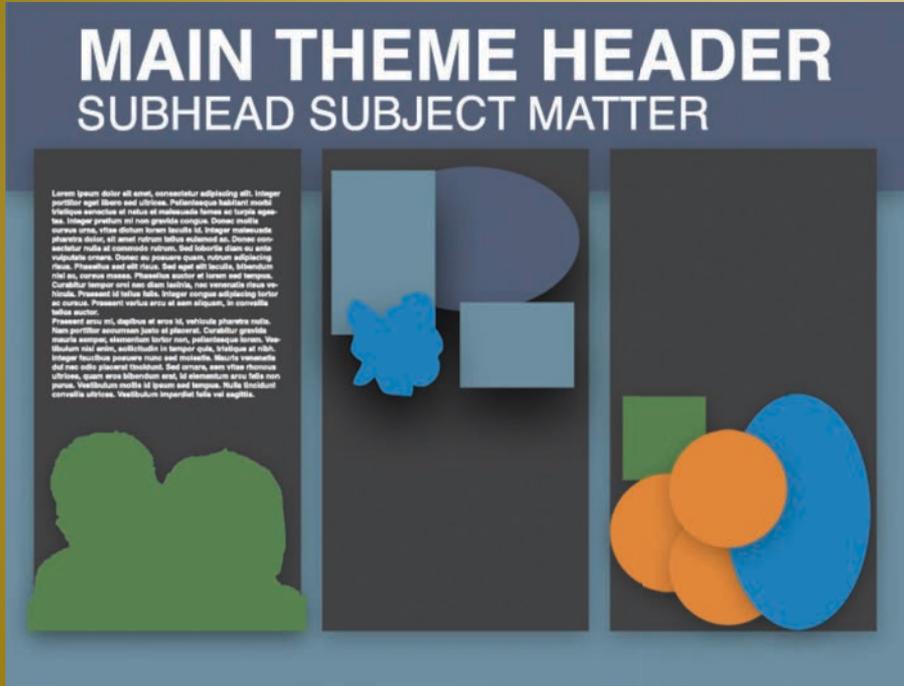
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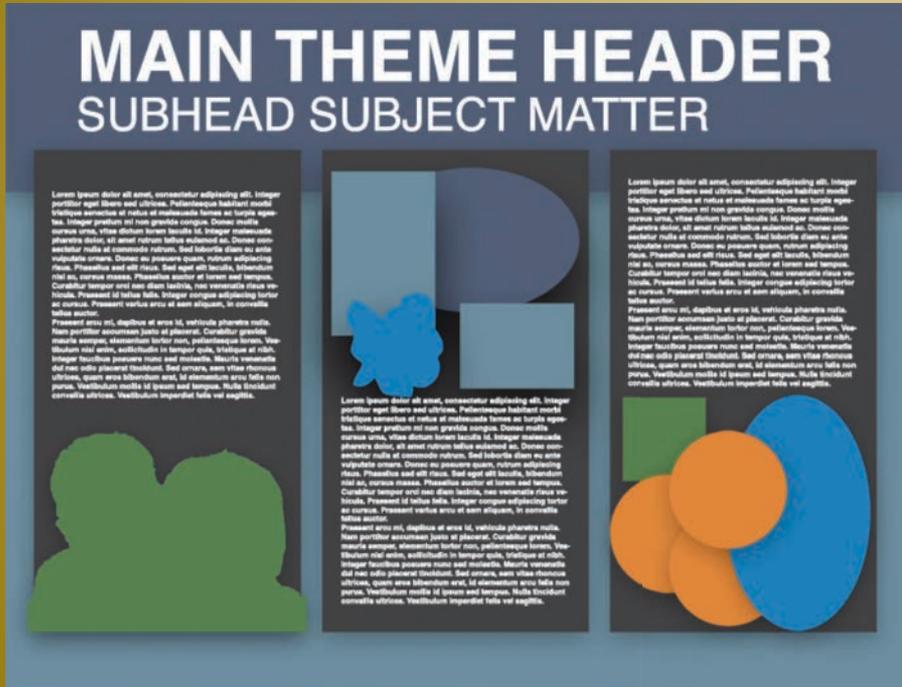
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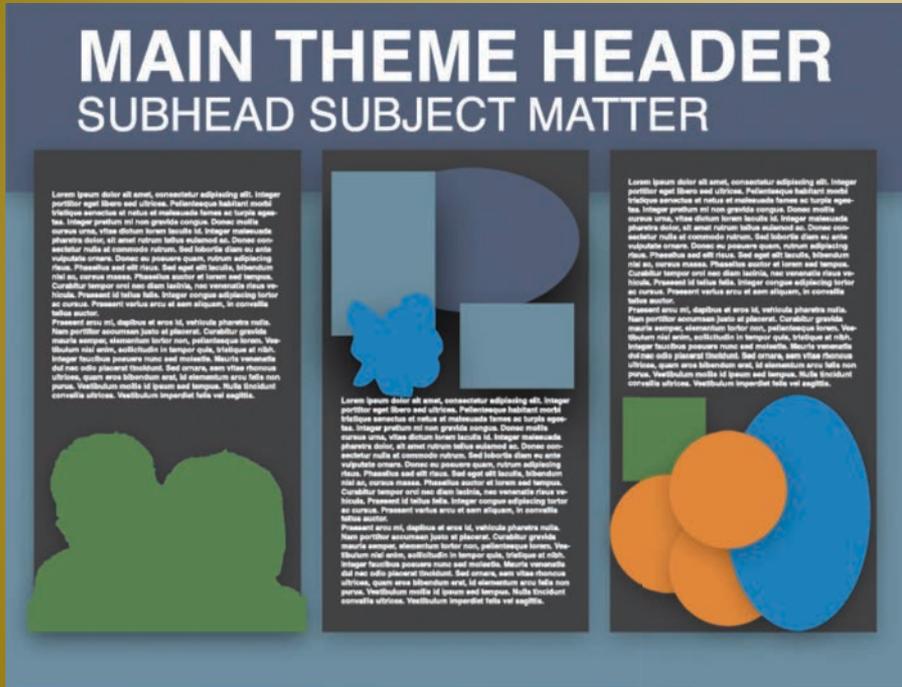
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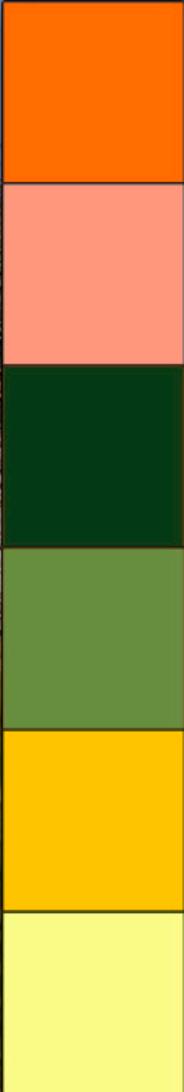
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Typography

