Verdugo WASH

visioning report

!melk

+BuroHappold

November 2022

Verdugo Wash Project Team touring the Verdugo Wash debris basin, April 2021

about this report

This report for the Verdugo Wash Visioning was written for the City of Glendale, California.

It was authored by **!melk landscape architecture & urban design**, with the support of key project collaborator, **Buro Happold Engineering**.

Key contributions were provided by the Planning Staff of the City of Glendale, as well as valuable project stakeholders including Chief Anthony Morales and Richard Toyon of the Tongva Tribe, the Arroyos & Foothills Conservancy, and the Verdugo Wash Visioning Working Stakeholder Group.

In addition to thanking the above contributors, we are grateful to the Los Angeles County Public Works Department for their cooperation, the City Council for the opportunity to study this corridor, and to every Glendale community member who offered immensely constructive input in the effort to re-imagine the Verdugo Wash.

City of Glendale, California
Community Development
633 E Broadway Room 103
Glendale, CA 91206

!melk
landscape architecture & urban design
111 John Street Suite 2650
New York City, 10038

BUROHAPPOLD
ENGINEERING
Buro Happold Engineering
800 Wilshire Blvd 16th Floor
Los Angeles, CA 90017

the Verdugo Wash Visioning **final report**

table of contents

chapter 1. **introduction** 7
- **the project & the process** 9
- **stakeholder & community engagement** 15

chapter 2. **the site today** 41
- **existing conditions** 43
- **historical accounts** 57

chapter 3. **the Vision for Verdugo Wash** 73
- **first impressions** 77
- **improved connectivity** 113
- **potential impact** 123
- **hydrological function** 131
- **enhanced ecology** 139
- **phasing implementation** 159
- **community considerations** 171

appendix A. **baseline hydrology** 189
appendix B. **mobility considerations** 205
appendix C. **interconnected ecologies** 283
appendix D. **sustainability & planning** 343
appendix E. **community outreach survey results raw results** 359

1.

introduction

introduction
the project & the process

A successful 21st century city includes accessible, open, public spaces that help improve walkability, safety, and physical and mental health.

The Verdugo Wash Visioning is the one of the first steps to realizing a truly connected Glendale - connected to the LA River, to Downtown, to various social and civic programs such as Glendale Community College, and - via an extensive mountain trail system - to multiple geographies.

A reimagined Verdugo Wash has the potential to bolster resilience, both across Glendale's natural environment and its diverse communities.

The Visioning for the Verdugo Wash was not conceived of in a vacuum! **In fact, the premise of this project and this Visioning Study is rooted in ideas voiced by the Glendale community!**

Glendale, whose urban and suburban fabric is fully "built-out" - recognizes the importance of green open space. It is important to note that Glendale is simultaneously "parks-rich" and "parks-poor" - while the publicly-accessible natural areas are tremendous resources for Glendale, they most enrich the lives of northern Glendale.

Glendale needs more green space.

Consider the Verdugo Wash, a 60-acre linear concrete channel that runs through the 18 Glendale neighborhoods. While the Verdugo Wash represents just 0.3% of the land area of Glendale, consider the following:

1. if one excludes the "natural / wild" areas, these 60-acres would represent a significantly substantial - equally distributed - land area within Glendale;

2. The Verdugo Wash is a *corridor* - a contiguous spine that connects north and south Glendale. At some points, it is 90-feet wide, and more importantly, it comfortably navigates the pinching topographies of the Verdugo Mountains and San Rafael Hills

The sum of these parts is greater than its whole. **The Verdugo Wash is the tremendously unique opportunity to stitch together North and South Glendale!**

The initial channelization of the Verdugo Wash was engineered nearly 90 years ago. The City of Glendale neither looks like it did in the 1930s (physically and demographically) nor has the same overall sentiments about the Wash. Furthermore, hydrology engineering technology has made monumental strides since the mid 1930s, and similarly, Glendale has experienced the advantages and disadvantages of concretized waterways.

project location: ***the Verdugo Wash is a 9.4-mile-long tributary of the Los Angeles River located in the Glendale area of Los Angeles County, California. The channel begins just south of Interstate 210 in the Crescenta Valley. It flows southeast along the eastern edge of the Verdugo Mountains, then south through a pass between those mountains and the San Rafael Hills, and finally west to ultimately join the Los Angeles River just northeast of Griffith Park.***

We believe that the Verdugo Wash has the potential to go beyond a single utilitarian function to integrate multiple benefits to enrich the community.

The Verdugo Wash Visioning offers a unique place-making opportunity that would significantly reshape the urban framework and character of a major area of Glendale.

The goal of the project is to develop a high-level vision, including but not limited to, conceptual design, programming, and integration of a re-imagined Verdugo Wash into the existing and potential land use framework of the City.

The vision will help transform the utilitarian design of the Wash (as a flood control channel) into a significant contributor to the City's character and amenities. The original tributary path will be revitalized, biodiversity will be reactivated, and the community will be reconnected with an active transportation corridor.

The Verdugo Wash Visioning will build upon strategies identified in the Greener Glendale Plan and other existing efforts. Related city goals and targets will be incorporated into the design where possible. The key project objectives, as defined by the City of Glendale and the brief for the Verdugo Wash Visioning, are:

1. *Create an overall urban design vision for the Verdugo Wash that extends from its northernmost origin to its confluence with the Los Angeles River and Griffith Park. The vision should respect the various neighborhoods along the route, but also create an identifiable theme that is consistent for the entire Verdugo Wash.*

2. *Develop new pedestrian and cycling trails that will allow the Verdugo Wash to serve as a multi-modal transportation spine while supporting and enhancing the Citywide Pedestrian Plan and Bicycle Transportation Plan.*

3. *Establish connections amongst existing assets along the route such as Downtown Glendale, business districts, entertainment venues, parks, and Griffith Park.*

4. *Identify and develop opportunities for public open space such as parks above or adjacent to the Verdugo Wash.*

5. *Identify and develop opportunities for fixed and temporary uses along the Verdugo Wash to promote civic and social engagement using urban design, art, and other placemaking strategies to create inspiring and activated places.*

6. *Identify sustainability, environmental restoration, and remediation measures including opportunities to restore the natural habitat in segments in or along the Verdugo Wash, and other strategies that will counter the effects of climate change.*

7. *Establish identifiable segments of the route that will create unique urban design visions and environments that are responsive to the surrounding urban context.*

8. *Utilize innovative experiential urban design, landscape architecture, art, and placemaking tools to create an aesthetically compelling and interactive urban space. This may include, but is not limited to; paving materials, landscape palette, art installations, wayfinding, and other unique design strategies that will create an identifiable vision. (Currently, Lighting Design, Public Art Strategy/ Procurement and Signage & Wayfinding are not accounted for in the landscape scope.)*

9. *Create a strategic branding program that will provide a recognizable identity for the Verdugo Wash and the project that will serve as an identifiable symbol and brand to be incorporated into wayfinding and other graphic representation of the vision.*

10. *Identify opportunity parcels that can serve as significant moments along the route. This should include parcels to consider for acquisition, or those that are already in possession of the city that can be repurposed to support the objectives of the Verdugo Wash.*

11. *Identify early and easily implementable strategies by creating a comprehensive vision that will make the project viable for long-term implementation, but creates early "win" opportunities to stake claim in the corridor.*

The Visioning Process

The Verdugo Wash Visioning effort, led by the **!melk**+**BuroHappold** team in close collaboration with the City of Glendale, will be an approximately one-year effort, comprised of the following stages:

Stage 1: ***Project Initiation & Pre-Design***

The pre-design stage established the basic framework for the study and involved: collecting and documenting physical and visual data of the study area including existing conditions and future citywide initiatives; reviewing and discussing precedent projects; establishing goals and objectives for the Verdugo Wash Visioning; establishing a public engagement strategy and schedule; and establishing a branding strategy for project identification.

Stage 2: ***Visioning***

Using data collected from Stage 1, public feedback, and design direction established as part of the charrette process, the **!melk**+**BuroHappold** team developed design alternatives and interventions for the Verdugo Wash.

This included potential route alternatives for pedestrians and cyclists, identifying locations for public space improvements, types of open space, exploring areas for habitat restoration, design approaches to respond to different neighborhood contexts, and sustainability measures.

The design team's efforts were compiled and presented by the City of Glendale, Community Development to City Council on February 7, 2022.

The presentation was an update on the Verdugo Wash Visioning Process, and requested a motion to provide input and feedback to staff regarding the current stage of the

visioning process for the Verdugo Wash Project, and to note and file the report.

Subsequent to Community Development's presentation, a lengthy and robust period of comment and question ensued, and ultimately the project received City Council approval.

Other interactions included a presentation and discussion with the Upper Los Angeles River & Tributaries (ULART) working group, and periodic "check-ins" with Los Angeles County Public Works (LACPW) regarding project intent, feasibility, and overall operations and maintenance considerations.

Stage 3: ***Visioning Refinements, Community Input & Engagement***

The **!melk**+**BuroHappold** team - with the valuable input and feedback from various stakeholders - went back to the drawing boards to further refine the vision / framework for the Verdugo Wash.

Another layer of input was collected at a city-wide public event, hosted by the **!melk** team in Glendale on February 12, 2022. At this engagement effort, which occurred simultaneously at three locations throughout the City (Verdugo Park, Fremont Park, and the City's downtown storefront) in order to maximize attendance. A great deal of valuable input and education occurred that day!

The team was able to - first-hand - present the work done to date, while listening to feedback and reactions from the community. The team was then able to incorporate the feedback received during public engagement events and hearings, stakeholder review, and through City staff guidance. This includes refinement of all work products undertaken in Stage 2, and advancing them from the conceptual to finalized vision documents.

Stage 4: ***Final Design & Report***

The efforts of the Visioning stage culminate in (this) final design report, which documents the process and components of developing the Verdugo Wash Vision.

Ultimately, upon completion of the Visioning stage, it is the goal that the Final Vision Report encapsulates a set of tangible design ideas and schemes for the Verdugo Wash that offers a unique identity, a distinct design vocabulary and offers enough welcome impressions that will be beloved by the community

It is our aim that these schemes will spark interest for the project - to further develop the Vision into a Concept Master Plan, which will be used to identify potential future phases (perhaps even pilot projects), which can be further developed in subsequent design stages.

!melk is particularly expert in creating strong "brand identities" for places, and has cultivated a reputation for delivering well-crafted designs, from small to large scales. **!melk**'s designs - and as is the case for the Verdugo Wash Vision - almost always include a fundamental and simple "built-in" fundraising approach in order to activate the appropriate expertise to facilitate with fundraising strategies.

Visioning Design Report

This Vision report, shared herein, focuses on urban design challenges, landscape strategies, sustainability initiatives, mobility solutions, as well as the hydrological and biological function of the Verdugo Wash. Collectively, each of these areas contribute to a re-imagined multi-benefit Verdugo Wash. It is the sincere hope of the **!melk** team that the ideas provided herein will inspire future project phases including concept master planning on to implementation!

What is a "visioning study"?

In the grand scheme of things, the Verdugo Wash Visioning Study is in its very initial (exciting) stages!

The objective of a Visioning Study, in short, is to paint the picture of what is possible.

Possibility is formally defined as "feasibility" - and the feasibility of the Verdugo Wash Vision has been vetted based on available data and as this project stage duration has allowed. Kindly reference the "road map" diagram below to understand where the Verdugo Wash project is today in relation to following design stages and any implementation.

Feasibility
Most design ideas in this Design Report are organized as a "kit-of-parts", which means each design idea is not yet pinned to a specific location within the Verdugo Wash.

An example of this would be the included "Access Point" study. Consider this a "catalogue" of options or possibilities, given the existing opportunities and constraints. Since these access points were initially suggested in the project's Pre-Design Report, the community has provided input, and the project team responded by advancing the catalogue by adding/deleting, shifting/expanding, and differentiating (e.g. human/wildlife). During the master planning stage of the project, additional and significant community and stakeholder input will be crucial to advancing this "catalogue" into an actual, defined plan including "what access points, where," "what design segment, where," and "what program, where."

The feasibility for a project the magnitude of the Verdugo Wash is rooted in its political, economical, and engineering realities.

With regard to Engineering Feasibility, any successful re-imagined Verdugo Wash must be anchored in a rigorous analysis of what volume of space is available - or "freeboard" - to locate landscape elements. The Verdugo Wash has the potential to become a one-of-a-kind linear park, but must still of course function to convey stormwater.

With regard to City Policy / Politics and Economics, a project such as the Verdugo Wash will require a sequence of growth checks in its lifespan. Such "checks" might include: *Cost Estimating of Capital Improvements; Operations & Maintenance (O+M) Planning; City Council & City Agency approvals*

In the master planning process alone, the Project Team recommends two cost estimates of the developing plan done by a professional cost estimator familiar with the contracting landscape in LA County. Additional cost estimating work is recommended in the Design, Engineering, and Project Approvals stage as well. In the typical scenario when a design is shown to be too expensive, the project team gets creative in "right-sizing" the design, a process called value-engineering. This financial growth check ensures the project stays on budget.

Operations and Maintenance (O+M) planning functions similarly, checking the design at regular intervals as more detailed design information becomes available. An expert O+M consultant will evaluate the plan to develop estimates of the time, staff, and funding required to maintain the design. In the scenario that the design becomes too costly to maintain, a possible solution would be to simplify the design.

Community & Stakeholder Input
Community and stakeholder input is essential to public space design - it's for the public after all!

A portion of this report is dedicated to the Community Engagement and Public Outreach process to date. There will be many more opportunities to weigh in on the re-imagination of the Verdugo Wash.

We look forward to these interactions!

At every stage in the process, there will be numerous "check-ins" planned to interact with the community and stakeholder groups in order to collect input and feedback, which the design team will genuinely consider within the wider picture of stakeholder input and project realities.

introduction
stakeholder & community engagement

We're the first to tell you that the success of a public realm project hinges on a well-conceived public engagement process. Here at **!melk**, we have demonstrated a long-term commitment to genuine community outreach and are proud of our deep portfolio showcasing these efforts and glowing reputation among the communities we have served.

A simple but critical aspect to public engagement is consistent, direct, and honest conversations with community leaders, residents, stakeholders, and local agencies. There is nothing as formative to a design as this set of conversations and we welcome everyone's participation in the process!

An aspect of the community engagement process that we too often see under-emphasized by others is the methodology for soliciting, documenting and responding to input. **!melk**, however, recognizes the importance of a strong methodology to ensure:

1. We honor the time and effort of participating community members. For instance, we go to lengths to document conversations so that they we can refer back to them as needed.

2. We honor participants' voice, ensuring this rich community input (e.g. general information, ideas, and concerns) is folded into the process and truly informs the resulting design and solutions.

With this methodology, we can be confident the design is of and for your community! For our team, a successful project means that our design and related solutions are "future-focused" and inspiring - a place for the people of the local community that is representative of them and feels like "home".

What we offer as designers is the ability to transform the identity of a place into a unique and community-specific expression of the community's histories, desires, and pride; a welcoming place where one you can connect with yourself, others, and the environment.

For the Verdugo Wash Visioning project, stakeholder engagement and community outreach has occurred in various ways throughout the entire project duration, per a Public Engagement Plan that was carefully developed together with the City of Glendale.

a proven process: ***how the project will be a holistic integration of program and identity/form/character, guided by input from the City of Glendale, the community, and the design team.*** *©MELK*

Project Website

In early 2021, Glendale city staff created a website specific to the Verdugo Wash Visioning Study, *verdugowash.com,* to communicate the premise of the Verdugo Wash Visioning Study, share project updates, and invite residents to participate in various engagement conversations.

As a project team, we are committed to promoting diversity and neighborhood representation throughout the design process. Not everyone has the time or headspace to attend a formal community engagement event. To connect with these community members, the community dialogue began on the platform of the Verdugo Wash website via an online survey. Using this tool, we were able to collect general sentiments, initial ideas, preferences, aspirations, wishes, and aversions for consideration in the re-thinking of the Verdugo Wash and its potential transformation.

the Verdugo Wash Visioning project website: ***https://www.verdugowash.com/*** *is an important platform, where key project information is uploaded for public reference and review and online surveys were hosted.*

This page captures the online community survey as it appears on the verdugowash.com website.

ONLINE SURVEY: "My Vision Survey"

1. Do you work in Glendale?
YES / NO

2. What is your age group?
Under 18 / 18-24 / 25-34 / 35-44 / 45-54 / 55-65 / 65+

3. Image Preference Survey
Please rate the following pictures on a scale of 1 -10, 1 being not favored and 10 being excellent. My vision of the Verdugo Wash includes:

Example image-based question where participants asked to rate their level of preference 1 to 10.

Above: the remaining images included in the image preference survey.

4. The new Verdugo Wash should cater to...
select priority level for each: HIGH / MEDIUM / LOW

Glendale Residents / Daily Commuters / Public Transit Users
Tourists / Families / People with Disabilities / Children
Teenagers / Older Adults / Wildlife

5. Which modes of transportation should the new Verdugo Wash accommodate?
select priority level for each: HIGH / MEDIUM / LOW

Pedestrian / Skateboarding / Cycling / Electric Scooter
Shared Shuttle Service / Delivery Robot / Equestrian

6. Which sorts of commutes should the new Verdugo Wash serve?
select priority level for each: HIGH / MEDIUM / LOW

Commuting to Work / Transit Connections / Recreational
Amenity-Destination Based / Commuting to School
Ecological Mobility / Local Neighborhood Mobility / City Wide

7. "A key outdoor amenity for us could be..."
Write in answer

8. "The Verdugo Wash should be unique and memorable because...?"
Write in answer

9. "The Verdugo Wash could become the 'IT PLACE' to visit, if we had..."
Write in answer

Online Survey Results

The Project Team thanks everyone who made time to answer the surveys! All results are included in **Appendix E** in this report, where you'll see how sentiments and comments varied. There were:

Participants who expressed outstanding concerns about the project *(e.g. residential privacy for those whose homes back up the Wash, or questions regarding the hydrological feasibility of the project).*

Participants who were open to the project with reservations *(e.g. how much would both the capital improvements and ongoing maintenance cost).*

Participants who displayed great enthusiasm for the project and suggested ideas to enrich the project *(e.g. ensure south Glendale can access opportunities at the Wash without having to drive and park nearby).*

The Verdugo Wash has immense potential to transform the community of Glendale, so it's natural for community members to have varied reactions to that potential change at this early point in the design process. Please enjoy reading people's responses, as we did. We find it useful to put ourselves in each commenters' shoes, to do our best to understand their perspective, which is all then folded into the design process.

In good faith response - especially to those with outstanding concerns and reservations - we have written a new report chapter, "**Community Considerations**" that includes preliminary design solutions to questions like residential privacy.

Throughout the visioning process City staff and the design team engaged in several meetings with the general public, neighborhood groups, and various boards and commissions to obtain feedback and input.