ABC ABC

You want type that is easy to read with little to no visual distortions. Too many times using bold mistakes emphasis for legibility. Clean, concise faces are best.

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Typography

ABC ABC

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North Etiwanda Preserve



North Etiwanda Preserve



North Etiwanda Preserve



- Established 1998
- 762 acres of County Land
- Freeway mitigation, open space preservation
- 3.2 Miles of Primary Trail with extensions
- Riversidean Alluvial Fan Sage Scrub plant community
- Remnants of Historic Settlements, Water Management and Aboriginal Groups
- Trail and Historical Site







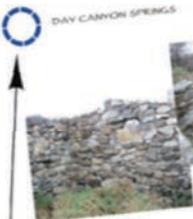
CHOLLA CACTUS



CHOLLA



OLD WELL PUMP DECK



DAY CANYON SPRINGS



OLD GRAPE AT NATURAL SPRING DEEP



EARLY SETTLEMENT CABIN RUIN

EAST ETWANDA CANYON



EAST ETWANDA CANYON WASH



DAY CANYON STATION

ENTERING PINE FOR SHADE/HELPER



VIEW TO VALLEY BELOW



WHITE SAND



FOSSIL OAK



OUR LORD'S-CANDLE



KNEED BUSH



BLACK SAGE



NARROW-LEAFED YERBA SANTA



CALIFORNIA FURNACE

SYCAMORE WASH - HIGHLIGHTING PLANT SPECIES AND ADAPTATIONS TO FIRE AND DROUGHT

EARLY WATER RESOURCE DEVELOPMENT

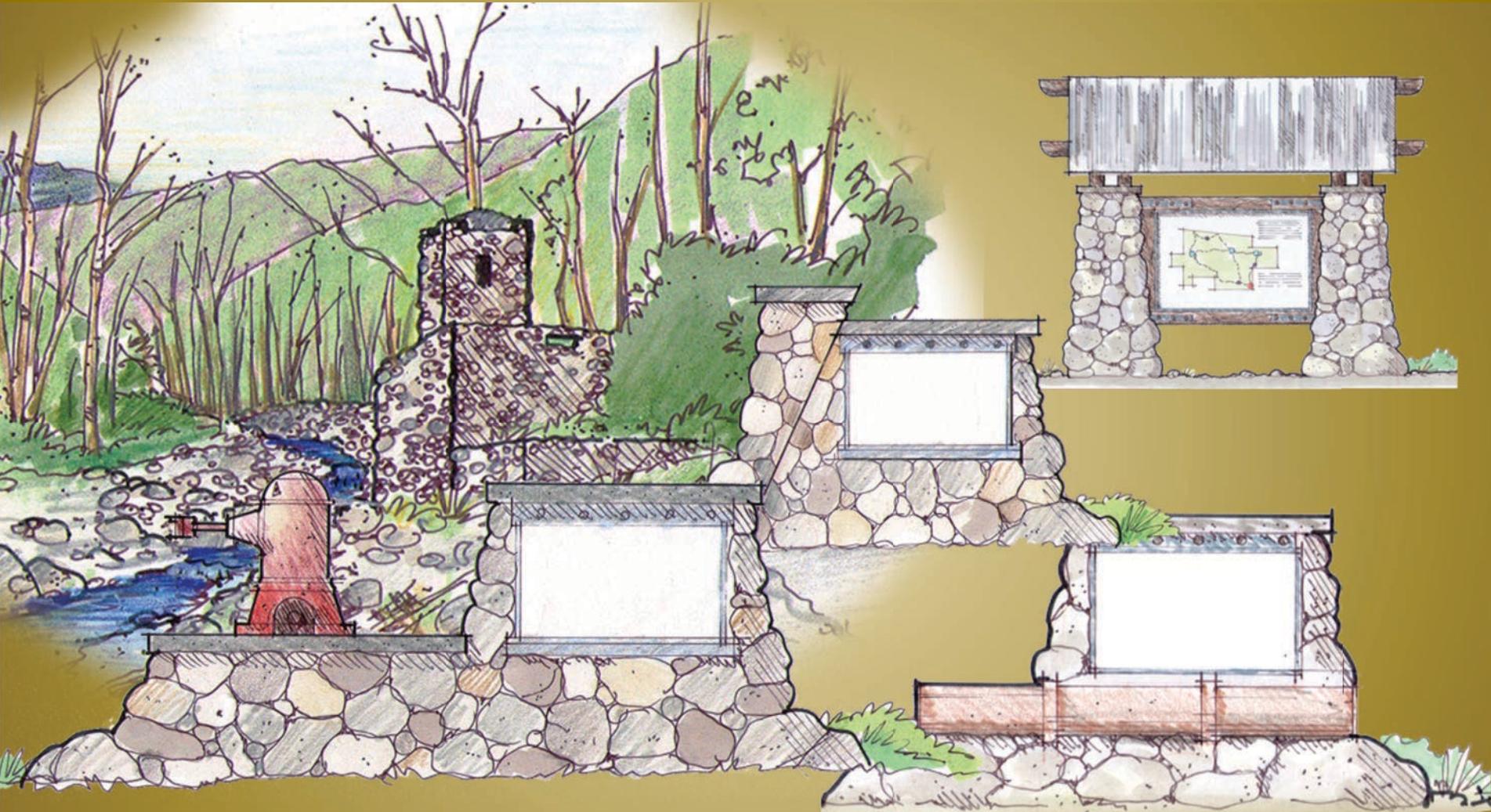
DAY CANYON SPRINGS

AQUADUCT PIPE SYSTEM



TRAILHEAD TO ETWANDA PRESERVE





A stone pillar on the left and a stone wall at the base of the sign.

NORTH ETIWANDA



PRESERVE

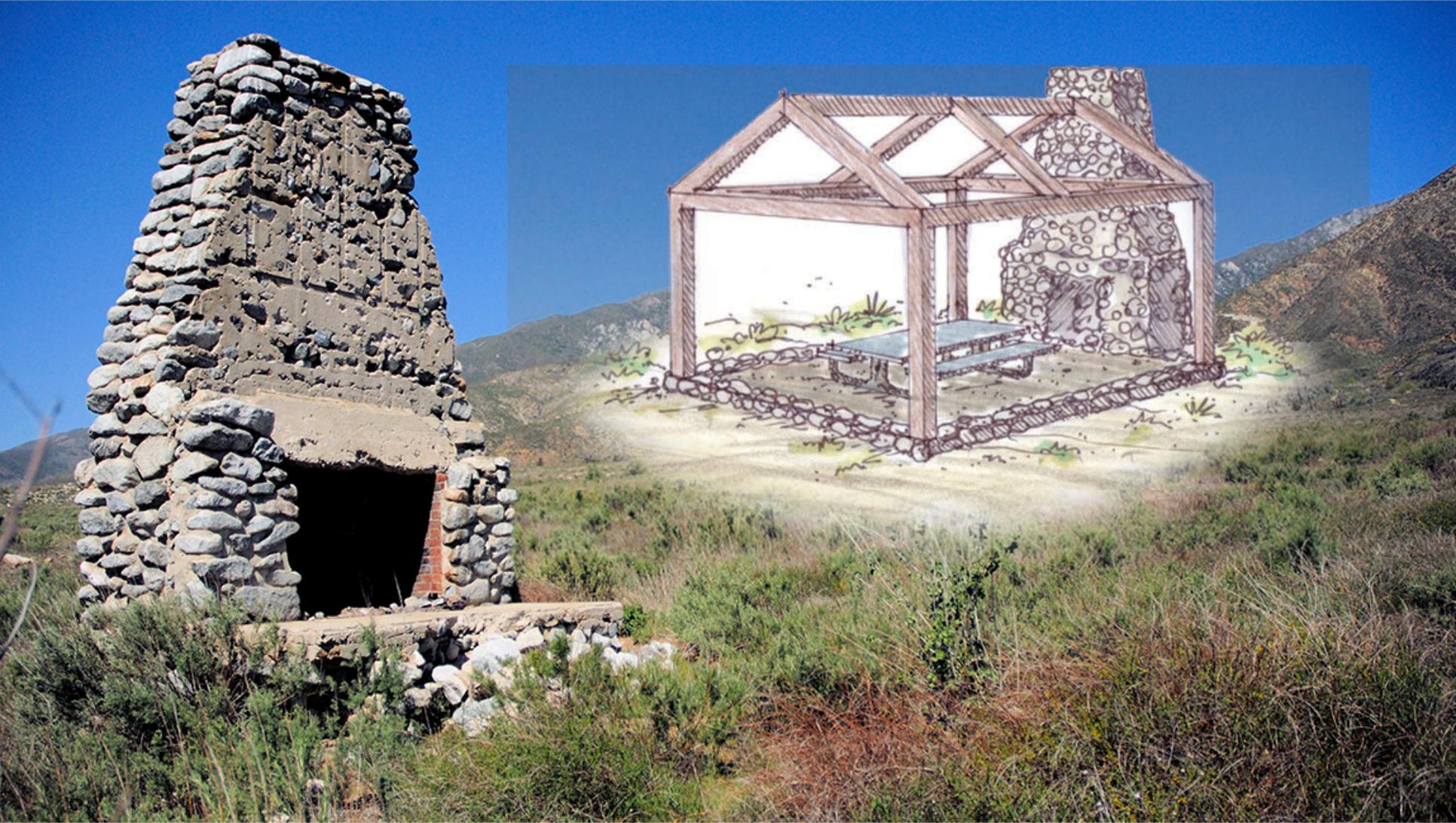


COUNTY OF SAN BERNARDINO
SPECIAL DISTRICTS DEPARTMENT















Cucamonga Basin #6



- PLANT COMMUNITIES:**
- Wetland Plant Community
 - Riparian Plant Community
 - Existing Riparian Plant Community
 - Riversidean Sage Scrub Plant Community

FEATURE LEGEND:

- ① Existing wetland structure
- ② Flexible spring slope stabilization
- ③ Low-flow pipe outlet from structure
- ④ Existing timber steel perimeter fencing
- ⑤ Existing structure steel structure
- ⑥ Existing wetland area with ① shallow structure
- ⑦ Existing outlet pipe and headwall from upper slope development
- ⑧ Wetland maintenance access gate
- ⑨ Wetland developed grade rectangular access road structure 17 wide
- ⑩ Wetland barrier with reinforced Tand behind the wetland channel. Bottom depth 120.0
- ⑪ Low-flow structure at headwall
- ⑫ Flexible slope structure structure size 13x16 120.0
- ⑬ Rip-rap retaining lower structure depth of 7
- ⑭ Wetland #1 with trapezoidal channels. Maximum water height 124.5
- ⑮ Concrete "Narrow Crossing" with 2/8 rubber openings and removable top for maintenance channel use
- ⑯ Wetland Tand access area
- ⑰ Wetland #1 mini-pool with hard bottom for wetland removal. Bottom depth 124.5
- ⑱ Wetland #1 deep structure concrete size with slugged height. Maximum height 124.7 to maximum 122.0
- ⑲ Wetland #2 with trapezoidal channels. Water height 123.5
- ⑳ Wetland #2 mini-pool. Bottom depth 120.0
- ㉑ Wetland #3 deep structure concrete size with slugged height. Maximum height 123.7 to maximum 124.5
- ㉒ Reinforced concrete base #3. Top elevation 123.8. Bottom elevation 120.6
- ㉓ Proposed elevated headwall and outlet pipe to protect maintenance road to see wetland
- ㉔ 1/4th structure with removable top for maintenance channel
- ㉕ Access ramp to gate structure height 15
- ㉖ 1/4th structure side
- ㉗ Emergency spillway structure. Elevation 124.5
- ㉘ Existing flexible rip-rap wetland channel
- ㉙ Outlet pipe to stabilized channel
- ㉚ Maintenance access road
- ㉛ Some wetland area

Cucamonga Basin #6

Conceptual Master Plan

Cucamonga Basin #6





REPLENISHING THE NATURAL BARRIER
A project of the City of San Diego

1. **REPLENISHING THE NATURAL BARRIER**
The project aims to restore the natural barrier between the city and the ocean, providing a natural defense against coastal erosion and flooding. This is achieved through the planting of native coastal plants and the construction of a stone retaining wall.

2. **IMPROVING THE WATER QUALITY**
The project will improve the water quality of the adjacent water body by filtering out pollutants and sediment. This is done through the use of natural filtration techniques, such as the planting of native coastal plants and the construction of a stone retaining wall.

3. **CREATING A RECREATIONAL SPACE**
The project will create a recreational space for the community, providing a place for walking, jogging, and playing. This is achieved through the construction of a wooden boardwalk and the planting of native coastal plants.

4. **PROTECTING THE NATURAL BARRIER**
The project will protect the natural barrier from erosion and flooding, ensuring its long-term sustainability. This is done through the construction of a stone retaining wall and the planting of native coastal plants.

5. **ENHANCING THE SCENIC VIEW**
The project will enhance the scenic view of the adjacent water body, providing a beautiful view for the community. This is achieved through the planting of native coastal plants and the construction of a stone retaining wall.





Cucamonga Basin #6

SLOWING THE FLOW OF WATER



What are wetlands?

Wetlands occur in low-lying areas of land where water flow is slowed down and stored for a period of time. Some wetlands are wet all year long, while others are ephemeral, and only appear during the rainy season. The wetland ponds that make up Cucamonga Basin #6 can vary in wetness due to seasonal moisture and the influx of water from upland sources.

WHAT TYPES OF WETLANDS ARE THERE?

MARSHES

Marshes are periodically or permanently saturated shallow bodies of water. They occur near the ocean (Tidal Marshes) or inland (Non-Tidal Marshes).



SWAMPS

Swamps are fed by surface water and are dominated by hardwood trees and shrubs.



BOGS

Bogs are freshwater wetlands with spongy peat deposits where plant material builds up over time and creates a thick carpet of sphagnum moss.



WHY ARE WETLANDS IMPORTANT?

Wetlands are important features in the landscape and help reduce erosion, improve water quality, protect areas from floodwaters, and provide habitat for thousands of animals and plants. Wetlands act like natural sponges and allow water to slowly settle and percolate into the ground.

Wetland plants then help to absorb excess nutrients, sediment, and pollutants before they enter river waterways and oceans. Many animals depend on the resources that wetlands generate for their survival. More than one-third of the nation's endangered and threatened plants and animals ~~in the United States~~ depend on wetlands in some way.



Wetlands provide habitat



Provide protection from flooding



Stabilize shorelines and banks

REPLENISHING THE ALLUVIAL AQUIFER

A significant source of fresh water



Historically, surface water from the San Antonio and Cucamonga Creeks has been diverted to spreading grounds at the base of the San Gabriel Mountains. As far back as the early 1900's, the San Antonio Water Company recognized the importance of collecting and storing water for future use within the deep aquifers surrounding this area. Although the landscape character has changed dramatically since then, Cucamonga Basin #6 has been designed to help maximize ground water storage, by allowing water to collect here within the eastern portion of the basin. The recharge basin you see below has an extremely porous substrate of alluvial soil. Rock, gravel and sand make up this substrate, and allow water to percolate rapidly.



Maintenance personnel can adjust the amount of water allowed to exit the recharge basin by opening a series of gates from the control tower. These gates can also be closed to optimize water storage during the winter months. From this intake structure water moves down stream and daylighted just south of Colonias Parkway into the rock-lined channel.



INTAKE STRUCTURE AT BASE OF CONTROL TOWER

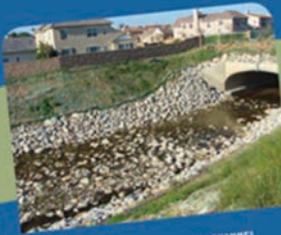
Cucamonga Basin #6 wetlands and recharge basin are an important local source for replenishing ground and surface water.