The following outreach events / meetings for the Verdugo Wash Visioning were held throughout 2021 and 2022 as part of the Visioning process:

September 11, 2021
Whiting Woods Neighborhood Meeting

October 23, 2021
Sycamore Woods Neighborhood Meeting

March 19, 2022
Woodbury Neighborhood Meeting

February 19, 2022
Verdugo Park, Fremont Park, Downtown Storefront

February 12, 2022
Verdugo Wash Coalition

April 22, 2022
Kiwanis Club

August 4, 2021
West Glendale

April 2, 2022
Glendale Riverwalk Event

June 15, 2022
Planning Commission

July 7, 2022
Sustainability Commission

August 15, 2022
Parks and Community Services Commission

October 24, 2022
Transportation and Parking Commission

Neighborhood-Based Meetings

Since Glendale is known for its collection of well-organized neighborhoods, these groups proved to be an excellent conduit for connecting with groups of Glendale residents, reaching engaged citizens, sharing the objective of the project, and for soliciting community input to guide the Verdugo Wash Visioning.

Neighborhood-based meetings were generally conducted in the front and back yards of residents in their respective communities. This process facilitated pointed conversations around the existing conditions specific to each neighborhood so that design solutions could respond to each neighborhood's unique context.

During these conversations, staff heard feedback related to issues such as:

- Crime and Safety
- Operations and Maintenance
- Privacy
- Impacts to surrounding land uses
- Opportunities for enhanced vegetation
- Overall cost

Additional meetings were also held with other interest groups such as the Kiwanis Club and GoGlendale.

If the project moves into additional phases, an even more robust approach will also be taken by forming specific groups and committees that are focused on their specific neighborhood to ensure that as the design is refined, that it responds to each unique condition that exists along the route.

February 19, 2022 public outreach event flyer: ***the above flyer was translated into Spanish and Armenian and circulated on numerous platforms to advertise this grand public outreach event, which was to take place at (3) three locations throughout Glendale - Fremont Park, the 142 California Avenue City storefront, and Verdugo Park. The event was well attended with 100+ participants!***

Community-Wide Outreach Event Feb 19th, 2022

While most of 2021's outreach and engagement efforts were led by the City of Glendale Community Development staff, the Design Team organized a "grand" public outreach event advertised to the wider open to the public.

The largest in-person engagement conversation during the Verdugo Wash Visioning Study occurred on Saturday February 19th, 2022 at (3) three different locations within the City: Fremont Park, the 142 California Avenue city storefront, and Verdugo Park. Each location was staffed by City of Glendale staff as well as representatives from the Design Team.

This vision of this large-scale public outreach event was two-fold: 1) to connect with a *"Greater Glendale"* audience and 2) introduce a different method and scale of engagement that is - most importantly - fun!

To aid the Design Team to connect with a more diverse cross-section of the community (e.g. those who may not participate in a Homeowner's Association, who may not own a home, whose first language is not English, or simply have not yet heard about the project), the Design Team prioritized community convenience and social equity.

To make attendance as convenient as possible, the Design Team hosted the same set of staffed activities at each of the (3) three public-facing locations throughout the City. The agenda and associated activities were purposely devised to establish interaction among attendees.

The City of Glendale Community Development staff facilitated the translation of all event marketing and meeting materials to connect with Spanish and Armenian speakers, and had translators on-hand on Event day!

It was the Design Team's hope that selecting public-facing venues would also entice members of the Community to "stop on by" during one's typical Saturday morning activities.

Significant marketing efforts were deployed to promote attendance from as many Glendale community members as possible! Specifically, marketing for the event occurred on the project website, social media blasts through citywide and department specific accounts, and various citywide and department newsletters.

The ultimate objective for each was to promote an open, welcoming, and robust dialogue about the project. To vary the "rhythm" of the form of engagement, the Design Team crafted (6) six hands-on, interactive activities for an open-house/fair-style format.

At the event **Welcome Station**, attendees were greeted and oriented to the event layout and activities. Participants were encouraged to sign-in, and complete an initial survey and submit suggestions and considerations to the *"Ideas Box"*.

1. **Introduce the Verdugo Wash Visioning Study Premise, Context, Analysis, Opportunities & Constraints, and "First Ideas"**
2. **Gather data and ideas about both the current and desired mobility patterns and activities in/around the Wash**
3. **Help Glendale community members "see" the scale and impact of Verdugo Wash if it were to become a community amenity; discuss how it might improve quality of life.**
4. **Build rapport with the community and generate positive "buzz" about the work being done.**
5. **Communicate how the community can contribute and author the Vision, and have continued involvement by staying abreast of project developments.**

February 19, 2022 public outreach event: ***the public reviewing the background information on the Verdugo Wash and the Visioning project***

February 19, 2022 public outreach event ***table-long corridor mapping exercise at Verdugo Park location.***

Attendees were further encouraged to spend some time absorbing the content presented on the **Project Introduction** boards, in order to gain a comprehensive understanding of the extent of the scope and scale of the Visioning study. Actually, a majority of the day's dialogue ended up occurring at these boards' location than any other, as staff walked participants through the information on the boards, fielded questions, and followed the conversation as needed.

February 19, 2022 public outreach event: ***Informational boards with background material on the Verdugo Wash and the Visioning project***

!melk
+BuroHappold
CITY OF GLENDALE
CALIFORNIA

cro-mobility
existing cycling times
projected cycling times w/
additional access points / activated Verdugo Wash
enhanced ecology
establishing a community amenity
maintaining existing hydrological infrastructure while creating a new public realm datum

The first guided, group activity was titled **"What If ... ?"**, for which the objective is to encourage participants to think imaginatively about opportunities for the Wash.

Prompts such as, *"The Verdugo Wash would be the 'It' place to be if..."* were designed to encourage fresh thinking. Participants were encouraged to write their responses on post-it notes and stick them to the board to create a collection to each of the five prompts/boards.

For a **Mobility Mapping** activity, participants were encouraged to map one or more typical mobility patterns of their daily routine such as commutes to work/school; "dot" stickers were placed on a large-format map indicating important destinations, or start/end locations. Attendees were prompted questions during this activity to gain a better understanding of how Glendale residents make mobility pattern decisions (e.g. why do you bike to this park location and not this one?) - in order to ultimately glean overall ease/safety.

February 19, 2022 public outreach event Mapping Exercise documentation: ***attendees were invited to map out important daily routes and destinations in/around the Verdugo Wash and its environs***

February 19, 2022 public outreach event: ***Selfie opportunity! Attendees were encouraged to snap a photo in front of one of the initial renderings of the vision for Verdugo Wash.***

For another **Mapping** exercise of **Precedent Imagery**, participants were handed a small deck of cards with curated precedent images and prompted to consider where along the Verdugo Wash it would be most ideal (or not!) to host a particular programs (e.g. gathering area) or design elements (e..g bench in a particular style). Participants placed the cards on the map, which was actually 3 separate 6-foot long maps of the Verdugo Wash corridor!

February 19, 2022 public outreach event / Verdugo Park location: ***programming/character engagement mapping exercise***

February 19, 2022 public outreach event / Verdugo Park location: ***programming/character engagement mapping exercise***

"Continuing the Dialogue"

The day of Outreach was extended to an informal rendezvous, where the Design Team and the City of Glendale staff convened locally for a Debriefing "social event". The purpose of this convening was to further promote open dialogue with the community - in a less structured format - and discuss the takeaways of the day, and share great ideas for the Verdugo Wash within a fun atmosphere!

There were no formal activities related to data gathering or project feedback, and conversations were not moderated. All were welcome!

For the Project Team – comprised of City of Glendale staff and the **!melk**+**BuroHappold** consultants – this gathering was used to discuss what was said throughout the day at each of the three "satellite" outreach events / locations, while continuing to set the tone that outreach can occur in a comfortable, positive environment to foster authorship together with the community!

It's important to note that public outreach is a process. There will continue to be opportunities to weigh in on the Verdugo Wash Visioning, as it might progress. Public Outreach will continue in parallel to any future design stages.

The Public Outreach format - overall, to date - has allowed for the presentation of a brief introduction to the project (for those unfamiliar) and an open forum - through guided discussion - to learn about participants' interests and desires for the Wash. Ultimately, there was general consensus and a spirit of unity around the notion that a re-imagined Verdugo Wash would certainly enhance quality of life in Glendale!

To further discuss the Verdugo Wash Visioning study, the public was invited to a debriefing "social event" upon the conclusion of the more structured outreach activities which had occurred earlier that day at various locations throughout Glendale.

February 19, 2022 public outreach event:
Verdugo Park location

examples of the "precedent mapping" exercise

general discussion around the project introduction boards

February 19, 2022 public outreach event:
Fremont Park location

examples of the "precedent mapping" exercise

examples of the "mobility mapping" exercise

February 19, 2022 public outreach event:
142 California Avenue storefront location

examples of the "what if" exercise

examples of the "precedent mapping" exercise

What did Glendalians have to say about this project?

I fell in love with my house 20 years ago because it backs up to the Wash, offering a magnificent view of the Verdugo Mountains. I love to host garden parties. I admit the Wash itself isn't conventionally attractive, but I've selected attractive low-growing plants to enhance the mountain view.

The Wash's concrete geometry amplifies sounds up and down the Wash, like one neighbor's barking dog several blocks away, so I am open to ideas for re-imagining the Wash! I have concerns about operations, maintenance, and safety, and want to ensure that access points are equitably placed and not requiring any of my neighbors to move.

- "Gloria"

I moved with my family to the US 6 years ago. We rent an apartment in Vineland. My husband uses the family car to go to work on Saturdays so I am home with the kids alone and always looking for things to do with them! My oldest son always wants to go to the skate park at Verdugo Park, but it's difficult to get there by public transportation. I'd love to bike, but am uncomfortable taking the streets, especially after hearing a chilling story from my neighbor. It occurred to me that if there was a bike path in the Verdugo Wash, I'd be able to connect with many places in Glendale (by bike) that were really difficult to get to before!

- "Elen"

I am in my mid-30s and live in the Montrose neighborhood. I live with epilepsy and unable to drive at this time. I was contently biking to work in Downtown Glendale and really enjoying the additional activity in my day. And the autonomy - I don't like relying on public transit schedules.

I purchased a pedal-assist bike to support my uphill commute home. But just before the pandemic shutdowns, I was commuting to work on Verdugo Road when I was hit by a car and broke my leg. I haven't biked since, and honestly, I won't until protected bikeways are implemented around me.

Biking in the Verdugo Wash would be incredible!

- "Erik"

I am a first generation Hispanic American, and attend Glendale Community College. I currently live in a "parks-poor" community in west Glendale.

Between a full credit load this semester and a part-time job, I feel stressed out all the time and can't seem to make the time to go the gym, even though I know it reduces my anxiety. I try to carpool with classmates to class, but when that doesn't work out, I have to hustle to make the bus, an experience that always leaves me super frazzled!

I am enthusiastic about the idea of utilizing the Wash as a route to walk to class, especially if it was really green and shady with places to pause and review my notes before class.

- "Bianca"

I live in a retirement home along the Wash north of downtown Glendale. I visit my doctor regularly who, at every appointment, encourages me to be more active to better manage my blood sugar. My daughter lives in Chicago, but we talk every Sunday evening. She the real nag - getting on my case to be more active! I was using the exercise facilities in my multi-unit complex before the pandemic closed it down. My vision has gotten worse so I can't drive any more, making it harder to be active other places.

If Verdugo Wash became a park, I think it would be a safe place to walk since it is so close to the Home. Besides a walking path, it would be great if there were also shady spots to sit, chat, and maybe play cards with my girlfriends.

- "Florence"

Since the objective of any public space is to foster and enrich its community, we are sharing snippets of anecdotes we've heard so far from Glendale community members, capturing various points-of-view, hopes, desires, and concerns. Note these quotes are based on conversations with community members, but names and some details have been modified for privacy.

We live in a secluded neighborhood in north Glendale nestled in the Verdugo foothills. Our house is located on a street that runs directly along the Verdugo Wash. We take a lot of pride in our neighborhood and love how quiet, safe, and remote it feels. We understand that the Wash in its current utilitarian state is needed to mitigate flood risk. We have intense concern that facilitating public access could jeopardize the safety and quiet that we value so much about our neighborhood. And as a wealth management advisor, I am skeptical about how the City could finance both the capital improvements and upkeep of a new public space. But as an enthusiastic bird watcher, I'd love to see more supportive native plantings and am curious about how additional planting could consider wildfire risk.

- "Wendy & Scott"

I am an environmentalist! I live near the Wash, and am keen to learn how this project could support the surrounding ecosystems. I have lots of questions! How will the proposed deck system work? Could parts of the concrete channel be exposed so we can see the water? What is the quality of the water in the Wash? Can it be filtered to improve water quality?

There's way too much concrete! Could the concrete be removed to infiltrate water to the aquifers? How can the Wash be naturalized to enhance wildlife value? There are so many species, including native bees, butterflies, birds, and mammals that the project could support!

- "Carl"

I also live in a secluded northern neighborhood along the Wash, and have more concerns about the Wash than hopes it could benefit the City. I wonder about the security of my home if the Wash was made accessible to the public and what options would be available if people using the Wash behind my house riled up my dog into a barking frenzy, or what I should do if I ever witnessed antisocial behaviors behind my house?

I wonder how the Wash improvements will be paid for, and then maintained and operated in perpetuity. I also want to be assured that any Wash improvements wouldn't exacerbate flood risks. I am particularly concerned that integrating public space in a neighborhood known for and sought out for its peace and quiet could reduce property values.

- "Matt"

We live in La Crescenta-Montrose and really enjoy biking as couple. We have become increasingly frustrated recently though... we've witnessed a handful of vociferous folks from a nearby neighborhood shoot down modest - but otherwise well-supported - proposals to integrate even basic bicycle facilities! We are interested in how we can support the Verdugo Wash Vision as an active transportation corridor and community amenity for Glendale.

- "Stephen & Judy"

I am a student at Glendale High School and live in Citrus Grove. A couple of nights a week, I have practice at Glendale Sports Complex, but it's difficult for my mom to get me there on time with other family obligations.

I could go to practice on my own by bike if the Verdugo Wash had a bike path. I'd get there pretty quickly!

It would be great if there were also larger gathering areas integrated along the route so that my friends and I can hang out after school and on the weekend.

- "Dylan"

Stakeholder Outreach

The Verdugo Wash Vision's objective is to integrate multi-purpose benefits including public space, mobility, equity, climate resilience, and ecological connectivity. Given this complexity, the Project Team invited key project stakeholders to champion their "stakes" throughout this Visioning Study process and guide the Visioning for the Verdugo Wash.

We'd like to thank the members of the Working Stakeholder Group for their time, effort, and investment in this Visioning Study! Their contributions have been invaluable:

• George Ballteria, Board of Directors, Glendale Parks and Open Space Foundation; Director of Design and Construction, North East Trees; before that 25 year Director of Facilities and Senior Project Manager, City of Glendale Parks, Recreation and Community Services Agency

• Shana Bonstin, Deputy Director of City Planning, Chief Sustainability Officer, City of Los Angeles*; lives near Glorietta Park

• Dave Gallagher, Landscape Architect at Los Angeles County Public Works*; lives near the Oakmont Debris Basin

• John Howell, Chief Executive Officer, Arroyos & Foothills Conservancy

• Mickey Long, field biologist, retired Natural Areas Administrator, Los Angeles County Department of Parks and Recreation

• Evan Meyer, Executive Director, Theodore Payne Foundation

• Tim Martinez, Land and Program Administrator, Arroyos & Foothills Conservancy

• Nancy Steele, Executive Manager, Friends of the Verde River; past Executive Director, Council for Watershed Health in Los Angeles; co-founder and president of Arroyos & Foothills Conservancy 2000-2011

• Laura Stotler, retired Principal Planner, City of Glendale

• Ana Tabuena-Ruddy, landscape architect; Project Development & Inter-agency Coordination Manager, Department of Public Works Bureau of Street Services, City of Los Angeles*; lives near the Oakmont Debris Basin

• The Tongva Tribal Council, represented by Rich Toyon, retired landscape architect

• Diego Zapata, Nursery Manager, North East Trees

** comments are as individuals; titles are for reference*

The Role of a Stakeholder

While individual community members enrich the engagement process by entrusting their insights, their points of view, what they're excited about, and what concerns them, with the Design Team, stakeholders are engaged to tackle larger overarching themes.

It's the Design Team's role to say, "we heard you," and respond with design options that collectively integrate feedback from the Community while managing wider project objectives and constraints.

Members of the working stakeholder group are also members of the community, but they are distinguished from individual community members in that they don't represent a single property, but a specific stake in the outcome or decision.

While Glendalians can offer valuable personal insights, the members of Verdugo Wash Working Stakeholder Group offer wider points-of-view, focusing on more overarching themes such as climate resilience, regional ecology, urban impact, connectivity, etc.

The complexity around establishing the Verdugo Wash as a multi-benefit (enhancing public space, mobility, equity, climate resilience, ecological connectivity) place for Glendale is not something the Design Team can take on alone!

Together with the City of Glendale, the Design Team invited local stakeholders to champion their "stakes" throughout this Visioning Study process - to guide, direct, and challenge the visioning process! We would like to thank the members of the Working Stakeholder Group for their time, effort, and investment in this process! Their contributions have been invaluable.

Championing Safety & Operations+Maintenance

An internal working stakeholder group was also convened by the City of Glendale in order to discuss potential security, operations and maintenance of the Verdugo Wash.

The group was comprised of representatives from Police, Fire, Parks and Community Services, Public Works, Mobility, Office of Sustainability, and Community Development, and feedback included:

Police
- *Add emergency call boxes*
- *Create operating hours*
- *Leave enough room for motorcycle access in the event of an emergency*
- *Some bicycle and foot patrol could be incorporated with appropriate funding*
- *Good visibility from the street will allow for incorporation into existing patrols*
- *Supports the idea of ambassadors looking over the wash*
- *Ensure good lighting*
- *Separation of pedestrians and cyclists*

Parks
- *Would like to see a trail safety patrol*
- *Create operating hours*
- *What would the process be to clear and close the wash when necessary*

Fire
- *Follow fire resistant code requirements*

Sustainability
- *Ecological education opportunities*
- *Stormwater retention*
- *Using sustainable construction materials*
- *Identify mental heal and environmental health benefits (carbon capture)*
- *Ensure equitable access*

Championing Functionality & Hydrology

A specific example of a Verdugo Wash-relevant "stake" being championed by local stakeholders is groundwater recharge. The City of Glendale purchases and imports 60-70% of the city's drinking water, meaning only 30-40% is procured locally via well pumping of aquifer-based groundwater.

Aquifer stores are important because: 1) well water is vastly less expensive than importing water, gallon-for-gallon; 2) they promote climate resilience by cushioning water stores during times of drought; and 3) they contribute to the region's ecology as the LA River basin's hydrology is naturally a complex mélange of above and below surface flows.