Cucamonga Basin #6 can hold 600 acre-feet of dead storage and during heavy rain events can release up to 600 CFS (cubic feet per second) of water. The large storage area of this basin helps extend the time period of storm water release. By releasing water after the flood peak, the potential for down stream flood damage is greatly minimized.

Dead Storage — The volume in a reservoir below the lowest controllable level.



RECHARGE BASIN AT FULL CAPACITY



OVERFLOWS TO DOWN STREAM CHANNEL



OUTLET STRUCTURE TO CUCAMONGA CREEK

FLOOD PROTECTION AND CONSERVATION

How does it work?



Cucamonga Basin #6 provides flood protection and ground water recharge for the cities of Upland, Rancho Cucamonga, Ontario and Chino. Beyond the necessary flood protection, the basin has been designed to mimic conditions found locally within a Riparian/Wetland ecosystem. The wetlands and surrounding slopes have been revegetated with native plants and provide habitat to wildlife and migrating waterfowl. This 58-acre conservation open space and detention basin system will have a long-lasting positive effect for humans, plants, minerals and wildlife.



THE FUNCTIONAL COMPONENTS OF CUCAMONGA BASIN #6



Water travels through the basin by gravitational flow. "Tiered sub-basin ponds" help slow the water and allow sediment to sink. Each pond fills up and then overflows to the next pond, eventually arriving at the recharge basin, filtered and ready for ground water recharge. During large storm event: water is released into the soft bottom "gooseneck" channel, where it then flows to the Cucamonga Creek Channel.

A SEDIMENT BASIN
Water entering the Basin contains trash, sediment and debris. This basin helps to collect this debris before it reaches the wetland ponds and recharge basin.

C ARIZONA CROSSINGS
The Arizona Crossings provide safe access across the wetlands while allowing water to flow freely through underneath culverts.

E WETLAND POND #2
Wetland #2 helps temporarily store water even further prior to it reaching the recharge basin. The shorelines are heavily vegetated and provide habitat for amphibians and waterfowl.

H GOOSENECK CHANNEL
This soft-bottom channel aids in ground water recharge and provides additional riparian and wetland habitat. This bermed-lined channel connects the large retention basin to the Cucamonga Creek Channel.

B DROP STRUCTURES
Drop Structures are placed between each sub-basin and help to dissipate energy from fast moving flowways. Large boulders provide a "stepped" drop, similar to waterfalls found in nature.

D WETLAND POND #1
This wetland is the highest and contains several islands that waterfowl use for nesting and protection from predators. During times of drought, this wetland dries down to brackish channels and mudflats.

F RECHARGE BASIN
By the time the water reaches the recharge basin, the majority of the sediment, chemicals, oils and other pollutants are removed. Water is stored here and allowed to percolate into the ground water aquifer.

G EMERGENCY SPILLWAY
In the event of a 100-year storm, the basin will flood and rise until it breaches the emergency spillways. This spillway leads down the "Gooseneck Channel" and empties into the Cucamonga Creek Channel.

AN INDIGENOUS LANDSCAPE

The plant communities of the basin



Looking down into the basin you'll see patterns of plants that wrap along the slopes, shorelines and wetland islands. Each plant community is adapted to thrive off the natural rainfall and seasonal conditions that surround the basin. Upland slopes are much drier, and more adapted to drought. These slopes feature a mixture of Chaparral and Alluvial Sage Scrub plant species. Riparian trees and shrubs dominate the interface zone between Upland and Wetland communities. Many of the Riparian species are adapted to both wet and dry conditions. Within the bottom of the basin lies the Wetland community. This community is made up of water-loving plants that meander the shorelines and wetland islands. These wetland plants play a vital role in a process called phytoremediation. Phytoremediation uses plants to contain, remove or render harmless pollutants, pesticides, heavy metals and other environmental contaminants that migrate into the water and saturated soils.

UPLAND COMMUNITY



Eucalyptus - Desert Eucalypt



Quercus laevis - South Leaf Yucca Sage



Penstemon spectabilis - Showy Penstemon



Salvia apiana - White Sage



Artemisia californica - California Sagebrush



Yucca whipplei - Our Lord's Castle

RIPARIAN COMMUNITY



Populus fremontii - Western Cottonwood



Salix exigua - Sandbar Willow



Platanus racemosa - Western Sycamore



Rosa californica - California Wild Rose



Sambucus mexicana - Mexican Elderberry



Alnus rhombifolia - White Alder

WETLAND COMMUNITY



Anemopsis californica - Yerba Buena



Carex spiza - San Diego Sedge



Juncus mexicanus - Mexican Rush



Salix lasiolepis - Arroyo Willow



Scirpus californicus - California Bulrush



Typha latifolia - Common Cattail

The hydrological regime of the basin has the greatest influence on the vegetation patterns of the Wetland and Riparian communities. Fluctuating water levels and timing of water conveyance shape where "hydrophytes" exist and thrive. Plants within the Wetland zone are referred to as "hydrophytes", meaning they can thrive in flooded conditions where their root systems are saturated in water for most of the year.

HYDROLOGIC REGIME — Changes in the flow rates of water; effected mainly by precipitation and evaporation, although human influence and activity can also alter these conditions. The hydrologic regime of the basin is designed to follow the seasonal climatic conditions of Southern California. This profile cross section illustrates where the plant communities exist within the basin and how the water levels fluctuate seasonally.



PROFILE CROSS SECTION OF BASIN PLANT COMMUNITIES



HABITAT DIVERSITY

A new place to call home



The constructed wetlands and vegetated slopes surrounding the basin now offer a diverse environment for many animals to inhabit. Waterfowl, lizards and snakes alike can find refuge amongst the boulders, thickets and wetland islands. Man's encroachment into native areas has a devastating effect on wildlife populations. Through conservation and restoration, it is likely that many of the species listed below may once again utilize this open space as a place to visit or call home.