Available data indicates that the upper Verdugo Wash was in fact a creek before it was channelized north of the debris basin. Given that length of soft bottom condition, it likely facilitated meaningful groundwater recharge.

With this in mind, it is only reasonable that some stakeholders - including the Tongva Tribe, the Arroyos & Foothills Conservancy, and the Upper Los Angeles River Tributaries Working Group - have taken interest in "groundwater recharge projects".

In addition to this, and in connection with larger hydrological systems, the Design Team has also engaged with key Agency Stakeholders such as *Los Angeles County Public Works (LACPW) Flood Control Department*.

LACPW is charged with the responsibility of overseeing the mitigation of flood and debris flow risks for all the residents of LA County. Aside from this important functionality, LACPW also recognizes the merit of multi-purpose benefits, and is endeavoring to weave such benefits into improvement projects while of course never compromising storm event capacities.

The **!melk+BuroHappold**, together with the City of Glendale, has been in contact with the LACPW, regarding the Vision for the Verdugo Wash.

The Design Team is in receipt of a Flood Permit Guidance note, which summarizes the key flood control permit issues and the permit's purpose. The note recommends submitting a Flood Control Permit, and has served as guidance in this initial Visioning stage. (It is indicated that the LACFCD will be able to assign a County staff person to the Verdugo Wash project once a permit application has been filed.)

In addition to interactions with LACPW, the Design Team has also met with the *United States Army Corps of Engineers*, whereby the Design Team became aware of the potential permits that might be required for future Reviews and Approvals.

Last, but not least - with regard to functioning site hydrology - the Design Team engaged with the *Upper Los Angeles River Tributaries* working group during the Visioning process.

Working Stakeholder Group "sustainability" recommendations for the Verdugo Wash Vision *graphic by !melk based on June 5, 2022 correspondence*

Gabrielino-Tongva Vision for the Verdugo Wash

Incredibly important is the Gabrielino-Tongva culture, which was - at one point in time - deeply intertwined with the "Verdugo Wash" and surrounding environs of the Crescenta Valley. While the Tongva were forcibly uprooted from their land centuries ago, the Tongva culture is still very much tied to the land in the Crescenta Valley and its environs.

Given the Tongva's great legacy of land stewardship and resilient sensibility towards resource management, they would like to contribute to the collective dialogue around the most appropriate Vision for the Verdugo Wash.

Headwaters: Because there are few opportunities for habitat restoration and water sequestration along with developed recreation in the Crescenta Valley, the entire Verdugo Hills Golf Course property should be obtained to create a true regional park that has both recreational and educational opportunities by re-imagining a park that utilizes storm water capture, native plant materials managed as the Tongva people have for thousands of years, a laid back riparian Blanchard channel, hiking and recreation, and dedicated learning memorials for the WPA Tuna CCC Camp, the Tuna Camp Detention Center (as supported and promoted by the Los Angeles Japanese American Museum), and Tongva Village site of Wiqanga. The learning opportunities are enormous for this site at the nexus of history.

Stream Bed: The Verdugo Wash should be re-imagined as the life giving force it had been for thousands of years by creating daylighted areas where the channelized stream can exit and create not only wildlife/riparian opportunities through pools and side tributary streams but gathering areas that were common during the centuries Tongva habitation. Only native vegetation should be used

Mid Stream: Crescenta Valley Park and Mountain Oaks represent the next best opportunity for water sequestration and stream daylighting. The importance of creating a sustainable water supply through aquifer re—injection cannot be over emphasized and to create recreational and educational opportunities through that same opportunity is fundamental. Mountain Oaks is a property the city of Glendale needs to pursue and obtain. Within the Mountain Oaks property and near the stream bed is an opportunity to create a native plant material gathering area endemic to the region and managed as the Tongva would have and a ceremonial ground for tribal purposes is necessary and a tribute to the people who have stewarded these lands for centuries. Additionally, daylighting in this area provides a direct access to the Verdugo Mountains slopes and would establish a direct wildlife corridor.

Oakmont Debris Basin: The Oakmont Debris Basin needs to also be re-imagined as a seasonal wetland as managed by the Tongva people. The debris basin is a grand recreational and educational opportunity to return the area to the probable seasonal wetland it once was. Without doubt it was a gathering area for materials integral in daily Native life such as food, pharmaceuticals, and for basketry and other structural materials. It is recommended that a boardwalk system be implemented to preserve the fragile environment of a wetland with informational and educational opportunities throughout.

Oakmont Golf Course: The golf course was once a riparian environment and flood plain as evidenced by the number of riparian trees still within the property. Recently, the course has reduced their greens to reduce their water consumption. It is highly recommended the golf course goes further and adopts the Audubon International Golf Course design for sustainability and utilizes daylighting and tributary side streams to support native non-exotic plant species for- both wildlife habitation and creates swales and depressions for water sequestration.

Verdugo Park: Once a riparian environment and floodplain, the seasonal stream bed at the base of the Verdugo Mountains is a ripe opportunity to restructure the area as a more natural riparian area with Tongva managed native plantings for gathering, recreational and educational opportunities. Any interpretive signage should be more than piecemeal but imagined and executed as a region wide system of information from the headwaters to the convergence with the Los Angeles River.

Confluence: Water served a daily ritual and importance in the life of the Tongva people as it was celebrated and central to their existence. Water was managed closely and provided the many resources in their daily existence and subsequently held a sacred place in their spirituality. Thus, the convergence of waters was a strategic and celebrated place. It was the place of meeting and council and the recognition of the significance of water central to their history and daily existence. The Tongva simply believed that if they cared for their water and their land, the land and water cared for them. The meeting place of the two waters is a near sacred place to the Tongva and the land at this place should include a specific space for council, reflection and celebration. It is the culmination of the life of the Verdugo Wash and the life it supported both human and non-human. This space should be of careful consideration and careful design and should have a direct interaction and access with the water and the land and human beings. This is also the culmination in an educational journey from headwaters to confluence and the final expression of the natural and native landscape architectural expression and possibly the most important. It needs to recognize the natural system of the movement of water through a land and it must be respectful to the people who stewarded the land for thousands of years.

"The Tongva Tribal Council requests involvement in all phases of design and planning of the Verdugo Wash Sustainability project to ensure proper representation but to also ensure sustainable improvements are executed in the manner customary to the Tongva stewardship principles. The Tribal Council also requests that the nomenclature of the project incorporates Tongva nomenclature and tells the history of the Tongva people in a true and proper manner as the basis of all history of the region the Verdugo Wash entails." (excerpt from correspondence with Gabrielino-Tongva chief, Rich Toyon, May 27, 2022)

right: ***Tongva recommendations for the Verdugo Wash Vision*** *graphic by !melk based on correspondence with Gabrielino-Tongva Chief Anthony Morales and Richard Toyon*

san gabriel mountains
"BLANCHARD CHANNEL"
"COOKS CANYON CHANNEL"
"DUNSMORE CANYON CHANNEL"
FORMER VERDUGO HILLS GOLF COURSE
• Probable site of the Wiqanga Village
• Create a regional park with recreational and educational opportunities
• Stormwater capture opportunity
• Native plant materials managed as the Tongva have historically
• Hiking and recreation areas
• Dedicated memorials for the WPA Tuna CCC Camp, Tuna Camp Detention Center, & Tongva Village Site of Wiqanga
(BURIED BY 210)
FORMER "BARRANCA CREEK"
WIQANGA VILLAGE SITE
BLANCHARD CHANNEL
• Riparian plantings at Verdugo Wash headwaters
CRESCENTA VALLEY & MOUNTAIN OAKS
• Water sequestration and stream daylighting
• Create sustainable water supply through aquifer rejuvenation
• Recreational and educational opportunities
"VERDUGO" CREEK HEADWATER AREA
MOUNTAIN OAKS
• Native plant material and gathering area near streambed
• Managed in Tongva tradition
• Ceremonial ground for tribal purposes
• Tribute to Tongva people who stewarded the land for centuries
VERDUGO WASH STREAM BED
• Restore the life-giving significance the channel had for thousands of years
• Create daylighted areas for stream to exit
• Create wildlife and riparian opportunities like pools, side tributary streams, and gathering areas
• Exclusively native vegetation
OAKMONT DEBRIS BASIN
• Seasonal wetland managed by the Tongva people
• Recreational & educational opportunity
• Acknowledgement of site history as a gathering area. Integrate materials such as food, pharmaceuticals, basketry, and other materials that were integral to daily Native life
• Boardwalk system to protect the wetland environment
verdugo mountains
OAKMONT GOLF COURSE
• Once a riparian environment and flood plain
• Adopt the Audubon International Golf Course design guidelines for sustainability
• Daylighting and tributary side-streams to support native plant species, wildlife habitation
• Swales and depressions for water sequestration
VERDUGO WASH
VERDUGO PARK
• Once a riparian environment and floodplain
• Restructure as a natural riparian area with Tongva-managed native plantings
• Area for gathering, recreation, and educational opportunities
san rafael hills
CONFLUENCE
• Sacred space with areas for council, reflection, and celebration
• Allow direct interaction/access to water
• Culmination of the educational journey from the headwaters to the confluence
griffith park

2.

the site today

the site today
existing conditions

Overview
The Verdugo Wash is a 9.4-mile long tributary of the LA River that was channelized to swiftly convey rainwater and debris from Glendale and surrounding areas to mitigate flood and debris flow risk. The quintessential Wash experience feels heavily engineered with its strict rectangular geometries and hard, sterile concrete floor and walls. Nearly 60-acres in size, the Wash feels inhospitable lacking human scale, being sunk an average of 12-ft from the adjacent city fabric and any other human activity, and secured on all perimeters by chain link fencing.

Temporal Character
The Wash has two primary temporal characters: dry & empty or wet & coursing. Below are two sets of photos - at three areas along the Wash - to illustrate this contrasting condition.

In the left column are photos of what the Wash feels like the majority of the year: dry, vast, and underutilized. In the right column are those same three moments during the few annual precipitation events when the Wash feels wet, coursing, and useful. Here, the Wash performs as hydrological infrastructure: receiving and channeling water from the hundreds of stormwater outlets that drain the watershed, then hurriedly escorting that fresh water out of the city.

location: ***Confluence with LA River, looking upstream.*** *left:* ***"low-flow" condition during dry season;*** *right:* ***coursing condition during December 2021 rain event. These stairs were engineered to dissipate energy from Verdugo Wash water joining the LA River.***

location: ***Fremont Park.*** *left:* ***"low-flow" condition during dry season, April 2021;*** *right:* ***coursing condition during December 2021 rain event***

location: ***Oakmont Debris Basin.*** *left:* ***dry season, April 2021;*** *right:* ***wet condition, December 2021 rain event***

Project Site Segmentation

The "UPPER" Wash reach starts just south of Interstate 210 and flows into the Oakmont Debris Basin located just north of the Oakmont Golf Course. Water collects in the debris basin and is detained for a interval to allow debris to settle from the water flow. After spilling from the concrete dam, water enters the "LOWER" Wash reach and flows until it meets the Confluence to join the LA River. *©!MELK*

The "upper wash" is the narrowest segment beginning at approximately 10 ft wide and widening to about 40 ft

box culvert *(highlighted by dotted white circle)* ***just south of interstate 210 is the start of the Verdugo Wash in Glendale***

The Oakmont DEBRIS BASIN & spillway split the "upper" & "lower" segments of the wash and is the only non-concrete bottom section

north end of debris basin where water flows down into the basin

water collecting in the debris basin, April 2021

water is detained behind the concrete spillway for a period of time, allowing debris to settle and be later cleaned out during regular maintenance

The "LOWER WASH" ranges in width from approximately 43 ft to 86 ft and terminates at the confluence with the Los Angeles River

The Verdugo Wash meeting the LA River at the confluence *(highlighted by dotted white rectangle)*

Spatial Character

The Wash varies considerably in its width and depth in relation to the adjacent city fabric.

Sections are cut within square call-outs on opposite page
"Types" refer to areas of the wash with similar widths, shapes, and adjacent land uses

TYPE 1
(*in residential area*)
10' - 25'

TYPE 2
(*in residential area*)
25'

TYPE 3A
(*in residential area*)
40' - 45'

TYPE 3B
(*in open space area*)
43'

TYPE 4
(*in golf course*)
75'

TYPE 5A
(*in residential area*)
87'

TYPE 5B
(*in open space area*)
87'

TYPE 5C
(*in commercial area*)
87'

site analysis / !melk 3d model:
massing & land use along the corridor of Verdugo Wash

this page / opposite page:
3D model development of areas typifying certain conditions along the Verdugo Wash, such as the channel's profile (width and shape), as well as the adjacent land uses such as open space, residential and commercial. *Graphics: ©!MELK*

TYPE 1
(*in residential area*)

TYPE 2
(*in residential area*)

TYPE 3A
(*in residential area*)

TYPE 3B
(*in open space area*)

TYPE 4
(*in golf course*)

TYPE 5A
(*in residential area*)

TYPE 5B
(*in open space area*)

TYPE 5C
(*in commercial area*)

How big is the Verdugo Wash? How does it compare in scale to other linear public spaces we may be familiar with?

The Verdugo Wash has been inaccessible to the public since it was channelized. A useful exercise for starting the conversation of "what is possible" in this space is to digest just how much space there is. Have you visited any of these linear public spaces? If so, how does its footprint (black footprint below) and your experience there compare to the footprint of the Verdugo Wash (green footprint below)?

At 9.4 miles long, the total surface area of Verdugo Wash is approximately 2.6 million square-feet!

urban trail
Central Park
New York, NY
Sunset Strip
Los Angeles, CA
rural trail
La Rambla
Barcelona, Spain
Copacabana
Rio de Janeiro, Brazil
The High Line
New York, NY
Cherry Creek Trail
Denver, CO
Los Angeles River Vision Plan
Los Angeles, CA

How does Verdugo Wash relate to the rest of Glendale?

The Wash touches at least eighteen distinct neighborhoods as defined by the City of Glendale. There are even more distinct communities with unique characters within these neighborhoods, which should be studied in more depth in future design phases.

Land uses vary along the Wash. At the northern end, these land uses tend to be single family residential and open space.

Immediately south of the debris basin is the golf course, where the wash is trapezoidal in shape and unfenced. After the golf course, the Wash returns to its typical rectangular, fenced condition. Cutting through Glendale to meet the LA River, land uses trend towards higher density residential and commercial, especially near downtown.

Verdugo Wash alignment, and surrounding environs

1/8 1/4 1/2 1 mile

site analysis / !melk 3d model:
urban scale massing & land use

Verdugo Wash alignment, and adjacent urban land uses

1/8 1/4 1/2 1 mile

Special thanks to Rich Toyon and the Tongva Tribe for their contributions to this section of the report.

the site today
historical accounts

TONGVA: ITS ORIGINAL PEOPLE

The Tongva are original people of the Los Angeles basin; their presence can be traced back 9,000 years, although some studies indicate 11,500 to 18,000 years. Their territory *"Tovaangar"* stretched over 2,500 square miles and included modern-day Glendale. Due to the area's favorable climate and their strategic location along the ocean extending into the mountains, the Tongva developed a sophisticated social structure and rich oral history and demonstrated great economic strength. Not only did the Tongva name most villages and physical features in the area, but many individuals spoke several different dialects and languages to facilitate trade amongst the neighboring nations.

The approximate homeland of the Tongva Nation was surrounded by many other first Nations, facilitating rich trade. A neighborhood in Long Beach changed its Western name to Tonga nomenclature to honor its original people. *Image source: Long Beach Post News*

"Wiyot's Children," a painting by Mary Leighton Thomson, depicts the Tongva village of Sa-angna at Playa del Rey, Ballona Wetlands. Tongva village sites were carefully considered based on Tongva traditions of land stewardship, even shifting to respond to ecological dynamics. *Image source: via SMBAS*

In the Crescenta Valley, the Tongva founded several villages including Muuhonga, Tohuunga, & Haahamonga (circled) / Area mountain ranges labeled with today's western names for reference. *Image source: Decolonial Atlas*

TONGVA IN THE CRESCENTA VALLEY

The Tongva people's history in the Crescenta Valley *(includes modern-day Glendale and La Crescenta-Montrose)* and their relationship and stewardship of the Verdugo Mountains is well-established and predates written California history. When translated to English, the name *"Tongva"* means *"People of the Earth"* and so it follows that the Tongva's livelihood was deeply tied to the land. Primarily hunter-gathers, they changed location seasonally and actively managed the land.

Tongva village sites were carefully considered & established according to three critical criteria: a credible water source, stable land placement, and a credible food source. The Verdugo Mountains and immediate environs provided all three of these conditions. At least three of the villages in this region – Wiqanga, Tujungna (Tohuunga)/Muuhungna, and Hahamongna – were all located near water sources, underscoring the Tongva ethic in which water was not just a resource that supported their people, but a gift worthy of celebration. The Tongva's enduring occupancy in Crescenta Valley testifies to their great stewardship of the land, the life-giving waters of the Verdugo Mountain watershed, and the rich alluvial plains of the Crescenta Valley.

Tongva woman at her shelter covered with tule mats on the banks of the Los Angeles River. *Image source: Bowers Museum Collection via SMBAS*

VILLAGE OF WIQANGA

The Tongva village of Wiqanga in the western Crescenta Valley was inhabited for at least a thousand years and most likely originated as a seasonal village that later became permanent. The age of the village is reasonably much older and concurrent with the age of the other nearby villages: Tujungna (6,000 years old), Muuhungna (4,500 years old), & Hahamongna (4,000 years old). Over the centuries, the village most likely expanded and contracted, and possibly shifted position or established new boundaries. Based on artifacts found, Wiqanga extended into La Tuna Canyon beyond the western Crescenta Valley.

Wiqanga supplied and traded with the two nearby Tongva villages, Tujungna and Muuhungna, as well as Hahamongna. Smaller villages, including Wiqanga, were strategically established to provide management bases over sustaining resources like forests, fresh water, and hunting grounds, as well as those with cultural significance like gathering areas. Thus, it is unsurprising that Wiqanga was located near both permanent and seasonal water sources including area springs and - *in today's western names* – Blanchard Creek, Cook's Creek, Dunsmore Creek and La Barranca Creek (now buried under the 210 freeway).

The Tongva name of "Wiqanga" means *"place of the thorn,"* referring to the thorns of the *Opuntia* cactus species endemic to the area, a species the Spaniards later referred to as "Las Tunas" (La Tuna). Early missionaries traveling from Mission San Gabriel to Mission San Fernando would stop at or near Wiqanga to replenish their water supplies before continuing their journey. The missionaries' preferred route, "Old Indian Trail" and later "Old Padre Trail," roughly followed the northern base of the Verdugo Mountains and is today a fair portion of La Crescenta and Honolulu Avenues.

Wiqanga was named by the Tongva in reference to the* Opuntia *cactus species endemic to the area, pictured above. *image source: University of California CalPhotos*

A Tongva woman storing acorns in a granary. *image source: California Historical Society Collection at the University of Southern California via wikipedia commons*

The Village of Wiqanga was responsible for the stewardship of the large, almost uninterrupted oak forests on the northern side of the Verdugo Mountains. Dominated by Quercus agrifolia (Coast Live Oak), these forests supplied an annual bounty of acorns that was key to their diet. At the northern base of the Verdugo Mountains, creeks flowing down joined creeks flowing from the San Gabriel's, forming the Verdugo Creek – *and almost certainly sporting Tongva nomenclature* – which likely flowed year-round without the interruptions of today's Crescenta Valley. This relationship of the Verdugo Creek (credible water source) adjacent to the Verdugo Mountains' oak forests (credible food source) was blissful. Each Fall when the oak forests yielded their harvest of acorns, the Tongva people would process them into carbohydrate-rich acorn flour using the waters of the now-named Verdugo Creek to leech out their tannic acid. On average, it took five hundred pounds of acorns per Tongva household per year for subsistence when combined with other dietary staples. Based on the prominence of acorns in the Tongva diet, Wiqanga's oak stewardship role for the Nation, and the Tongva's estimated population in the area, one can surmise that the Verdugo Creek flow at this location must have been quite ample to process multiple tons of acorns.

The Crescenta Valley was like many other parts of California where native peoples actively stewarded the land. Their land management practices had developed over thousands of years and was based on a near complete understanding of the landscape ecology's relationships, rhythms, and intricacies. As a result, their stewardship was complex, sophisticated, and unequivocally sustainable.

Based on tribal knowledge and artifacts found, the village of Wiqanga was likely located at the former Verdugo Hills Golf Course. The Tongva would have selected this location to steward the acorn-yielding oak woodlands of the "Verdugo" Mountains, and process them using fresh water from the site's two artesian springs and the "Verdugo" Creek - where the Verdugo and San Gabriel Mountain streams converge. *Graphic by !MELK per 05/27/2022 correspondence with Gabrielino-Tongva chief Rich Toyon*

Remnant Oak Woodlands in the Verdugo Mountains. *Image source: r/socalhiking*

significance of the Coast Live Oak to the Tongva tribe

SPECIES PROFILE: *QUERCUS AGRIFOLIA*

The Coast Live Oak / syn. California Live Oak / *Quercus agrifolia*, is a medium-sized tree that grows along the coasts of mid and southern California. It is characterized by evergreen foliage and a much-branched trunk that can become massive, highly contorted, and gnarled with age. The lower limbs of ungrazed trees often recline on the ground. Legacy specimens can be over 250 years old with trunk diameters 3-4 meters. *Q. agrifolia* is among the most important wildlife plants where it grows.

Mature Size: 25 - 82 ft tall by 15 - 35 ft wide

Crown: Typically broadly rounded and dense, especially when aged 20 to 70 years; in later life the trunk and branches are more well defined and the leaf density lower. Younger trees are often shrubby.

Growth Rate: medium; height increases of 13–24"/year.

Leaves: dark green, oval, convex, spine-toothed margins

Flowering: early-to-mid spring. Pendulous male catkins and inconspicuous yellow / cream / green female flowers.

Fruit: slender, reddish brown acorn 2-3.5 cm long x 1-1.5 cm broad; matures about 7-8 months after pollination (most red oak acorns take 18 months to mature). Acorns attract variety of birds and butterflies.

Climate: Only California-native oak thriving on coast. Prefers mild climate afforded by ocean proximity; coastal fog supplies summer heat relief. Not frost tolerant.

Vegetation Communities: Grows on well-drained soils of lower elevation coastal hills and plains, usually near year-round or perennial streams below 3,000 ft. It's also often found in rocky hillsides that capture and hold more moisture. Common vegetation communities are "Mixed Evergreen Forest," "Southern Oak Woodland," and "Foothill Woodland."

Soils: Tolerates various soils; prefers deep, well draining loam Soil PH: 4.0 - 8; obligate relationship with mycorrhizal fungi, which provide moisture and nutrients

Planting/Water Needs: Fairly easy to grow and drought-tolerant after establishment. Ensure weekly watering through year one, then monthly starting at year two until tree is 10 ft tall. Once established, avoid direct summer water. May be planted near irrigated areas; trees will extend roots to access wetter areas. Shade root zones with mulch, rocks, or smaller native plants. Do not fertilize - trees will amend their root zone soil over time with their own leaves and build the natural mycorrhizal fungus in the soil they need to thrive. Gradually, they become islands of natural fertility that improve the health of the nearby plants.

Maintenance: Prune July-August; avoid pruning large limbs or over-thinning interior branches. Susceptible to several pests/diseases, especially oak crown and root rot fungi roots. Avoid activities that disturb or compact soil around trees within the dripline. Avoid direct summer irrigation, especially in urban landscapes, as it could lead to oak root and crown rot.

Fire Resistance: Large trees are exceptionally fire resistant with thick bark. Generally recover well from fire. Branches may produce new shoots after having been lightly burned and trunks exposed to moderate fires often re-sprout from the base. Smaller trees are less resistant, with even low- to moderately severe fires often killing seedlings/saplings.

Wildlife Value: Very high. Attracts ~30 species of birds including Oak Titmouse, Western Scrub Jay, Steller's Jay, Chestnut-backed Chickadee and Acorn Woodpecker. Hosts 41 (confirmed) up to 122 (likely) butterfly/moth species including California Sister, Propertius Duskywing, and Golden Hairstreak, other invertebrates like weevils and wasps and mammals like the California ground squirrel.

Hundreds of animal species rely on the coast live oak during at least one part of their life cycles including the above native species** (1) **California scrub jay with acorn,** (2) **golden hairstreak butterfly,** (3) **bushtit nest,** (4) **acorn woodpecker and granary,** (5) **wasp gall,** (6) **california sister butterfly *image sources: SCV Audubon - Socal Butterflies - Wikimedia*

information sources: Calscape - Calflora - USDA NRCS - USDA FEIS - LBJ Wildflower Center

Q. agrifolia often flourish along the edges of seasonal washes like here in La Tuna Canyon of the Verdugo Mountains. *image source: LA Creek Freak*

Q. agrifolia tends to grow either along seasonal or perennial streams or towards the bottom of hills in furrows to catch the winter rains. *image source: CNPS*

Q. agrifolia rounded form in open-grown conditions of Oak Savannah. *image source: Calflora*

Q. agrifolia acorns are preferred by species like scrub jays and squirrels whose seed caching behavior helps sustain the oak's populations. *image source: Calflora*

A mature Coast Live Oak woodland dominated by Quercus agrifolia at the Jack and Laura Dangermond Preserve near Santa Barbara. *Image source: The Nature Conservancy*

CHANGES FOR THE TONGVA

Between 1769 and 1840, the Tongva's culture and landscape were irrevocably changed. The Spanish arrived bringing with them disease, invasive species, and livestock. The Spanish forced the Tongva to resettle around three missions, re-purposed their hunting and gathering lands for grazing and agriculture, in addition to inflicting suffering and cruelly enforcing religious conversion and assimilation. The changes at the hand of the Spanish had many effects:

Misión San Gabriel Arcángel painted by Ferdinand Deppe, 1828. Deppe's painting depicts the landscape in the aftermath of the Spanish conquest of the Tongva and neighboring Indigenous. In the foreground is an independent, "gentile" or un-baptized and therefore still free Tongva village (possibly She-vaangna, at Whittier Narrows on the San Gabriel River and the Rio Hondo). On the left are the large barracks in which more than 1,000 Indigenous - largely Tongva - were required to live. The largest building in the center are the many workshops in which Tongva and other Indigenous peoples manufactured items required to support Spanish ruler. To the right is the Mission chapel itself, which like every other building in the complex, was the work of Tongva artisans. *Commentary & image source: California Historical Society Collection, via USC via Dornsife Dept of History*

1) UPENDED ECOLOGY

Removed from their villages, the Tongva were no longer able to manage the sustaining landscape as they had for millennia. Their diet changed from acorn flour, other plants, and wild game. Grazing accelerated ecological changes as cattle foraged at will, kneading the earth with their hard hoofs, dispersed alien seeds, and defecated in waterways.

2) ALTERED HYDROLOGY

Whereas the Tongva selected village sites based on criteria such as "stable land placement" and were nimble in shifting their villages' locations in sync with ecological dynamics, the Spanish mission sites were static and heavy.

Infrastructural investment exemplified the settlers' pattern. Notably, open, usually earthen canals called "zanjas" were dug to divert water from stream courses for agricultural and household purposes in the colonial settlements. Increasing populations and lack of respect for the waterways resulted in highly polluted water quality that become a true city hazard. Competition for limited water resources also resulted in the earliest forms of modern day "water masters" to regulate

Despite their range of problems, many visitors commented on the beauty of the zanjas. Above: A zanja (center left) runs in front of sprawling lawns on Figueroa Street, circa 1892. The banks of zanjas often functioned as de facto parks. *source: Los Angeles Public Library via LA curbed*

and enforce zanja use. Flood events precipitated the first attempts at "controlling" waterways. Yet the zanjas were essential to young Los Angeles and surrounding areas. These gravity-fed water channels supplied farmers with irrigation water and children could often be found splashing around in them, many even using it as a bathtub. The zanjas were also dangerous, a source of crime and corruption, and an unofficial sewer - a streaming washing machine and giant trash can.

After California became an American state in 1850, new zanjas began to be dug throughout the city. However, by 1903, an official end-of-year report to Los Angeles's newly formed Board of Water Commissioners was the nail on the coffin for the zanja typology: *"The zanja system has made its usual poor showing for the year,"* he wrote. *"It would certainly be the greatest folly to spend any more money in new construction on this system."*

3) NEW NOMENCLATURE

Being advantaged in power and the written word, the Spanish not only renamed the region's physical and topographical elements as they saw fit, but even renamed the "Tongva" people "Gabrielino" for the San Gabriel Mission.

While the Verdugo Mountains, the Verdugo Creek/Wash, and the Crescenta Valley alluvial plains and canyons all had original Tongva names, these cultural landmarks of the Tongva were lost to history, especially following the Spanish Land Grants. Few Tongva place names in the LA Basin remain, though some have been reestablished like "Tongva Peak" located in the Verdugo Mountains in 2002.

The Tongva have called the LA Basin and modern-day Glendale home for at least 9,000 years and have been the land's champions, despite the friction that began with the arrival of the Spanish. In fact, ***Native history is fiercely alive and abundant in the area of the Verdugo Wash today***: at the northern base of Verdugo Mountains, in the alluvial plains that make up the Crescenta Valley, and the waters that flow south from the San Gabriel Mountains.

Given the Tongva's great legacy, their engaged, wise presence today, and how the premise of this Visioning process has been to re-imagine a Verdugo Wash *(in today's western name)* that is dynamic, resilient, and contributes to the regional ecology, ***would it not be appropriate to reestablish a Tongva-honoring nomenclature for newly envisioned place names along the corridor?***

Relying on rigorous research, this nomenclature would ground the establishment of new or improved features and connect the re-imagined Wash to the Tongva's legacy of stewardship and land knowledge in the basin.

The Tongva are original people of Los Angeles. Tovaangar, their territory, was once home to 100+ Tonga villages with Tongva nomenclature. *Image source: Decolonial Atlas*

RANCHOS, EARLY GLENDALE, & "THE JEWEL CITY"

European land expeditions provide the earliest written descriptions of this area and were remarkably illustrative. An diarist from the 1769 de Portolá expedition described the scene after crossing the Arroyo Seco, *rhapsodizing for more than a thousand words that day about this "green, lush valley" its "very full flowing, wide river", the "riot of color in the hills." "The place defined abundance - native grapevines, wild roses and sage growing in rich soils, grizzly, antelope, quail and steelhead trout for the taking."* This expedition led to the founding of the Mission San Gabriel in 1771 and later, the Pueblo of Los Angeles.

The Glendale area was initially established quite loosely when corporal José María Verdugo, a Spanish soldier, petitioned the Spanish governor in 1784 to allow him to graze his livestock in the area. The land was approximately one and a half leagues from the Mission on the road to Monterey (which is still called Monterey Road), and lay roughly between the Arroyo Hondo (now called Arroyo Seco) and the Los Angeles River as far as the "Saca de Agua" (or water dam).

The area was called "Haleameupet" by the Tongva. The vast grassy acres, the more than adequate water supply, and the beautiful green mountains to the north appealed to the corporal. The Governor granted Verdugo's petition with several conditions including peaceful relations with the native peoples and agricultural improvements. The small empire thus obtained by Corporal José Maria Verdugo, later known as Rancho San Rafael, was originally called by him, "Parajé de Zanja de Zacamutin" or "Rancho La Zanja", meaning "*ditch that brought water from the rivers*." Such nomenclature indicates the area was quite rich in water, no doubt due to the Verdugo Creek.

With the cession of California to the United States following the Mexican-American War, a 1848 Treaty provided that land grants like this be honored; the US Land Commission confirmed the grant in 1855. In 1882, the grant was patented to the Julio and Catalina Verdugo Family for 36,403 acres. Today, the Rancho would contain all or a good part of Glendale, Burbank, Eagle Rock, Highland Park, Garvanza, Flintridge, Montrose, La Canada, the west part of Pasadena, and all of the area contained within the triangle formed by the junction of the Arroyo Seco and the Los Angeles River.

The Rancho was willed to Verdugo's unmarried, blind daughter, Catalina, upon his death, and managed by his son Júlio. Eventually split between the siblings, the Rancho was ultimately partitioned in 1871 into thirty-one parcels.

1900 map of the initial Glendale town site and its relationship to Rancho San Rafael and region's rich topography. *Image source: book "Sectional & Road Map of Los Angeles County Including Part of Orange & Ventura Counties Showing the Oil and Mining Districts Compiled From Official Records" via Homestead Museum*

Catalina Verdugo Adobe, Glendale's oldest home was constructed c. 1828 by Teodor Verdugo, who was Verdugo's grandson & Catalina's nephew. *image source: Glendale (CA) Public Library Special Collections*

Legacy oak tree at the Catalina Verdugo adobe in Glendale where the Treaty of Cahuenga was drafted in January 1847, and signed the following day in Cahuenga Pass. The tree was named "El Roble de la Paz" or "the oak of peace" by the adobe's later owners. Sadly in 1987, estimated at 500 years old, this tree succumbed to disease. *image source: Glendale (CA) Public Library Special Collections*

In 1884, area residents gathered to form a town site and chose the name "Glendale". Development in the area then consisted of agriculture, a few homes along Figueroa Street, and summer cottages in the hills overlooking the Arroyo Seco. Unsurprising given the area's natural beauty, areas like Mount Washington began attracting tourists by the 1890's.

As part of a wave of public fascination with the romantic days of California's Spanish and Mexican past, visitors made their way in droves ***"Out Glendale Way"*** to stroll about the area's lush grounds.

postcards from "Out Glendale Way" advertising the new location of the famous, longtime beloved destination in Glendale, Casa Verdugo restaurant
image source: Water & Power Museum

Circa 1917 postcard with "Panoramic View from Woodberry Hill, Orange Groves in Foreground, Glendale, California" illustrates the area's rich agricultural era thanks to the area's historic water resources. *image source: Glendale (CA) Public Library Special Collections*

Glendale, - The City Beautiful.

The words "glen" and "dale" are synonymous, each meaning a valley surrounded by hills. By combining the two words into one, the meaning is intensified—a charming valley encircled by inspiring mountains—a definition that seems particularly apt to those who have seen the city of Glendale, California.

A more beautiful setting for a modern city could hardly be imagined.

Situated in the eastern part of the level and fertile San Fernando Valley, encircled by rugged and towering hills, the azure sky above, semi-tropical fruits and perrenial flowers on every hand—such is a picture of Glendale, the Beautiful.

Circa 1917 postcard explaining how Glendale was named for its natural setting. In the 1910s, Glendale took its moniker, "the Jewel City" for how the city, with its background of the Verdugo Hills, "'sparkled like a jewel in the sun." *image source: Glendale (CA) Public Library Special Collections*

How did early surveying portray the Verdugo Wash?

United States Geographical Survey (USGS) Topographical Survey, 1894 is one of the oldest recorded maps for this area.

The Verdugo Wash is called out as three distinct segments:
1. Northern 1/3rd - "VERDUGO CREEK" starts approximately just south of today's 210 Freeway and runs to the seasonal creek running down between Whiting Woods and Mesa Lila Roads. The contours are very similar today, indicating the creek was relatively steep in this segment. While named a "Creek," the legend signature indicates some intermittent hydrology at this point in time. However, given its nomenclature at this point in time, was likely more major than other "intermittent streams" such as those originating in the Verdugo Mountains.

2. Middle 1/3rd - "VERDUGO CANYON" starts at the Whiting Woods seasonal creek and appears to end where the natural canyon formed by the Verdugo Mountains and San Rafael Hills ends. The brown relief signature is not identified in the legend, however by reading similar named features, one can surmise it indicates a seasonally wet, wash-like condition.

3. Southern 1/3rd - "VERDUGO WASH" begins where the canyon yields to the plains and ends at the Wash's confluence with the LA River. Note how the "Wash" portion bifurcates and then converges in the area just north of today's Fremont Park. Likely due to the flatter plain topography and lack of development, flowing water had time and space to meander - and likely, infiltrate into the aquifers below.

LEGEND

map source: University of Texas - Austin Perry-Castañeda Library Map Collection

G A
M O U N T A I N S
A N G E L
La Crescenta
Verdugo Creek
L A C A N A D A
La Canada
R.13 W.
R.12 W.
Las Casbias
Arroyo Seco
S A N R A F A E L
Devils Gate
Burbank
S A N R A F A E L
Verdugo Canyon
Verdugo Park
Linda Vista
Sycamore Canyon
Redondo
Verdugo Wash
Scholl Canyon
West Glendale
Glendale
Verdugo
Eagle Rock Valley
L O S
E L I S

Glendale on the map! A historically popular destination in Los Angeles

TRANSPORTATION INNOVATIONS

In 1902, the Glendale Rail Line was pioneered by L.C. Brand and Associates as "The Los Angeles & Glendale Electric Railway". One year later, the Los Angeles City Council approved an electric railway line running from Los Angeles to Glendale. The franchise was soon sold to Henry E. Huntington, owner of Pacific Electric Railway Co., who would bring the "Red Cars" to Glendale by 1904 under the name of Los Angeles Interurban Railway (later changed to Pacific Electric). Noteworthy is the way in which this 1906 promotional brochure reads for the project,

"The fame of this ride, decidedly the most picturesque to any suburb, attracts thousands of tourists, requiring many additional cars on Sundays and holidays, while the hundreds of commuters going daily to and from business and home are rapidly increasing in numbers.