BIRDS

This endangered songbird inhabits riparian waterways dominated by Willow canopy cover. They prey on a variety of insects by hovering and "picking" them from the vegetation. They typically migrate south during the fall, returning in March to begin breeding.



Vireo bellii palmeri
Least Bell's Vireo

You will find this bird along the shorelines and rocky edges of the wetland ponds eating many types of insects. These birds often act as the alarm system for other animals by sounding out a piercing call when danger approaches.



Charadrius vociferans
Killdeer

These birds are very common to the basin. You will find them swimming in flocks in the open water, occasionally diving for food. They nest along the shorelines within the protective thickets of the tall reeds.



Fulica americana
American Coot

Soaring above the basin in the shape of a "flying cross" you may spot this bird searching for prey. The Cooper's Hawk is a short-winged raptor that is fairly common within urban areas. It preys on birds and small mammals.



Accipiter cooperii
Cooper's Hawk

MAMMALS

This rabbit, also known as the black-tailed hare, inhabits the wetland and semi-open sage scrub areas within the foothills of the San Gabriel Mountains. It is an herbivore and feeds on grasses, forbs and shrubs.



Lepus californicus benetii
San Diego Black-tailed Jackrabbit

This member of the Felidae family is primarily active during the twilight hours (dawn and dusk). They are very territorial and hunt a variety of other animals including birds, fish, rabbits, squirrels, and domesticated animals like dogs and cats.



Lynx rufus californicus
Bobcat

You will find these small vertebrates darting across the boulders on their way to their protective burrows. They are primarily vegetarians and eat perennial grasses, seeds and herbaceous plants. Raptors, snakes, bobcats and coyotes prey on them.



Otospermophilus beecheyi
California Ground Squirrel

Coyotes travel and hunt in small packs and are primarily nocturnal. Ground squirrels, mice, snakes and lizards make up their diet. They are also well adapted to the human environment and have been known to prey on semi-domesticated pets.



Canis latrans
Coyote

AMPHIBIANS

This frog is terrestrial and breeds in its own under rocks and logs during the daytime and nights. These toads are very active at night and use open water for breeding. They lay their eggs in shallow water between 6"-12" in depth. They feed on bees, beetles, ants, arachnids and other insects.



Bufo boreas
Western Toad



Actinemys marmorata
Western Pond Turtle

These turtles are found in marshes, streams, ponds and rivers. They seek refuge in habitats that have boulders, logs and brush cover. They like to bask in the sun during the daytime hours, but can be difficult to detect.



Batrachoseps major
Garden Slender Salamander



Hyla regilla
Pacific Tree Frog

This small frog is found in many aquatic habitats throughout the west coast. It can be identified by the black eye stripe that extends from the nose to the shoulder. This frog can also change its color from tan to green depending upon the background or vegetation color of its habitat.

REPTILES

This snake is a venomous pit viper that can reach 4-5 feet in length. It eats lizards, frogs, small mammals, birds and even other snakes. Do not attempt to handle these snakes, as they are extremely dangerous.



Crotalus oreganus helleri
Southern Pacific Rattlesnake



Scoloporus occidentalis
Western Fence Lizard

Who's that skimming themselves on the rocks? It's the Western Fence Lizard, and they employ quick reflexes to keep them from being targeted by snakes, birds and mammals. These lizards hibernate in the winter, but are active during the warm months searching for insects and spiders.



Pituophis catenifer
Pacific Gopher Snake

This nonvenomous snake is sometimes mistaken for a rattlesnake. The Gopher Snake makes a similar sound by hissing and rapidly moving its tail through the grass. It preys on small gophers, lizards, insects and birds and their eggs.



Ameiobas tigris
Western Whiptail

This lizard prefers hot dry areas with sparse foliage and may be seen digging and foraging for beetles, termites, centipedes and other small lizards. The Western Whiptail is extremely fast and difficult to approach.

Jefferson Park Phil and Nell Soto

Interpretive features:

- ±2 acres nature & historic park
- Educational & Discovery Panels
- Themed Gardens
- Architectural Accents
- Hands on Kids Elements
- Water resource education



PHIL & NELL SOTO PARK

A History of Service and Dedication to Pomona

Phil and Nell Soto

Phil and Nell Soto Park is dedicated to the years of service and commitment to Pomona and all of the San Gabriel Valley by two of the most influential and important Latino politicians in California history. Their dedication to social justice, economic, financial and environmental causes make this park a precious and enduring treasure to their life and their legacy.

Phil was one of the few Latinos to be elected to state office since the early days of California serving in the State Legislature from 1962 - 1966. He fought for farm workers, students, and the poor. He marched with Cesar Chavez and campaigned with both Lyndon and Robert Kennedy. After he left state office, President Lyndon B. Johnson appointed him to be the Director of a minority business development program, providing job-training resources in East Los Angeles.

A middle-left generation daughter of Pomona, Nell worked in the city prison as a child during the depression. Nell and Phil were married in 1946. Elected to the State Assembly at the age 72, she was one of the first Latino women ever elected to state office. She began her political career as an environmentalist in Pomona serving from 1987 until 1998. Her dedication to environmental issues never faltered. She served on the Air Quality Management District Board in 1993. Later as a state senator, she championed water causes and was able to secure \$27 million dollars in funding for clean water resources.

A sustainable and native nature park is a fitting monument to two of Pomona's finest citizens. May all residents walk among the sustainable gardens and be reminded of the Soto's dedication and service to Pomona.



Wilton Heights Historic District

Wilton Heights is named after W.H. Wilton, a prominent builder in the early days of Pomona. Many of the homes he built are in the National Historic Register. This was a prominent part of town where bankers and high society made residences. The area is known for its large Victorian homes as well as the distinctive entry columns that adorn the neighborhood. Many of the park's features pay homage to the architecture and history of Wilton Heights.

A COMMUNITY PARTNERSHIP

The City of Pomona has partnered with The San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC) to design and construct Phil and Nell Soto Park. Major funding was provided by the RMC, one of ten conservancies within the California Resources Agency whose mission is to preserve open space and habitat in order to provide for low-impact recreation and educational uses, wildlife habitat restoration and protection, and watershed improvements within their jurisdiction. Participation from members of the community was facilitated throughout the process via town halls and other methods to make this a truly collaborative effort.



The Vital Role of Agriculture and Citrus

The Buschick Family moved from Concord Bluffs, Iowa to the Pomona Valley around 1855. Cyrus Buschick was a young man of 19, but quickly established himself as an honest and hardworking businessman. In 1860 Cyrus brought three worms of bees from San Diego and proceeded to produce honey that sold for \$1.00 a pound. By 1870 he was looking for a new venture and chose horticulture - more specifically he planned an orange grove in this very area. He started with five hundred trees, planted at night by lantern light.

Pomona was at the center of what became known as the Citrus Triangle which extended west from Santa Ana to the San Fernando Valley and east to Redlands and Riverdale. The citrus industry thrived from the 1880s to the 1970s but by World War II the industry started to disperse and the large acreage devoted to citrus was replaced by housing and industrial tracts.

FOLLOW THE PATH AMPHIBIANS AND WATER

Frogs are cool. Their presence in an area of biodiversity, a strong ecosystem and everything worth protecting in our natural environment. Frog Walk is a visual reference tool assisting the life cycle of the frog, its role from water both land and water environments, the landscape how will help to create an amphibian garden home.

Frogs are important to the water cycle and to humans. Tadpoles keep water cleaner than by feeding on algae, while adult frogs eat pests and insects that can carry disease. Frogs are an important indicator species meaning that a healthy population of frogs means a healthy natural environment.



BIOSWALES

Bioswales capture storm water runoff, as well as any excess water from landscape irrigation. The sloping sides drain water into the swale where the plants catch the water, allowing it to percolate through the soil. Large bioswales can help significantly ground water recharge, while smaller ones provide water for surrounding plants by reducing water on the surface than carrying it away through a storm drain system.

As you follow the life cycle of the frog to adulthood, look over to the bioswale and consider... are you still part of this cycle of life and what you do to sustain ourselves and other species only makes the world a better, cleaner and healthier place to live. Frogs can help to teach us how we are all interconnected in this ecosystem we call earth!



WATER CYCLE

In the natural process of the "Water Cycle," water slowly drains its way through the landscape, as rain, melting ice and snow percolates into the ground where it fills through streams and ponds, and finally returning to the ocean. Natural vegetation helps to increase soil disturbance and erosion, allowing our surface and below.

Tadpoles grow and thrive in the water protected by the plants that grow along the banks of ponds, streams and other water systems. As you walk towards the tadpole, take notice of the landscape plants. It's a frog garden, walk all the resources to provide a healthy habitat for amphibian populations.



WATER TABLE REPLENISHMENT

Water is stored in the ground in varying depths and is all part of the water cycle. Most of the water in the ground comes from precipitation that infiltrates downward from the land surface. The upper layer of the soil is the unsaturated zone, from precipitation that infiltrates downward from the land surface. The upper layer of the soil is the unsaturated zone, where water is present in varying amounts that change over time. The lower layer is the saturated zone, where all of the pores, cracks, and spaces between rock particles are saturated with water. The water groundwater is used to describe this zone. Another term for groundwater is "aquifer."

All of us need water, not just frogs. It is the most basic requirement of life. By encouraging systems that store and replenish our water, we are all helping to maintain a healthy water supply to help sustain life for generations to come.



ECOSYSTEM

An ecosystem is a community of living organisms plants, animals and microbes supported by nonliving components of their environment like air, water, minerals and soil. The interaction of these components, all together to provide nourishment and energy to sustain life. Ecosystems can come in any size from small areas like the bioswales, to the entirety of planet Earth.

Each detail! Frog eggs are dependent on a specific ecosystem, requiring both land and water. As you begin the walk you will notice the growth cycle of the frog and how the ecosystem builds you contribute to this beautiful amphibian.



ACTIVE COMMUNITIES

Healthy Vibrant Communities Enriched by Play, Exploration, and Exercise

This park makes life for the whole community better. Providing a positive space that combines healthy activity, nature, discovery, exploration and play - the park encourages a sense of well being and provides a common gathering place. Residents have a space to aggregate as neighbors and friends. By strengthening these bonds with both neighbor and nature, the park will be here for generations to continue to foster a heightened sense of community and a safer place for the whole family.



WALK



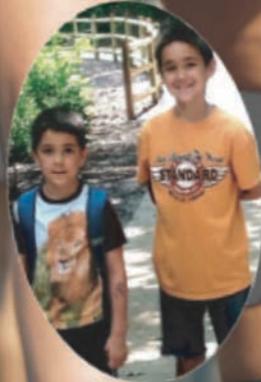
EXPLORE



EXERCISE



LEARN



DISCOVERY

BUTTERFLY GARDEN

Join in and Play with the Butterflies and Caterpillars

Butterflies are more than just beautiful delicate creatures. Their presence in the environment is beneficial to plant and animal life. While as a caterpillar the butterfly will feed on the host plant, the damage however is often minimal and the benefits of the adult butterfly population are immeasurable. Because of their beauty and showiness, butterflies attract people to their surroundings, creating a better understanding of our role in maintaining a protective environment.

Pollination

Butterflies are attracted to the bright colors and fragrance of flowers. As they feed on the nectar they move from flower to flower and their movements pollinate the plants along the way. Plants rely on insect pollinators such as butterflies for reproduction and to insure genetic diversity.