The passage through the city, passing Central Park, traversing Figueroa Street, Lake Shore Drive (today, Glendale Blvd)*, skirting Echo Park, through Edendale and the Pass between Elysian and Griffith Parks to the point where the most enchanting of all valley panoramas burst upon the view, is accomplished in fifteen minutes. The scene is framed on the north, in ascending order, by the San Rafael Hills, Verdugo Mountains and the San Gabriel range, showing Mts. Lowe and Wilson in the foreground, while far to the east Mt. Cucamonga's dome and the other snow-capped peaks of the San Bernardino mountains rising eight thousand and nine thousand feet are discovered. The flight along the borders of Griffith Park, over the trestles spanning Los Angeles River, and through Tropico to the fine depot at Brand Boulevard and Fourth Street* (today, Broadway)*, Glendale occupies but ten minutes.*

Here, midway the broad valley, its beauties and surpassing advantages are fully realized. But five minutes are required for the remainder of the trip down the center of Brand Boulevard, a thoroughfare 130 feet in width, flanked by seventy-two monoliths, eleven and one-half feet high, capped by electric lights, with the space between the broad cement walks and curbs filled by graceful palms, on to Mountain Avenue. Here at the end of the line is found the choicest residential portion of the valley, at the foothills. This is not a picture of a dissolving view, but one as eternal as the everlasting hills."

With its proximity to Downtown, rail connection, and picturesque landscapes, Glendale quickly became a popular destination. Acres of land in/around the Verdugo Wash were part of a lush park with meandering pathways lined with vegetation - including varieties of cacti and a fragrant grove of oranges that was intended to represent the type of gardens found in the "old California days".

1904 map showing the Inter-Urban Railway route. The rail was eventually extended north, generally following today's Canada Blvd to connect passengers to Montrose, La Canada, La Crescenta, and Tujunga. *image source: Water and Power Museum*

Acres of land in/around the Verdugo Wash were part of a lush park with meandering pathways lined with vegetation - including varieties of cacti and a fragrant grove of oranges that was intended to represent the type of gardens found in the "old California days." *source: https://www.theriverproject.org/*

As a result of these transportation innovations, a commercial district was created in the Casa Verdugo neighborhood at the corner of North Central Avenue and West Stocker Street, which established a new solid "urban core" within Glendale.

This economic district included a theatre, various stores, a school, and a post office - all of which sparked interest in more permanent residential development.

Subsequently, Glendale and its surrounding area experienced a significant growth spurt beginning around 1904, due in large part to the arrival of the Pacific Electric line. In 1906, the City of Glendale was incorporated. The city's population rose from ~14,000 in 1920 to over 60,000 by 1930.

sources for this section:
https://www.kcet.org/shows/departures/hahamogna-native-tongva-people
https://en.wikipedia.org/wiki/Hahamongna,_California#cite_note-gnis-1
https://geonames.usgs.gov/apex/f?p=GNISPQ:3:::NO::P3_FID:1732526
https://www.latimes.com/socal/glendale-news-press/entertainment/tn-gnp-me-yamada-20180126-story.html
https://www.coloradoboulevard.net/forgotten-residents/
http://www.tongvapeople.org/?page_id=696
http://www.laalmanac.com/history/hi05.php
https://gabrielinotribe.org/history/
https://www.theriverproject.org/
https://gabrielenoindians.org/
https://la.curbed.com/2016/4/28/11490196/los-angeles-history-water-zanjas
https://online.ucpress.edu/scq/article-abstract/32/4/269/84340/The-Casa-Adobe-de-San-Rafael-The-Sanchez-Adobe-In?redirectedFrom=PDF

HISTORY OF FLOODING

The success of "Out Glendale Way" and the town's quick growth was threatened during the early 1930s when the region was devastated by a series of unprecedented flood events. The most damaging flood event came after a November 1933 wildfire denuded the San Gabriel Mountains of its vegetation, producing ubiquitous ash and compromising soil stability. Intense rain storms occurred in December, and on New Year's Day 1934, the Verdugo Wash began to swell and overflow its then natural channel, even bucking its banks and destroying homes, washing out bridges, and blanketing the town in mud, boulders, and debris. On January 2nd, the Glendale News-Press published the headline, *"36 dead and 31 Missing, Seek U.S. Aid."*

This news headline, *"...Seek U.S. Aid,"* embodied a larger national shift. Many American cities were founded along economically and agriculturally rich waterways and were similarly struggling with flood conflicts. So in response to public demands for federal aid for flood-prone areas like Glendale's (and also for work relief in the midst of the Great Depression), Congress passed the Flood Control Act in 1936. This was the first act that recognized flood control as *"a proper activity of the Federal Government."* Most of the responsibility for planning and designing federal flood control projects was assigned to the Army Corps of Engineers (USACE).

Why was the Verdugo Wash channelized?

flooded condition: pre-channelization
Left: the 1933-34 flood sent water, mud, and debris down the steep slopes of the San Gabriels. The flood followed the then mostly-natural wash through the Woodlands. The photo taken Jan 5, 1934 by the Los Angeles County Flood Control District shows the devastation. Right: a man surveys the heavily eroded banks the Verdugo Wash after the 1934 flood. image sources: https://digital-collections.csun.edu/digital/collection/SFVH/id/1278/

Engineering report map documenting the extents of damage from the New Year's Day Flood in La Canada Valley and vicinity.

the "BEFORE"

typical condition, pre-channelization
the area that today known as the "Verdugo Wash" was originally a natural canyon channeling seasonal precipitation

Given the recent devastating flood events and the federal political climate regarding flooding, the Los Angeles County Flood Control District and USACE partnered to engineer nearly 9.5 miles of the Verdugo Wash and mitigate flood risk in Glendale. What was once a natural canyon channeling (and sometimes overflowing) seasonal precipitation was lined in concrete in order to create a safe place for water and debris to go during flash storm events and reduce, if not prevent, future flooding of Glendale homes and businesses. The use of concrete was an intentional material choice, selected to efficiently move stormwater from the city grid to the new wash channel and onto the LA River. Unlike the stream's natural banks, concrete would not erode away during storm events, and would facilitate easier clean up of the mud and debris the floodwaters carry downstream.

While the Verdugo Wash channelization project was certainly successful in reducing flood risk in Glendale, the channelization denuded the natural river of its many natural benefits. Wildlife habitats were fragmented, storm water runoff and pollution increased, and the original identity of the stream began to fade away. The Verdugo Wash Visioning project aims to revitalize the original tributary path, reactivate biodiversity, and reconnect the community with an active transportation corridor.

Verdugo Wash construction

The significant and impervious mountainous topography surrounding Glendale is a primary reason why this area has been particularly susceptible to flooding. During storm events, rain cascades down the mountains with force, having no "horizontal" distance before the town begins to slow down and infiltrate into the ground. When this forceful storm water "runs off," it also carries considerable debris and mud, disturbing city activities.

the "AFTER"

typical condition, post-channelization
one of the standard segments of the Verdugo Wash, which was created to mitigate and divert waters from large-scale flood events

sources:
Special Collections, Glendale Public Library
https://waterandpower.org/museum/Early_Views_of_Glendale_2_of_2.html
https://digital-collections.csun.edu/digital/collection/SFVH/id/1278/
http://dpw.lacounty.gov/wmd/Watershed/LA/Larmp/LARMP-33%20Appendix%20A%20-%20History%20of%20the%20Los%20Angeles%20River.pdf
https://www.publications.usace.army.mil/Portals/76/Publications/Engineer-Pamphlets/EP_870-1-29.pdf

3.

the Vision for Verdugo Wash

"sphere of influence" - notional urbanistic transformations for the Verdugo Wash in order to establish a multi-purpose community amenity for Glendale *(graphic ©!melk)*

the opportunity

Effectively, the Verdugo Wash was channelized with a single-purpose in mind: to reduce flood risk. And in 1930s Glendale, and in light of flood events, this made sense!

But Glendale today neither looks the same as 1930s Glendale, nor are the needs of its residents the same as those who lived there in the 1930s.

In 1940 after the initial channelization of the Verdugo Wash, Glendale's population was approximately 85,000; in 2020 this number had grown to nearly 200,000.

Glendale has undoubtedly been enlivened by this growth, but the City is spatially constrained with a built-out urban and suburban fabric. One could say that Glendale's growth plates have fused. While fledgling "1930s Glendale" needed the safety of flood control to continue establishing, "2020s Glendale" is craving additional benefits related to health, happiness, and resilience.

These benefits include *additional parks & open space, convenient recreation opportunities, improved pedestrian and bicycle access & connectivity, improved water quality and aquifer recharge, reconnected ecologies, reduced urban heat island effect, social equity, and new economic development opportunities*.

At a scale of approximately 60-acres, navigating significant geographies that connect north and south Glendale, the Verdugo Wash is a *key opportunity* for the City of Glendale to further mature urbanistically.

This is a critical moment to respond to the needs of today (and tomorrow's!) constituents, and fold in additional community benefits to this robust hydrology infrastructure.

The overall objective of the Verdugo Wash Visioning is to ensure that the channel continues to provide the safety of base flood control while integrating benefits to enrich Glendale's health, happiness, and resilience.

Unique Identity

Regionally, southern California is unique in its mild, sunny Mediterranean climate, Hollywood glamour, laid-back culture, and wild surrounding landscapes. Glendale is even more unique nestled as a foothill city between the San Gabriel Mountains, the Verdugo Mountains, and San Rafael Mountains - yielding a beauty and fertility recognized by the Tongva, the Spanish explorers, City Founders and Current residents alike.

Glendale's more recent history has been most remarkable, too, having supported a range of identities. From being historically home to some of the most extensive citrus groves and wine crops, to serving as a crossroads of land and air mobility (railroad networks and Grand Central Airport), to housing film studios and a thriving epicenter at Brand Boulevard, Glendale has so much to be proud of!

In addition, the City of Glendale is wonderfully diverse and can boast being the "safest mid-sized-city-in-America"!

To this end, we recognize that any visioning for the Verdugo Wash must be equally unique! The re-imagined Verdugo Wash - like the City of Glendale - must be one of a kind!

Glendale: the "Jewel City"

The Verdugo Wash's current form has enabled hundreds of local residences, businesses, community institutions and open spaces to safely build "up against" the Wash. But this growth pattern is like a generations-long, city-scale gesture of the City "turning its back" to this critical waterway.

Once upon a time, the Wash was a multi-dimensional link that connected the region physically, hydrologically and ecologically. After all, prior to its channelization, the Verdugo Wash was once a wild, naturalistic waterway comprised of *a creek*, *a canyon*, and *a wash*! It connected the bejeweled hillsides and nurtured Glendale's beloved coast live oaks and sycamore trees. It contributed to Glendale's identity.

It is the Project Team's opinion that this identity is important to underscore and reinstate, and that an authentic re-imagining of the Verdugo Wash would honor this heritage as a connector within a uniquely natural, geographic setting.

To be clear, it is not feasible to "naturalize" the Verdugo Wash by wholesale removing the concrete at this time. (This would compromise its current hydrological function within the larger urban system as it relates to larger infrastructure networks in Glendale.) What is feasible is establishing a landscape that offers experiences which evoke these cultural and natural histories. It is our belief that this approach - re-imagining the Verdugo Wash as a community amenity that also functions hydrologically - will contribute to the Glendale's overall sustainability and resilience.

the Vision for Verdugo Wash

first impressions

establishing a multi-benefit open space for Glendale: ***the Verdugo Wash as an immersive, cohesive, connected landscape corridor that still functions as an active piece of hydrological infrastructure***

Overarching Design Principles

1. establish a cohesive, connected landscape corridor

2. enhance access & connectivity

3. define gateways, markers, "special moments"

Conceptual diagram illustrating optimal corridor rhythm. *graphic: ©!melk*

The engineered Verdugo Wash channel today is monotonous and inhospitable.

The key to activating the Verdugo Wash as a meaningful community amenity - to attract a baseline of routine use - is integrating relevant program / activity, all while maintaining hydrological function and increasing ecological connectivity

This could include playgrounds, plazas, flexible gathering areas, seating areas, pavilions, kiosks, gardens, planted areas, etc. The placement and location of any additional program is one of careful consideration and calibration with existing offerings throughout the city.

The Verdugo Wash also offers the tremendous opportunity to serve as a prominent north-south connector within greater Glendale, while serving as a meaningful public space that maintains visitor interest and attention.

To break up the potential monotony of a 9.4-mile linear corridor, a collection of "moments" and "interventions" can help attract visitors, aid their navigation, and keep their interest to make the most of their experience in the re-imagined Verdugo Wash.

To attract visitors to the Verdugo Wash, we envision a "macro-rhythm" of iconic "moments" that could, for example, coincide with gateway features, viewing platforms, or plazas or pocket parks at designated entrances.

These moments will function as places of intensity and be strategically located along the length of the Verdugo Wash, functioning as physical beacons and destinations.

As a second layer, we envision a "micro-rhythm" of "interventions" that enrich the walking experience minute-by-minute, which translates into intervals of approximately 250-feet. These interventions provide both physical comfort and continued interest. They can consist of spaces and objects like shady seating areas, artwork, kiosks, or water features, but can also be achieved through design variations such as shifts in topography or riffs of materials or geometries.

establishing a connective spine: ***the existing project site navigates significant topographies (e.g. the "bottleneck" where the Verdugos and San Rafaels pinch) to make walking and biking as easy as possible between north and south Glendale.***

integrating areas for activity: ***a "micro-rhythm" of programmatic interventions such as this seating area offer comfort and interest along the Verdugo Wash experience, which safeguards the journey from monotony!***

placing interventions: ***gateways would welcome residents and visitors alike to the Verdugo Wash. Functioning as gateways, markers, and shade canopies, these elements will create a strong silhouette and facilitate navigation and orientation throughout the Verdugo Wash as a newly imagined linear park***

below: ***existing open space program / community programming along the Verdugo Wash***

below: ***possible synergies that program within the Wash can have with its environs***

physical attributes of the Verdugo Wash channel: ***The dimensions of the existing channel vary. Generally, the width increases as the channel curves towards its confluence with the LA River, since the channel was hydrologically engineered to convey greater volumes of water in these lower reaches. The lower reaches of the wash, especially south of Glorietta Park, are 86 feet wide!***

possibilities for passive recreation:
The Verdugo Wash can serve as a much-needed place of respite to complement a growing, densifying Glendale. Chat with a friend in a pleasant pedestrian comfort area with design elements like shade, benches, and picnic tables. Enjoy activities like bird watching in one of the native planted areas, or take in rich public art like murals or sculpture.

a relevant ecology: ***Native plants, planted responsibly to manage wildfire risk, would greatly increase habitat value along the Wash, attracting birds and pollinators. In conjunction with smart lighting, these measures would invite wildlife to travel along the corridor at night between regional ecological refuges such as the Verdugo Mountains, San Gabriels, and Griffith Park.***

physical constraints: ***any proposed program - or proposed mobility - must correlate with the profile of the Verdugo Wash in any given location. Based on current surrounding land use, the width / footprint of the Verdugo Wash is unlikely to expand much, if at all.***

Where appropriate, and as it relates to adjacent land use and context, the Verdugo Wash can have integrated program for multi-benefit community use!

possibilities for active recreation:

The Verdugo Wash will be most successful as a community amenity if it is activated - a destination in and of itself. This will attract more visitors, and by extension, promote appropriate, social behaviors that keep more "eyes on the street," which promotes safety for all!

An inventory of existing public recreational facilities in the City of Glendale. Locations for recreational programs within the Verdugo Wash will need to work smartly within this system to add geographical and activity diversity for Glendale residents. <u>The City is currently working to update its Recreational Element, which coupled with further community outreach conversations in the future Master Planning phase will inform how the "additional programs" are sited along the Verdugo Wash.</u> *(graphic by !melk based on information from the City of Glendale's 1996 Recreational Element)*

HITING
OODS
SPARR
HEIGHTS
N Verdugo Rd
MONTROSE COMMUNITY PARK
Community Park
- 2 ballfields (permit required)
- 1/2 basketball court
- 2 tennis courts
- 1 playground (ages 2-5)
- 1 playground (ages 5-12)
- 5 barbecues
- 12 non-reservable picnic tables
DECANSO GARDENS
Botanical Garden
- 160 acres of gardens
- Bradley House
- Stuart Hedge Gallery
- Weddings and events venue (for rent)
- Photographs and filming location (permits required)
- Classes
- Concerts
- Festivals and events
OAKMONT VIEW PARK
Mini-Park
- 2 tennis courts
La Crescenta Ave
SPARR HEIGHTS COMMUNITY CENTER
Special Facility / Community Center
- 10 non-reservable tennis courts
- 2 meeting rooms for rent
- 1 small and 1 large patio for rent
- 1 kitchen for rent with room/patio rental
- wifi
OAKMONT
CHERRY CANYON PARK
Hiking Area
- Hiking trails
- Mountain biking loop
GLORIETTA TENNIS PARK
Neighborhood Park
- 1 ballfield (permit required)
- 1 multi-purpose field
- 4 tennis courts (private, for rent)
- 1 playground (ages 2-5)
- 1 playground (ages 5-12)
- 8 barbecues
- 6 non-reservable picnic tables
- wedding venue
GLENDALE SPORTS COMPLEX
Sports Park
- 2 soccer fields
- 1 1/2 soccer field
- 1 ballfield
- Concession stand
- Public restrooms
- Meeting room
- 2 trailheads
Cañada Blvd
N Verdugo Rd
CATALINA VERDUGO ADOBE
Historic Home, Museum, Garden, Special Facility
- 1 barbecue
- 13 reservable picnic tables (permit required)
- wedding venue
VERDUGO
WOODLANDS
GREENBRIAR
VERDUGO PARK
Community Park
- 1 ballfield (permit required)
- 4 1/2 basketball courts
- 1 horseshoe pitching pit
- 2 playgrounds (ages 2-12)
- 12 barbecues
- 28 non-reservable picnic tables
- 19 reservable picnic tables (permit required)
- 1 public community garden
BASE HERMAN FIELD
Special Facility
- 1 ballfield (permit required)
VERDUGO SKATE PARK
Special Facility
- Skate park (classes available)
HIBLEY PARK
Neighborhood Park
- 1/2 basketball courts
- 2 tennis courts
- 1 playground (ages 2-5)
- 1 playground (ages 5-12)
- 1 barbecue
- 9 non-reservable picnic tables
STENGEL FIELD
Special Facility
- 1 ballfield (permit required)
CIVIC AUDITORIUM
Special Facility, Community Building
- 6 rooms (for rent)
Camino San Rafael
ROSSMOYNE
COLLEGE HILLS
Glenoaks Blvd
E Chevy Chase Dr
N Glendale Ave
WOODBURY
OWNTOWN
S Verdugo Rd
PIEDMONT MINI-PARK
Mini-Park
- 0 non-reservable picnic tables

Any intervention within the Verdugo Wash must be carefully located and calibrated against the required flood control capacities of the channel. The available flood capacity is known as "freeboard."