Conservation of Resources

Butterflies prefer native plants. Landscaping with native plants is a viable sustainable practice. Native plants are naturally better suited to the local climate and therefore require fewer resources for maintenance and help to create a healthier plant population.

Encouraging Habitat and Wildlife

Native habitats are able to thrive without the use of harmful chemicals or pesticides. Butterflies are susceptible to pesticides and insecticides. Native plants are not only pesticide safe plants for butterflies but also for other animals and beneficial insects such as bees and ladybugs, providing the plant system and landscape providing the plant system with a natural defense against harmful populations with a natural defense against harmful pests. Caterpillars and butterflies also provide a healthy and natural food source for birds, lizards and other wildlife.

Promote Environmental Awareness

Integrating natural settings like butterfly habitats provide the cultural appeal of the flowers and insects to attract and encourage human interest. This relationship can result in greater environmental awareness and provide better understanding of our role in creating natural habitats.



CALIFORNIA NATIVE POLLENATORS



Penstemon



Penstemon
(*Penstemon d. Howard McManis*)



California False Indigo Bush
(*Amaranthus Californicus*)

Hummingbird Garden

Hummingbirds are some of the birds that are fun to watch. Their ability to seemingly hover is a result of the young and old alike. Hummingbirds are also an important part of the ecosystem. Their ability to get up close and land to reach flowers makes them an important insect pollinator.



Anna's Hummingbird
(*Calypte anna*)

Allen's Hummingbird
(*Selasphorus sasin*)

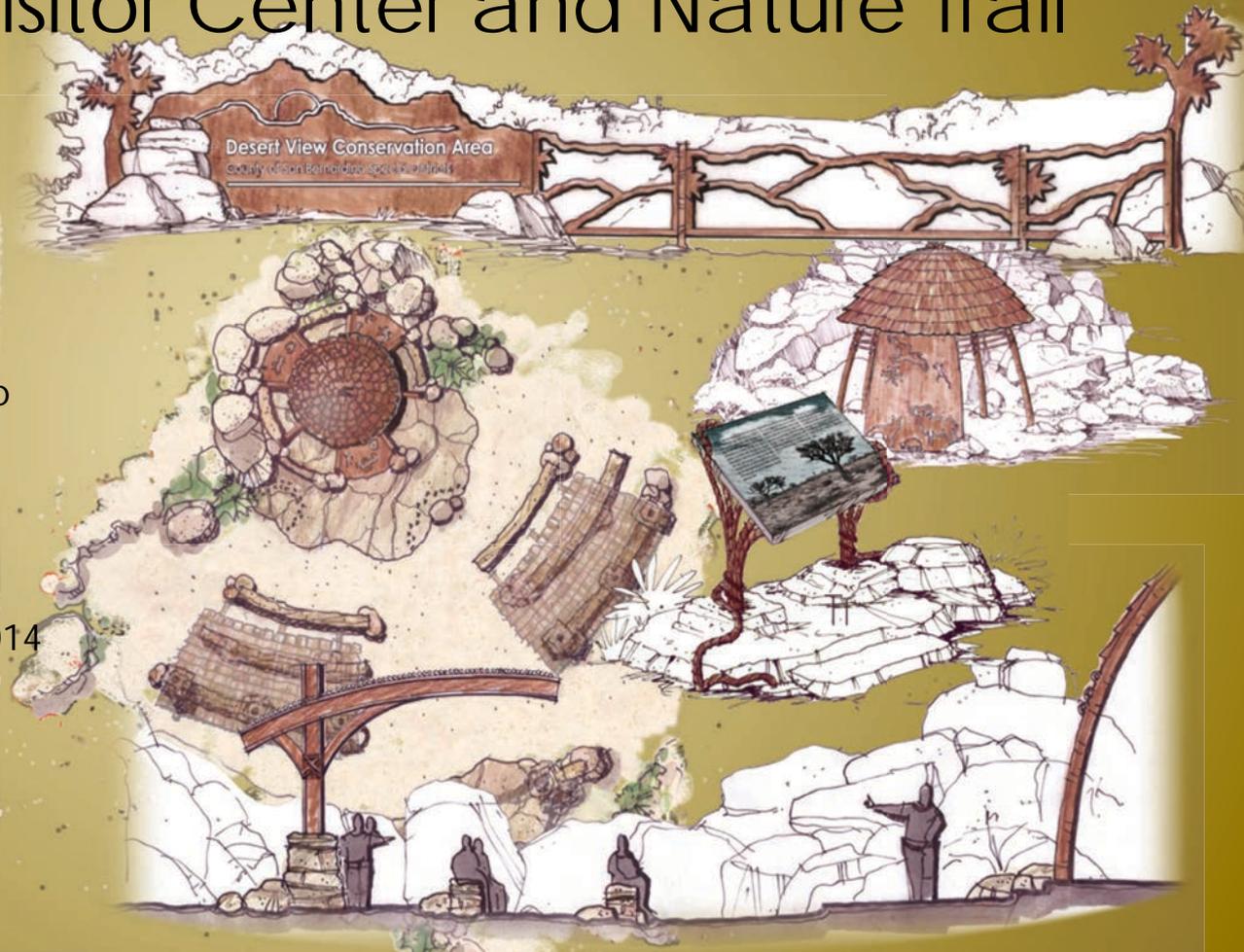
Costa's Hummingbird
(*Calypte costae*)

Black Chinned Hummingbird
(*Archilochus alexandri*)

Joshua Tree Visitor Center and Nature Trail

- ±640 acres
- County Regional Park.
- Home to a Fragile Desert Ecosystem.
- Sustainability and Environmental Stewardship
- Native, Historical Cultural Unique and Sensitive Habitats.

Expected Groundbreaking 2014



Joshua Tree Visitor Center and Nature Trail



Joshua Tree Visitor Center and Nature Trail



Joshua Tree Visitor Center and Nature Trail