However, at the confluence area at the junction with the LA River, we have envisioned a strategy of intervention that "floats" above the Wash since this area of the existing Wash is basically at flood capacity. Further feasibility work is anticipated in future planning phases.

possibilities for enhanced mobility:
The Verdugo Wash is a prime opportunity to connect Glendale. Class 1 (traffic-separated) bikeways and gracious walkways are envisioned to establish a pleasant realm free of vehicular traffic!

A primary project goal is to integrate continuous biking and walking paths along the length of the Wash.

Where space allows, the Class 1 bikeways would be physically separated from the pedestrian paths. In instances where project constraints push the biking and walking paths together, materiality changes and related design elements will be turned up to ensure clarity of pathways for user safety.

at Fremont Park, a wider section of the Verdugo Wash

an example of a Class-1 Bikeway that can be integrated into a new mobility corridor within the Verdugo Wash

different modes of mobility (designated cycling / scooter routes and pedestrian routes) will co-exist in a safe, clear, and efficient layout, to ultimately improve mobility throughout greater Glendale

the big idea!

Create a "platform", within the concrete channel which will effectively serve as a new "elevation" for community benefit and use! Integrating a platform will expand the functionality of the channel whereby the Wash can continue to function as a flood channel, while simultaneously offering a one-of-a-kind immersive landscape experience.

The reimagined Verdugo Wash is still a vital piece of hydrological infrastructure, however - with this simple "platform" solution - the possibility opens up to transform the channel into a 9.4-mile long linear park, replete with biking and walking paths, program, shade and ecologically-rich planting within water bio-filtration planters whose vegetation utilizes excess organic nutrients from city runoff and contributes cleaner water to the LA River.

*EXISTING CHANNEL PROFILE (TYPICAL) **

**Reference page 46 of the report for a more comprehensive catalogue of the spatial character of the Verdugo Wash.*

PROPOSED INTERVENTION: "LANDSCAPE PLATFORM(S)"

newly integrated bikeways within the Verdugo Wash will positively impact commuting within Glendale

clear distinctions will be made between multi-modal routes to promote safety

multi-modal, multi-level connectivity within a re-imagined Verdugo Wash

the newly integrated "green amenity space" is intended to vary in width and extent, in order to appropriately relate to the adjacent context / city fabric (a series of studies relating to potential privacy issues and solutions can be found in the "Community Considerations" chapter of this report)

“rewil

lding”

A nod to Glendale's rich natural landscape

The proposed gateway structures are inspired by the surrounding landscape. Sculptural volumes clad in fire resistant materials evoke the hills, mountains, and boulders that constitute the geologic base of Glendale's natural history. They are strategically located at access points to serve as markers, which will both orient and draw people to the re-imagined Verdugo Wash!

early sketches of Verdugo Wash gateway designs ©MELK

this page: ***various locations and iterations of the Verdugo Wash gateways***

At the flexible gathering areas, residents of Glendale and visitors alike can - during the day - find respite at the plaza under the canopy, while - in the evening - look forward to attending community events such as small performances or film screenings.

bespoke canopies - totally unique to the Verdugo Wash, that exist nowhere else! - will serve as gateways for the project

the gateways will facilitate navigation and orientation for visitors to - and within - the Wash

access to the Verdugo Wash will be integrated into the existing conditions in equitable and immersive ways!

access to the Verdugo Wash will be integrated into the existing conditions in equitable and immersive ways!

A nod to Glendale's rich natural landscape: the proposed gateway structures are inspired by the surrounding landscape. Sculptural volumes clad in fire resistant materials evoke the hills, mountains, and boulders that constitute the geologic base of Glendale's natural history. The gateways are strategically located at access points to serve as markers, which will both orient and draw people to the re-imagined Verdugo Wash!

The Oakmont Debris Basin is a highly viable opportunity to significantly enhance ecological diversity and bolster hydrological resilience along the Verdugo Wash.

Accessible walkways elevated above the sensitive soft-bottom vegetation, wayfinding and educational signage, and other interventions would transform the basin into a rich natural park for Glendale.

above left (view looking north from the dam), and above right (view looking north at the "mouth" of the wash)
the Oakmont Debris Basin reimagined with accessible walkways elevated above the sensitive soft-bottom vegetation

the new debris basin area would feature ample seating, as well as wayfinding and educational signage

the Oakmont Debris Basin as a rich natural eco-park for Glendale

the Vision for Verdugo Wash

improved connectivity

Connectivity

The Verdugo Wash Visioning project team has studied in depth all of the land uses and transportation networks as they relate to larger Glendale, with a guiding question: how can the Verdugo Wash improve connectivity for all Glendalians?

It is important to note that a more successful Verdugo Wash will effectively connect logical destinations for the Glendale community, and prioritize areas that are disadvantaged or underserved.

As presented herein, we are promoting active transportation solutions that are suitable for all! - a principle that is based on the belief that a City should be "8-to-80", accommodating for both 8-year-olds and 80-year-olds!

While there are many excellent definitions of social equity, design solutions must take into account the community's varying needs. This includes understanding the existing offerings and adjacent land uses to ensure the distribution and mix of program throughout the community is equitable and accessible.

It is essential that the re-imagined Verdugo Wash takes cues from its adjacencies.

To the right is an initial "zoning" recommendation that takes into account the current "composition" of Glendale: residential areas, schools, parks, open spaces, recreational facilities, commercial corridors, areas with higher urban heat island effects/higher pollution burdens/lower green space access, civic institutions, as well as office and commercial areas.

It is our aim for the Vision for Verdugo Wash to "feel" as if it always belonged to Glendale. Its appropriateness will be informed by distinct sub-areas that unify program, land use, and mobility to enhance overall cohesion and connectivity for Glendale.

right: ***taking cues from adjacencies; initial "zoning" for the Verdugo Wash***

FOOTHILL BLVD
HONOLULU AVE
OCEAN VIEW BLVD
VERDUGO BLVD
N VERDUGO RD
GLENDALE COMMUNITY COLLEGE
N GLENDALE AVE
N BRAND BLVD
LA RIVER

Public Access

The Project Team studied land use, physical constraints, ecological connectivity potential, key community destinations (e.g. parks & commercial zones) and locations significant to mobility-disadvantaged user groups (e.g. schools for youth and senior housing for the elderly) to suggest this set of potential access point candidates

These candidates were also rationalized based on the distances between them, and refined based on community input received to date.

Kindly note that the final quantity of access points is not a "magic number" (a successful Verdugo Wash could have many fewer than this initial study set). Secondly, the exact locations will likely to shift to respond to additional engineering and community input in any future design phases.

Design/engineering advancement scenarios that would influence access point recommendations include:

1. A traffic study that concludes safer options could be achieved elsewhere;

2. Conversations with utility companies reveal insurmountable utility conflicts.

Differentiation of access points is also expected in future design phases. Examples of differentiation include:

3. Be design solely for wildlife use (no public access);

4. Have gated codes so that they are semi-private (e.g. for the use of a local community or business only).

What will be key in supporting a successful Verdugo Wash is not reaching a magic number of access points, but creating a rich, rationalized constellation of access points that are located based on where Glendale wants to go!

above / right: ***mapping of study of possible (existing & proposed) access points to the Verdugo Wash***

note: ***a photo inventory of the annotated access points is provided in the Appendix of this report***

note: ***more detailed documentation of each of these vignettes is provided in the Appendix of this report***

existing access point "P1"
Boston Avenue

existing access point "P2"
Dunsmore Avenue

proposed access point "P3"
New York Avenue

existing access point "P7"
Shirlyjean Avenue

existing access point "P8"
the Basin

existing access point "P9"
San Gabriel Avenue

proposed access point "P13"
Verdugo Elementary School

proposed access point "P14"
Verdugo Skate Park

proposed access point "P15"
"Lot 30"

proposed access point "P19"
Pacific Avenue

proposed access point "P20"
First German United Methodist Church

existing access point "P21"
Fremont Park

proposed access point "P4"
Eagle Canyon

existing access point "P5"
Whiting Woods

proposed access point "P6"
Oakendale Place

proposed access point "P10"
Glorietta Tennis Park

proposed access point "P11"
Fern Lane / El Rito Avenue

proposed access point "P12"
Wabasso Way

existing access point "P16"
E Glenoaks Boulevard

proposed access point "P17"
Geneva Street / Monterey Road

proposed access point "P18"
Brand Boulevard

existing access point "P23"
Concord Street

proposed access point "P24"
Estelle Avenue

proposed access point "P25"
San Fernando Road

Opportunities for Mobility

The Verdugo Wash's positioning and surrounding networks provide great potential for a future multi-modal mobility corridor. Strategically positioned entry points will greatly improve the Wash's frequency by welcoming youth activity, encouraging an active lifestyle, seamlessly connecting commuters to major transit hubs, and providing a safe alternative for bicyclists and pedestrians.

To model a future cycling network, an isochrone analysis was performed on the Verdugo Wash cycling network. An isochrone analysis presents numerous travel lines, all originating from the same point simultaneously to display efficiency and accessibility. Assumptions of this analysis were that the average speed on a road without a bike lane is 5mph, with a bike lane is 10mph, and within the Wash is 20mph. Shown below is an isochrone analysis of present-day cycling times, originating from Downtown Glendale. The most efficient bike travel is limited to the Downtown commercial hub and employment center, averaging 15 minutes or less.

If the Verdugo Wash opened tomorrow, utilizing only the existing entrance points, the analysis portrays the increased accessibility along the entire Wash; specifically improving efficiency within residential settings north of Downtown Glendale. There is a wider east to west reach, connecting to existing bike infrastructure. Bike travel efficiency to the suburb of Woodbury and Glendale Community College would also improve.

If additional entrances were added to the Verdugo Wash opening, the full impact of an integrated transit corridor can be projected. Bike travel cycling times under 10 minutes expand in Downtown Glendale and average 10 to 15 minutes within the ¼-mile Verdugo Wash buffer, significantly improving accessibility within Woodbury and Verdugo Woodland. This scenario also expedites travel to the LA River Bike Path and adjacent bike networks.
Ultimately, the Verdugo Wash should prioritize new entrance locations based on proximity to transit corridors and stops with higher ridership. Entrances should also be situated near Park & Ride lots to increase regional accessibility. Bike share and micro-mobility options should be integrated into existing transit service locations to maximize use. Connections to the LA River bike network should be established, mainly at the LA River and Verdugo Wash junction of Confluence Park. Additional Wash entrances will also create opportunities for improved accessibility and transit equity in neighborhoods with limited mobility options.

The evaluation of entrance locations should include road hierarchy levels and the presence of on-street parking to accommodate new traffic flows. These increases will necessitate road diets, traffic calming, and adjusted speeding limits. Identifying criticalities and priority areas for pedestrian safety enhancements should be prioritized, including studying the potential integration of school trips by analyzing youth walkability and school bus routes.

Gaps and Challenges for Mobility

A significant challenge for Verdugo Wash engagement will be the transition from driving to cycling or walking for commuting. Reconfiguring the public space will potentially encourage active transportation options and reduce the probability of fatal injuries due to pedestrian vehicle collisions. However, strategies need to be established as to what types of commutes the Wash will serve. The Wash could assist in commutes to work or school, recreational use, access to events or open spaces, and local to citywide mobility. Users of the Wash will not be limited to Glendale residents, as visitors and commuters will be welcome. Individuals of all ages will interact with the Wash, including people with disabilities. The increased biodiversity will also welcome the presence of wildlife.

Establishing a transit corridor requires evaluations of all potential modes of transportation. Precedents tend to primarily attract pedestrians and bicyclists, but active transportation also includes the use of manual or electric scooters and skaters, even stretching to delivery robots, drones, and equestrian travel. The Verdugo Wash mobility infrastructure will need to accommodate a wide range of modal activity.

Existing cycling times

What level of connectivity is possible by an accessible wash?

The heat maps below demonstrate the tremendous level of connectivity that is possible when the Wash is opened at the studied access points. *As previously mentioned, these access points are by no means "decided" and subject to shifting, modification, deletion, feasibility checks, differentiation, and additional discussion with neighbors and other stakeholders.*

IMAGINE! What if you could connect conveniently to the Wash, zip along its spine to another destination, all while shaded by leafy trees and safely removed from busy vehicular traffic? *Evaluate the bottom right heat map.* If a start point of yours lands in the colored areas, you could bike anywhere within its bounds within 30-minutes!

Projected cycling times if existing access points were opened to the public

Projected cycling times if both existing and proposed entrances were opened to the public

the Vision for Verdugo Wash

potential impact

Urban Design & Urban Impact

A number of factors need to be considered if we are to imagine the Verdugo Wash transforming into a multi-benefit public space amenity that also continues to mitigate flood risk as a critical piece of hydrological infrastructure.

Some important considerations include:

- The Verdugo Wash is a utilitarian concrete stormwater channel varying in width from as narrow as 10ft to 87ft wide at its maximum where it merges with the Los Angeles River.

- The Verdugo Wash is a "sunken" space, sitting at an average of 10-feet to 12-feet below most of Glendale. This "contained" property would be conducive to a distinct, safe and connected cycling and pedestrian network. However elevational barriers associated with this condition would require inspired and thoughtful access solutions in order to accommodate all types and levels of mobility.

- The "sunken" condition of the channel will require careful consideration when it comes to public safety.

- The majority of the Verdugo Wash channel lacks an adjacent "right-of-way" (which, if available which typically support maintenance activities or could serve as potential connection routes along the upper banks of the channel). A related constraint is the fact that there are many established homes and businesses whose properties directly abut the channel, further challenging the establishment of any routes of connectivity or areas for program / activity along the banks of the channel.

- Any intervention(s) within the Verdugo Wash channel would require significant environmental permitting efforts.

- The Verdugo Wash has been an important hydrological infrastructure corridor, in place for nearly 100 years. It is a permanent fixture within the City of Glendale. Overhead power lines, various utilities and pipelines, pedestrian and vehicular crossings all interact with the channel. The associated agencies will need to be engaged in order to prioritize concerns and establish basic parameters and guidelines.

Most importantly, the Verdugo Wash has not been abandoned as stormwater infrastructure, nor will it be. Glendale's physical situation in and around mountainous terrain, the City's continued development over the decades, and climate change scenarios all indicate the city is as prone to flooding as ever. The re-imagined Verdugo Wash must continue to function as stormwater infrastructure at its current design capacity (100 year storm event),

!melk studied the Verdugo Wash corridor, as defined by a 1/2-mile buffer (coincidentally also a 10-minute walking radius), on the basis of architecture, open space, land use, owner, scale, shape, proximity to the wash, access, and other factors to highlight a number of "opportunity" parcels.

"Opportunity Parcels," in short, are properties whose direct or indirect integration with the re-imagined Verdugo Wash would enhance the future Verdugo Wash experience as a public space amenity for Glendale.

More specifically, an "opportunity parcel" could mean:

- Vetting interest of a possible sale to increase the footprint of the project.

- Working with an adjacent property owner to provide access to the wash (e.g. restaurant owner wants customers to be able to access their business via the Wash).

- Transition an adjacent property to be in stronger relationship with the Wash. An example of this would be a public park whose future restoration could integrate wash access, strong sight lines into the wash, potentially mutual programming, and green infrastructure

- Collaborating with a property owner to enhance wildlife value like integrating native planting.

- Working with a property owner to integrate Wash access near. This process would address concerns such privacy and security.

Kindly note that what is presented is a "working list" of opportunity parcels that are intended to evolve and be further calibrated as community outreach and design efforts advance in future phases.

SAN GABRIEL MOUNTAINS
1/2-MILE RADIUS
~10-MIN WALKING
Foothill Freeway
Foothill Blvd
VERDUGO WASH
GLENDALE CITY BOUNDARY
VERDUGO MOUNTAINS
CONFLUENCE
GRIFFITH PARK
Glenoaks Blvd
Ventura Freeway
S Kenneth Rd
Camino San Rafael
E Chevy Chase Dr
E Verdugo Ave
E Broadway St
LA RIVER

VERDUGO WASH CORRIDOR "OPPORTUNITY" PARCELS

(NORTHERN PORTION)

- BUILDING FOOTPRINT
- OPPORTUNITY PARCEL
- EXISTING WASH ACCESS POINT
- POTENTIAL WASH ACCESS POINT

Based on studies of land use, ownership, Wash Right-Of-Way including service roads, development patterns, open space, community destinations, mobility, hydrology, biology, sustainability recommendations, and neighborhood character, !melk has highlighted the following parcels as potential opportunities for elevating the re-imagined Verdugo Wash experience.

Highlighted in orange are parcels located within 1/2-mile of the Wash that offer opportunity to further enhance the Verdugo Wash experience.

1/8 1/4 1/2 1 mile

SAN GABRIEL MOUNTAINS
VERDUGO MOUNTAINS
Foothill Blvd
Honolulu Ave
Pennsylvania Ave
La Crescenta Ave
Montrose Ave
Dunsmore Ave
New York Ave
LINCOLN ELEMENTARY SCHOOL
CRESCENTA VALLEY PARK
CRESCENTA VALLEY SCHOOLS
Hills Ave
Park Vista Dr
El Lado Dr
Whiting Woods Rd
Ramsdell Ave
Glenwood Ave
CAMP BOB WALDORF
Shirley Jean St
Oakmont Dr
VERDUGO MOUNTAIN OPEN SPACE PRESERVE
VERDUGO WASH BASIN
VERDUGO MOUNTAIN OPEN SPACE
J Verdugo Rd
MONTROSE PARK
J FREMONT ELEM SCHOOL
OAKMONT COUNTRY CLUB
Country Club Dr
Pennsylvania Ave
San Gabriel Ave
Country Club Dr
Santa Rosa Ave

VERDUGO WASH CORRIDOR PARCEL OPPORTUNITIES

(SOUTHERN PORTION)

- BUILDING FOOTPRINT
- OPPORTUNITY PARCEL
- EXISTING WASH ACCESS POINT
- POTENTIAL WASH ACCESS POINT

VERDUGO MOUNTAINS
VERDUGO MOUNTAIN OPEN SPACE
VERDUGO MOUNTAIN OPEN SPACE
San Gabriel Ave
Country Club Dr
Santa Rosa Dr
Cañada Blvd
GLORIETTA TENNIS PARK
Alpha Rd
Glorietta Ave
Rita Ln
SAN RAFAEL MTNS OPEN SPACE
N Verdugo Rd
El Rito Ave
Cañada Blvd
CATALINA VERDUGO ADOBE
Opechee Way
Wabasso Way
VERDUGO WOODLANDS ELEMENTARY SCHOOL
SAN RAFAEL MOUNTAINS OPEN SPACE
BACHMAN OPEN SPACE
VERDUGO PARK
N Verdugo Rd
GLENDALE CIVIC AUDITORIUM
GLENDALE COMMUNITY COLLEGE
PARKING LOT 32
N Glendale Dr
SARTORIS FIELD
PARKING LOT 30
COLLEGE VIEW SCHOOL
NIBLEY PARK
OPEN SPACE
W Dryden St
N Central Ave
N Brand Blvd
N Louise St
N Jackson St
Geneva St
Glenoaks Blvd
E Glenoaks Blvd
Corshado Dr
POWER SUBSTATION
WOODROW WILSON MIDDLE SCHOOL
E Chevy Chase Dr
N Brand Blvd
JO WHITE ELEMENTARY SCHOOL
N Glendale Ave
S Verdugo Rd
E Wilson Ave
E Broadway St
S Chevy Chase

the Vision for Verdugo Wash

hydrological function

Hydrology and Freeboard Analysis

Using the data available from the United State Army Corps HEC-RAS model, the **!melk** team has constructed a working parametric model to study and visualize the various flood risk considerations of the Verdugo Wash.

The physical section of the existing Wash changes in width, height, and profile along its 9.4-mile length.

Additionally, stormwater flows vary along the existing Wash. Because water flows are inherently dynamic, the HEC-RAS model captures the design storm event (1 in 100 year statistical rain event) using a hundreds of "snapshots" with various defined parameters like water velocity and volume; hence the collection of data points visualized below. Together, these data points can be interpreted to understand how water flows during the storm event in today's existing Wash configuration.

Stormwater velocities matter because water that is moving too quickly can scour the floor and walls surface of the Wash itself, causing events like wash wall collapse or even undermining bridge pilings. The existing Wash channel is concrete to prevent scouring while simultaneously causing water to move more quickly to the LA River in comparison to its historic, vegetated state. Any elements in the wash like vegetation slow down water flows and different types of vegetation can withstand higher water velocities before being uprooted/ broken and carried downstream.

Stormwater volumes are an critical parameter, too, and have been the focus of this Visioning Study stage. The integration of public realm elements (e.g. pedestrian and bicycle pathways) depicted in this Design Vision Report have been conceptualized as inhabiting a structural deck built within the Wash safely above stormwater flows. This deck concept relies on additional stormwater capacity as expressed as the **available "freeboard" - the distance between the water level required to safely convey the storm event, and the bottom of the "deck" that hosts any landscape interventions**.

The **!melk** team has studied various volumes associated with possible flood events (including that of the 100-year flood, plus an additional contingency for climate change, as well as an additional FEMA contingency). The Hydrology Appendix described this all in greater detail.

This valuable data and series of depictions will serve as a critical benchmark to facilitate design direction and decisions moving forward in future design phases to ensure public realm is safely integrated while maintaining the current level of flood protection.

CONFLUENCE AREA
While the area of the Wash near the Confluence is a prime opportunity to restore ecological habitat and integrate public realm including mobility connections, this set of red dots indicates this area first requires further hydrological study to ensure the concept is feasible.

above: !melk visualization of the current United States Army Corps HEC-RAS hydrological model depicting heat map of available "freeboard". After accounting for flow contingencies including climate change precipitation variations, wash segments shown in red and orange appear hydrologically constrained. Unless otherwise noted, these areas would require further study to vet for hydrological feasibility.

NORTHERN SEGMENTS
Analysis of the red and orange dots north of the debris basin (indicated by green dots) reveals that the segment of the Wash is hydrologically challenged.

This hydrological challenge is compounded by its physical context (built-out residential land uses), and given that there are fewer community destinations in this area in comparison to other segments of the Wash, the project team recommends that no further design work is done in this area at this time. This recommendation would focus future design efforts to the areas of the Wash containing greater opportunities and fewer challenges.

GOLF COURSE
While initial analysis of the golf course segment of the Wash reveals hydrological challenges, this area, in fact, contains multiple opportunities for relieving hydrological pressures. For instance, the golf course section of the Wash is currently a trapezoidal section configuration. Modifying to rectangular section configuration would effectively carry greater stormwater flows, which i turn increasing available "freeboard".

AVAILABLE FREEBOARD

- **< 0**
- **0 - 2**
- **2 - 3.5**
- **3.5 - 5**
- **> 5**

condition "A"

the current channel has capacity for all flood contingencies, however the FEMA floodplain sits almost at the top of the channel

above axonometric view: ***floodplain freeboard contingencies isolated for clarity***

above: ***cross-section of the Verdugo Wash channel, identifying the elevations of freeboards associated with various flood contingencies at "Condition A" along the Wash***

condition "B"

the current channel has capacity for all flood contingencies

above axonometric view: ***floodplain freeboard contingencisolated for clarity***

above: ***cross-section of the Verdugo Wash channel, identifying the elevations of freeboards associated with various flood contingencies at "Condition B" along the Wash***

condition "C"

the current channel does not have adequate capacity for all flood contingencies, including the FEMA floodplain

above axonometric view: ***floodplain freeboard contingencies isolated for clarity***

above: ***cross-section of the Verdugo Wash channel, identifying the elevations of freeboards associated with various flood contingencies at "Condition B" along the Wash***

Recommendations

It has become increasingly clear from our studies and observations of the Verdugo Wash - as a piece of hydrological infrastructure that is effectively functioning as a "channelized" tributary of the LA River - that any solution to mitigate future flooding and extreme events must be holistic.

A successfully re-imagined Verdugo Wash must be integrated within the Wash's adjacent context, greater Glendale, and LA County and watershed. The recommended hydrological approach for this project cannot be isolated or hyper-local, but rather holistic and tied into regional strategies.

In any future design studies, the project team recommends the following opportunities be drawn, modeled, and rigorously evaluated to increase the resilience of the Verdugo Wash, and by extension a facilitate the integration of a robust public realm.

- *designating floodable "extensions" or "bulbs" of the wash;*
- *modifying the channel section such as selectively increasing the height(s) of the channel wall or deepening the channel. The golf course's trapezoid section channel could be modified to a rectangle channel section*
- *infiltrating stormwater with the Wash's footprint, such as with suitable concrete alternatives and at the Debris Basin.*
- *identifying streets surrounding the Wash to facilitate water catchment, like a "greenstreets" district;*
- *identifying opportunities for water filtration to improve water quality*
- *study the next level tributaries including Dunsmore Canyon, that feeds water to Wash from the San Gabriel Mountains, for opportunities to slow or infiltrate stormwater flows. These tributaries are routes that could function as safer wildlife routes within the region.*

the Vision for Verdugo Wash

enhanced ecology

Enhanced Ecology

Unique precipitation patterns and the rich topography surrounding Glendale bore - through natural processes - the original Verdugo Wash (Creek), which served as the credible water source attracting the Tongva to the Wiqanga village just north of (today's) I-210 on the Verdugo Creek. The Verdugo Wash is the central, defining element for Glendale's foundation.

For various reasons explained throughout this report, we understand that the channelization of the Verdugo Wash greatly facilitated Glendale's growth as a young American city - however, we equally understand that there were impacts to the local and regional ecologies.

The habitat areas in/around Glendale are fragmented, not infrequently degraded, and subject to climate change - leading experts to conclude that many local flora and fauna populations are at serious risk.

Ecological enhancement along the Verdugo Wash is a bona fide opportunity for Glendale to become a leading example within the region, as it prioritizes the vegetative and wildlife populations which will collectively contribute to the City's identity!

SAN RAFAEL CONNECTION
Improved ecological connections between the Verdugo Mountains and San Rafael Hills support wildlife

VERDUGO PARK HUB
Improved ecological connections and trail access between the Verdugo Mountains and San Rafael Hills support wildlife and increase community access to open space

VERDUGO WASH / LA RIVER CONFLUENCE*
Improved community and ecological connections from LA River upstream to the Verdugo Wash. *Confluence identified as key restoratino area in LA River Master Plan

Pico
El Cariso Community Regional Park
Castaic
Humphreys
Olive View-UCLA Medical Center
Angeles Shooting Ranges
San Fernando
Discovery Cube Los Angeles
Verdugo Hills High School
Valley View Eleme
Dunsmore Park
Crescenta Valley Community Regional Park
Crescenta Valley High School
verdugo mountains
significant ecological area
verdugo wash trace
Montrose Community Park
Deer Creek
Ayars Canyon
Glorietta Tennis Park
san rafael hi
Glendale Sports Complex
Glendale Sports Complex Field #1

!melk+BuroHappold

Oakmont Debris Basin
an ecologically-focused park

Eagleheard
canyon
to San Gabriel Mountains
Verdugo Wash
2D

Oakmont Debris Basin
an ecologically-focused park

goals for the debris basin

- *establish habitats & wildlife corridors*
- *improve water quality & increase recharge opportunities*
- *create a safe and accessible recreational amenity*
- *develop experiential and educational opportunities around key habitats*
- *explore partnerships with ULART and Tongva-Gabrielino Tribe*
- *partner with LACPW to develop management approach that supports established habitats*

improved wooded edge / roadway buffer
bio-infiltration wetland habitat
pollinator meadows
pollinator meadows
potential structure for visitor comfort and formal environmental education programs
bio-infiltration wetland habitat
elevated pathways are accessible and protect sensitive vegetation below

Oakmont Debris Basin
an ecologically-focused park

above rendered views: ***elevated pathways at the Oakmont Debris Basin***

above rendered views: ***elevated pathways at the Oakmont Debris Basin***

Oakmont Debris Basin
an ecologically-focused park

HABITAT CONNECTIVITY TO VERDUGO MOUNTAINS
bio-filtration wetland habitat

the “pollinator meadows”

Invertebrates like southern California’s native bees and monarch butterflies are promising faunal candidates to feature at the debris basin park, especially if further conversations with LACPW reveal the debris basin needs to function at historically high levels of debris collection.

Avian species, being highly mobile creatures, are innately more resilient to seasonal disturbances like debris management, provided such activities are timed with species’ vulnerable life cycle moments.

Pollinating neighbors typically can be easily invited to a new habitat - simply by providing their favorite food sources!

above rendered view: ***ecological park at the Oakmont Debris Basin***

valley carpenter bee

native milkweed & monarch

purple sage

chaparral night-shade

common sunflower

white sage

Oakmont Debris Basin
an ecologically-focused park

above rendered view: ***accessible recreation & environmental education opportunities at the Oakmont Debris Basin***

potential gathering area
observation / viewing platform / outdoor classroom
!melk

native planting design considerations

It has been the initial intention and instinct - and underscored in conversations at community outreach events and with local stakeholders like ULART and the Arroyos and Foothills Conservancy - that native planting directly enhances a place's ecology.

By providing seed banks for local ecological areas, food and shelter for creatures, and facilitating wildlife movement between the adjacent protected areas like the Verdugo Mountains Significant Ecological Area, tremendous ecological strides can be achieved.

In addition, these planted areas will also provide attractive, shady respite areas whose qualities are also considerate of wildfire risks.

Quercus agrifolia - Coastal Live Oak

Arctostaphylos spp. - Manz

Sphaeralcea ambigua - Desert Mallow

Diplacus aurantiacus - Bush Monkeyflower

Lupinus succulentus - Arroyo Lupine

Eriogonum spp. - California Buckwheat

Eschscholzia cali

Yucca schidigera - Mojave Yucca

Agave shawii - Shaw's (Coastal) Agave

Dudleya pulverulen

anita

Arbutus 'marina' - Strawberry Tree

Rhus integrifolia - Lemonade Berry

Platanus racemosa - Western Sycamore

Salvia clevelandii - Cleveland Sage

Salvia spathacea - Hummingbird Sage

Carpenteria californica - Bush Anemone

fornica - California Poppy

Epilobium canum - Hoary California Fuschia

Leymus (Elymus) condensatus - Giant Wild Rye

ta - Chalk Liveforever

Hesperoyucca whipplei - Our Lord's Candle (Yucca)

ADDITIONAL SPECIES

Point reyes meadowfoam (Limnanthes douglasii ssp. sulphurea)
Woolly blue curls (Trichostema lanatum)
Bush anemone (Carpenteria californica)
Island alumroot (Heuchera maxima)
Canyon snow iris (Iris douglasiana 'Canyon Snow')
California bush sunflower (Encelia californica)
Monkey hand tree (Churanthofremontia X lanzii 'Griff's Wonder')
Shrubby monkey flower (Mimulus hybrids)
Wild rose (Rosa woodsii var. ultramontana)
Silver cholla cactus (Opuntia echinocarpa)
Blue-eyed grass (Sisyrinchium bellum)

the Vision for Verdugo Wash

phasing implementation

At 9.4-miles long, the transformation of the Verdugo Wash would need to be phased, meaning the Verdugo Wash would not be built all at once!

This is clear from many standpoints including that of actual construction, which will be limited to the "dry season" as well as the "lead time" required for any material procurement for hardscape and softscape elements. Phasing is also heavily dependent on available funding. The Visioning team has studied various parameters and scenarios to begin to answer the following questions:

1) Where should implementation first begin?
2) What sort of initial segmentation makes sense?
3) Should 100% of the design intent be implemented in each of the identified segments of the Verdugo Wash? Or should a "minimum viable product" (e.g. 50% of the design intent) be implemented in certain sections to prioritize connectivity?
4) Is there potential for pilot projects to be implemented as "early-win" moments along the corridor that could function anchor parks, key connections between destinations, or as wildlife bridges across the Wash?

Benefits of a Phased Approach
There is a plethora of benefits with regard to phasing implementation! A phased approach to implementing the Verdugo Wash Vision would allow for the identification and establishment of logical implementable "segments".

Each of these segments - even if implemented in the most minimal form - will enhance Glendale's current transportation network, and have a real impact on way movement occurs throughout the City. At each phase, improvements to the public realm and connections to existing transportation systems will ensure that the project is integrated with its surroundings and is welcoming for users.

Location Considerations
Social equity analyses indicate that western Glendale is in the greatest need of the benefits that are associated with the Verdugo Wash Vision, such as green open spaces and recreational opportunities. For this reason, the Project Team recommends an implementation scenario in that begins with this section (encircled in below diagrams) of the Verdugo Wash.

Pollution burden by population in Glendale *©BuroHappold*

Urban Heat Island Priority Areas *©BuroHappold*

Mobility & Connectivity Considerations
Mobility analyses and community outreach conversations have resulted in a list key destinations that would greatly benefit from increased active transportation connectivity:

- Downtown Glendale;
- Glendale Community College;
- Existing public parks, especially Verdugo Park;
- Glendale Sports Complex;
- LA River multi-use pathways;
- Destinations serving mobility-challenged neighbors including schools, senior housing, and community centers.

"Building Future Demand"
A very relevant consideration to phasing is the level at which connectivity is successful.

Perhaps 100% of the ultimate design intent does not need to be implemented on "Day 1" of implementation for the area to reach "minimum product viability" supporting Glendale in walking and biking along the Verdugo Wash.

The Project Team also suggests considering making use of a "Phase 0", or a "pilot stage" of the project before major design changes are implemented. This is useful in identifying the minimum intervention for cyclists and visitors to be able to use the Verdugo Wash.

A pilot project helps reinforce the demand for a project and encourages early adoption to allow visitors to become comfortable with proposed change in the built environment.

Potential interventions for a pilot project to open the Wash may include the following:

- *Existing access points are opened & made accessible*
- *Safety measures in place to avoid sliding/falls, including resurfacing as needed*
- *Ensure access points and wash pathway grades are ADA compliant*
- *Integrate clear wayfinding and temporary interventions*
- *Implement needed safety measures at adjacent intersections near existing access points*
- *Parking locations are communicated to visitors*

Users who may be interested in using the Verdugo Wash as a mobility corridor, might include local residents and cycling enthusiasts, who will be able to generate feedback about the experience of interacting with the Verdugo Wash and their mobility patterns.

Having users enter the Verdugo Wash also helps to include it in online platforms like Google Maps, Waze and Strava. This also creates the opportunity for placemaking and programming within the Wash, such as bike repair stalls, popups, and other retail activation facilities.

phasing approach

"segmentation" considerations

The Project Team studied various phasing scenarios based on social equity factors, with the assumption that implementation would begin near the Confluence/Downtown area and continue northwards towards the Oakmont Debris Basin.

As studies, these phasing scenarios serve simply to reveal lessons in what happens when implementation is "segmented" in different ways.

Kindly note: Access points, in particular, would be vetted with local residents and community stakeholders (like utility companies) in higher detail for feasibility during any future design phases. As discussed in the Hydrology Section, the segment of the Wash north of the Debris Basin is not being recommended for further design study at this time.

phasing study: SCENARIO "A"

opposite page>

WASH ACCESS: SCENARIO A

- EXISTING ACCESS POINT
- PHASE 0 - POTENTIAL ACCESS POINT
- PHASE 1 - POTENTIAL ACCESS POINT
- PHASE 2 - POTENTIAL ACCESS POINT
- PHASE 3 - POTENTIAL ACCESS POINT
- PHASE 4 - POTENTIAL ACCESS POINT

CONTEXT

- GLENDALE BOUNDARY
- NEIGHBORHOOD BOUNDARY

EXISTING BICYCLE NETWORK

- CLASS 1: OFF-STREET BIKE PATH/MULTI-U
- CLASS 2: ON-STREET BIKE LANE
- CLASS 3: ON-STREET BIKE ROUTE (SHARR

PROPOSED BICYCLE NETWORK

- CLASS 1: OFF-STREET BIKE PATH/MULTI-U
- CLASS 2: ON-STREET BIKE LANE
- CLASS 3: ON-STREET BIKE ROUTE
- CLASS 4: PROTECTED BIKEWAY

NEIGHBORHOOD CHARACTER

- HISTORIC SITE / DISTRICT
- DESTINATION POINTS
- SCHOOLS / COMMUNITY INSTITUTIONS
- MEDIA / ENTERTAINMENT
- TRAILS
- PARKS
- OPEN SPACE

A
SCENARIO
GLENDALE CITY BOUNDARY
VERDUGO WASH
Foothill Freeway
Honolulu Ave
Pennsylvania Ave
Foothill Blvd
MONTROSE
Montrose Ave
La Crescenta Ave
Honolulu Ave
WHITING WOODS
SPARR HEIGHTS
N Verdugo Rd
La Crescenta Ave
OAKMONT
VERDUGO MOUNTAINS
PHASE A-4
3.01 miles
Cañada Blvd
VERDUGO WOODLANDS
N Verdugo Rd
PHASE A-3
0.99 miles
GREENBRIAR
S Kenneth Rd
VERDUGO VIEJO
ROSSMOYNE
Glendale Blvd
GRAND CENTRAL
PELANCONI
FREMONT PARK
Glendale Blvd
COLLEGE HILLS
Ventura Freeway
WOODBURY
CONFLUENCE
Concord St
N Pacific Ave
N Brand Blvd
DOWNTOWN
N Glendale Ave
E Chevy Chase Dr
S Verdugo Rd
E Wilson Ave
E Broadway St
GRIFFITH PARK
PHASE A-1
0.77 miles
PHASE A-2
2.57 miles

phasing approach

"segmentation" considerations

Kindly note: in any future design phases, access points, in particular, would be vetted with local residents and community stakeholders (like utility companies) in higher detail for feasibility. The segment of the Wash north of the Debris Basin is not being recommended for further design study at this time.

phasing study: SCENARIO "B"

opposite page>

WASH ACCESS: SCENARIO A

- EXISTING ACCESS POINT
- PHASE 0 - POTENTIAL ACCESS POINT
- PHASE 1 - POTENTIAL ACCESS POINT
- PHASE 2 - POTENTIAL ACCESS POINT
- PHASE 3 - POTENTIAL ACCESS POINT
- PHASE 4 - POTENTIAL ACCESS POINT

CONTEXT

- GLENDALE BOUNDARY
- NEIGHBORHOOD BOUNDARY

EXISTING BICYCLE NETWORK

- CLASS 1: OFF-STREET BIKE PATH/MULTI-U
- CLASS 2: ON-STREET BIKE LANE
- CLASS 3: ON-STREET BIKE ROUTE (SHARR

PROPOSED BICYCLE NETWORK

- CLASS 1: OFF-STREET BIKE PATH/MULTI-U
- CLASS 2: ON-STREET BIKE LANE
- CLASS 3: ON-STREET BIKE ROUTE
- CLASS 4: PROTECTED BIKEWAY

NEIGHBORHOOD CHARACTER

- HISTORIC SITE / DISTRICT
- DESTINATION POINTS
- SCHOOLS / COMMUNITY INSTITUTIONS
- MEDIA / ENTERTAINMENT
- TRAILS
- PARKS
- OPEN SPACE

B
SCENARIO
GLENDALE CITY BOUNDARY
VERDUGO WASH
Foothill Freeway
Honolulu Ave
Pennsylvania Ave
Foothill Blvd
MONTROSE
Montrose Ave
La Crescenta Ave
WHITING WOODS
PHASE B-4
1.88 miles
SPARR HEIGHTS
N Verdugo Rd
OAKMONT
VERDUGO MOUNTAINS
Cañada Blvd
VERDUGO WOODLANDS
PHASE B-3
1.28 miles
GREENBRIAR
S Kenneth Rd
VERDUGO VIEJO
ROSSMOYNE
Glendale Blvd
COLLEGE HILLS
GRAND CENTRAL
PELANCONI
FREMONT PARK
Ventura Freeway
WOODBURY
E Chevy Chase Dr
CONFLUENCE
Concord St
N Pacific Ave
N Brand Blvd
DOWNTOWN
N Glendale Ave
S Verdugo Rd
E Wilson Ave
E Broadway St
S Chevy Chase
GRIFFITH PARK
San Fernando Rd
PHASE B-1
1.37 miles
PHASE B-2
1.96 miles

phasing approach

"segmentation" considerations

Kindly note: in any future design phases, access points, in particular, would be vetted with local residents and community stakeholders (like utility companies) in higher detail for feasibility. The segment of the Wash north of the Debris Basin is not being recommended for further design study at this time.

phasing study: SCENARIO "C"

opposite page>

WASH ACCESS: SCENARIO A

- EXISTING ACCESS POINT
- PHASE 0 - POTENTIAL ACCESS POINT
- PHASE 1 - POTENTIAL ACCESS POINT
- PHASE 2 - POTENTIAL ACCESS POINT
- PHASE 3 - POTENTIAL ACCESS POINT
- PHASE 4 - POTENTIAL ACCESS POINT

CONTEXT

- GLENDALE BOUNDARY
- NEIGHBORHOOD BOUNDARY

EXISTING BICYCLE NETWORK

- CLASS 1: OFF-STREET BIKE PATH/MULTI-U
- CLASS 2: ON-STREET BIKE LANE
- CLASS 3: ON-STREET BIKE ROUTE (SHARR

PROPOSED BICYCLE NETWORK

- CLASS 1: OFF-STREET BIKE PATH/MULTI-U
- CLASS 2: ON-STREET BIKE LANE
- CLASS 3: ON-STREET BIKE ROUTE
- CLASS 4: PROTECTED BIKEWAY

NEIGHBORHOOD CHARACTER

- HISTORIC SITE / DISTRICT
- DESTINATION POINTS
- SCHOOLS / COMMUNITY INSTITUTIONS
- MEDIA / ENTERTAINMENT
- TRAILS
- PARKS
- OPEN SPACE

C
SCENARIO
GLENDALE CITY BOUNDARY
Foothill Freeway
VERDUGO WASH
Honolulu Ave
Pennsylvania Ave
Foothill Blvd
MONTROSE
Montrose Ave
La Crescenta Ave
Honolulu Ave
WHITING WOODS
PHASE C-5
1.91 miles
SPARR HEIGHTS
N Verdugo Rd
La Crescenta Ave
OAKMONT
VERDUGO MOUNTAINS
PHASE C-4
1.28 miles
Cañada Blvd
VERDUGO WOODLANDS
N Verdugo Rd
GREENBRIAR
S Kenneth Rd
VERDUGO VIEJO
Glenoaks Blvd
PHASE C-3
2.07 miles
ROSSMOYNE
COLLEGE HILLS
GRAND CENTRAL
PELANCONI
FREMONT PARK
Glenoaks Blvd
Ventura Freeway
WOODBURY
E Chevy Chase Dr
CONFLUENCE
Concord St
N Pacific Ave
N Brand Blvd
DOWNTOWN
N Glendale Ave
S Verdugo Rd
E Wilson Ave
E Broadway St
S Chevy Chase
GRIFFITH PARK
San Fernando Rd
PHASE C-1
1.37 miles
PHASE C-2
1.37 miles

phasing approach

summary

The Project Team recommends the following segments - preliminarily named for convenience - as the starting point for further discussion, with regard to the potential phased implementation of the re-imagined Verdugo Wash.

"NORTH"
Segment would offer connections to Crescenta Valley YMCA, existing Lowell Parking Lot, and potentially to northern Verdugo Mountain trail heads. If Verdugo Wash could be connected across I-210, this segment could link to the Wiqanga (Tongva village) / La Tuna Canyon site. This additional scope extending to Wiqanga/La Tuna could be considered in future design/planning phases. **The "NORTH" segment is not being recommended for further design study at this time (refer to Hydrology Section)**

"DEBRIS BASIN"
Envisioned as ecologically-focused pilot project featuring habitat restoration, water filtration, and aquifer recharge. The basin would function as a stand-alone park until linked from the south by wash improvements in future phases.

"GOLF COURSE"
Golf course manager in favor of project. Opportunity to enhance key wildlife corridor by collaborating with this landowner. Changing existing trapezoidal channel to box channel will improve hydrology and provide more secure boundary between the transformed wash public space and the surrounding private golf facility.

"GLORIETTA CONNECTOR"
Key wash link through canyon that connects to destinations such as Catalina Verdugo Adobe and Glendale Sports Complex.

"SAN RAFAEL CONNECTION"
Provide wildlife corridor between Verdugo Mountains and San Rafael Hills, as initially proposed by Upper LA River Tributaries (ULART) and seconded & ground-truthed by Arroyos & Foothills Conservancy (AFC). This segment would also connect neighbors to key civic, recreational, and educational destinations. A potential pilot project in this segment could provide an essential wildlife corridor.

"VERDUGO CONNECTOR"
Key Wash link that connects historic neighborhoods and destinations including multiple local schools and trail heads.

"DOWNTOWN"
Connects largest office and commercial node in the City; high economic opportunities and programming synergies possible.

"CONFLUENCE"
Area should be prioritized to address high social equity needs, to connect Glendale to LA River trails and Griffith Park and increase ecological value. Preliminary analysis of the USACE HEC-RAS model indicate severe hydrological constraints; **Additional hydrological feasibility studies are needed**. Optimally, this segment is married with LA River Master Plan vision and United States Army Corps Alternative 20 for this area, which would re-create vital habitats.

wiqanga / la tuna canyon site
crescenta valley park
"NORTH"
210
"DEBRIS BASIN"
oakmont debris basin
VERDUGO MOUNTAINS
oakmont country club
"GOLF COURSE"
glorietta tennis park
"GLORIETTA CONNECTOR"
"SAN RAFAEL CONNECTION"
2
verdugo park
SAN RAFAEL HILLS
glendale community college
"VERDUGO CONNECTOR"
"DOWNTOWN"
"CONFLUENCE"
134
fremont park
LA river confluence
downtown glendale

the Vision for Verdugo Wash

community considerations

In response to conversations with community members, we offer several additional studies

"I live along the Wash, how can my privacy be maintained?"

In conversations during community outreach events, the Project Team heard concerns about potential privacy conflicts along the Verdugo Wash, should it become accessible as a public space amenity. In response, the Project Team explored various notions of residential privacy and devised an initial set of straightforward, implementable solutions.

The opposite page features a map / inventory of residential land uses along the Verdugo Wash corridor that has been codified to illustrate the "privacy study" extents.

Below, on this page, a sectional analysis studies the various conditions along the Verdugo Wash (varying width and depth dimensions of the channel against existing land use plans and satellite imagery).

Spatial factors identified to affect levels of privacy are: *(A) the difference between a residence whose backyard abuts the Wash in comparison to a resident whose frontyard is across a public street that runs directly along the Wash; (B) the difference in residents' existing choices to either enhance privacy or increase views along a back-yard Wash edge; & (C) the difference between single-family and multi-family properties abutting the Wash.*

A) Below are two conditions of residential land uses abutting the Wash. On the left is a residence with a street buffering their front yard from the Wash (e.g. stretches of El Lado Dr) & on the right is a residence whose backyard abuts the Wash. The condition on the right is more sensitive to privacy than that on the left based on 1) the increased horizontal distance to the Wash for a "front yard" Wash condition & 2) the psychological difference we feel between a "back-yard" vs a "front yard" since a front yard meets a public space - the street.

B) In many instances, residential properties line both sides of the Verdugo Wash. Residents' spatial relationships with the Wash vary, however. Where some residents keep dense vegetation along the Wash (left) obscuring the view of the Wash, others maintain minimal vegetation (right). The condition on the left is currently maintaining a higher level of back-yard privacy. Similarly, some residents have elected to erect privacy fencing along their Wash edge, in comparison to residents who experience the County's Wash security fence, which is the porous chain-link type.

C) In some cases, multi-family unit properties abut the Verdugo Wash. Single-family residents are acclimated to higher levels of privacy than those who reside is multi-family units.

CONTEXT
GLENDALE BOUNDARY
NEIGHBORHOOD BOUNDARIES
WASH PARCELS
TOP-OF-BANK SERVICE ROUTES
PRIVACY
FRONT YARD W/ ROAD BUFFER FACING WASH
BACK YARD ADJACENT TO WASH
WASH METRICS
- 9.4 miles of wash
- 18.8 linear miles of adjacent parcels
- 1.9 linear miles of parcels with frontyard facing wash with road buffer (purple parcels)
- 4.6 linear miles of parcels with backyard adjacent to wash (pink parcels)
- 1.2 linear miles of parcels with backyard adjacent to wash with planted buffer (orange parcels)
TYPE 1: 10-25' WIDTH
TYPE 2: 25' WIDTH
TYPE 3: 40-45' WIDTH
TYPE 4: 75' WIDTH
TYPE 3: 40-45' WID
TYPE 5: 87' WIDTH
BASIN
Foothill Freeway
Honolulu Ave
Pennsylvania Ave
Foothill Blvd
La Crescenta Ave
Montrose Ave
MONTROSE
WHITING WOODS
SPARR HEIGHTS
N Verdugo Rd
OAKMONT
Cañada Blvd
VERDUGO WOODLANDS
S Kenneth Rd
GREENBRIAR
VERDUGO VIEJO
Camino San Rafael
ROSSMOYNE
N Brand Blvd
COLLEGE HILLS
Glenoaks Blvd
PELANCONI
FREMONT PARK
Ventura Freeway
E Chevy Chase Dr
N Glendale Ave
WOODBURY
DOWNTOWN
Concord St
N Pacific Ave
S Verdugo

Privacy solutions

After mapping the extents and studying the factors affecting levels of privacy, the Project Team devised an initial set of possible solutions for maintaining adjacent residents' privacy.

A vegetated buffer can be implemented along the edges of the Wash - within the channel - in order to physically distance any public realm from residential properties and decrease visual connectivity.

Offsetting the public realm - within the channel - to leave a "gap" between the private and public realms enhances privacy. This offset can be horizontal or vertical.

Fences can be integrated to establish a clear limit between private property and the public realm. Fences can range in type, and the final material and design can offer solutions from completely "screened and solid" to "open and perforated".

If a fence solution is deemed inadequate, a wall can be proposed in certain locations. Walls are more robust than fences, severing visual and acoustic connectivity.

Noise mitigation solutions

The Project Team learned from community members that the existing Verdugo Wash conveys sound too well and can be a source of disruption. The hard lines and concrete materiality of the Wash are responsible for this sound-carrying effect.

Interventions in the Wash are expected to dampen this sound-carrying effect, yet the creation of adjacent public realm brings the sound of new people and activities. Below is an initial set of possible acoustic reduction solutions that could offset the new source of noise. Remember that the decibel system is logarithmic, so reduction figures are significantly greater than they appear!

Noise reduction over distance: ***a typical conversation occurs at a volume of 70 decibels (dB). The human voice's volume decreases as distance from the source increases. For example, a person standing six feet from a conversation will hear the conversation at 54dB, while someone standing 24 feet away would hear the conversation at 42dB.***

perforated fence consideration: ***a perforated fence will allow sound to travel directly through the fence, with only a slight reduction in noise level.***

planted buffer consideration: ***dense, layered planting consisting of a mixture of tree canopy, shrubs, and dense understory planting will decrease noise level by refracting sound. A 30-foot planting buffer, for example, could reduce the perceived noise level by up to 5dB.***

berm consideration: ***similar to vegetated buffers, berms with densely planted vegetation can also reduce noise levels by refracting sound.***

wall consideration: ***a solid wall will provide the greatest reduction in noise level by blocking and reflecting sound, and reducing noise levels by up to 15dB.***

sources: Dobson, Martin, and Jo Ryan. "Trees & Shrubs for Noise Control." Trees.org.uk, Arboricultural Advisory and Information Service, https://www.trees.org.uk/Trees.org.uk/files/8c/8c69f212-a82e-424b-96d1-c8ff6dc02403.pdf.

Engineering ToolBox, (2005). Required Voice Level at Distance. [online] Available at: https://www.engineeringtoolbox.com/voice-level-d_938.html [Accessed Day Mo. Year].

How can additional vegetation mitigate wildfire risk?

Community members expressed concerns about wildfire risk with the addition of vegetation in and or around the Verdugo Wash (that would come with the realization of the Vision for the Verdugo Wash).

Glendale has been known for its natural beauty since before its incorporation. This natural setting serves as the benchmark for a future Verdugo Wash, however notably carries wildfire risk.

The Project Team studied the City of Glendale's fire codes and related sources to outline landscape parameters to promote fire-resistance.

September 1-5, 2017, the La Tuna Wildland Fire burned 7,194 acres of rural areas in the vicinities of La Tuna, Tujunga, Sunland, and the cities of Los Angeles, Glendale, and Burbank. *image source: KPCC*

The objective of the City of Glendale's fire codes (for building and landscape) is to promote and protect public health, safety, and welfare by recognizing the hazardous fire potential created by grass, weeds, shrubs, and trees, which all provide a ready fuel supply that augments the spread or intensity of a wildfire.

The fire code should be generally understood as a set of minimum requirements to manage "*hazardous vegetation*" while maintaining sufficient vegetation for soil erosion control, functional, and aesthetic purposes. City Fire Officials have discretion over these minimums.

Relevant Definitions from the Glendale Fire Code:

"**Defensible Space**" - *space within 100 feet of a building or structure where vegetation capable of causing a fire to spread must be modified to slow the rate and intensity of an advancing wildfire to provide access by fire and other emergency personnel to defend the building or structure from the threat of fire.*

"**Hazardous Vegetation**" - *Refuse, grass, weeds, shrubs, trees, and other vegetation which, in the opinion of the fire code official, are in such condition and location, or by the unique characteristics of a species, as to provide a ready fuel supply to augment the spread of intensity of a fire.*

According to the map of the City of Glendale - last updated in February 2008 - several areas have been designated as "High Fire Hazard Areas". The area of Glendale that is most at risk of wildfire exposure is the northern-most parts surrounded by the natural area of the Verdugo Mountains, San Rafael Hills, and San Gabriel Mountains.

The fire code stipulates for "*defensible spaces*" in the "Wildland Urban Interface Fire Areas" or "High Fire Hazard Areas". In Glendale, hazardous vegetation - including dry grass, weeds and shrubs - near homes is one of the major contributors to catastrophic wildland fires. Creating defensible space - a buffer - is a proven strategy to slow the spread of wildfire, to improve both the safety of firefighters and a structure's chance of surviving a wildfire.

Diagram of a required property's "defensible space zones" requiring management of "hazardous vegetation" *image source: City of Glendale Fire Department*

ZONE 1

Extends 30 feet out from buildings, decks, and other structures

- Remove all dead plants, grass and weeds.
- Remove dead or dry leaves and pine needles from your yard, roof and rain gutters.
- Trim trees regularly to keep branches a minimum of 10 feet from other trees.
- Remove dead branches that hang over your roof, and keep branches 10 feet away from your chimney.
- Remove or prune flammable plants and shrubs near windows.
- Remove vegetation and items that could catch fire from around and under decks.

ZONE 2

Extends 30 to 100 feet out from buildings, decks, and other structures

- Cut or mow annual grass down to a maximum height of 4 inches.
- Create a minimum horizontal spacing of 20 feet between shrubs and trees.
- Create a minimum vertical spacing of 6 feet between grass, shrubs and the lowest branches on a tree.
- Remove fallen leaves, needles, twigs, bark, cones, and small branches. However, they may be permitted to a depth of 4 inches if erosion control is an issue.
- Protect water quality. Do not clear vegetation near waterways to bare soil. Excessive clearing can cause soil erosion.

The Glendale Fire Department separates the 100-foot defensible space area into two zones: Zone 1 begins at the outside wall of a building, a deck, or other structure and extends 30 feet; Zone 2 begins at 30 feet from the building and extends to 100 feet from the building. *image source: Glendale Fire Department*

Property owners within the High Fire Hazard Area (HFHA) are required to maintain defensible spaces around their property for the safety of the community. The Glendale Fire Department annually inspects properties in the High Fire Hazard Area to ensure that the defensible space standards are met.

The project team has reviewed the Glendale Fire Code and summarized the points salient to the Verdugo Wash Visioning. The re-imagined Verdugo Wash landscape shall avoid a ready fuel supply that could augment the spread or intensity of a fire but still function to prevent soil erosion and enhance ecology, microclimate, and aesthetics.

How the "Zone 2" 100 feet of defensible space is designed and how it's maintained is dependent on adjacent vegetation, topography, and proximity to nearby structures.

There is actually no universal specific standard for maintaining defensible space that works for every property. Instead, vegetation design and maintenance should be intelligently based on the conditions present to achieve the ultimate goal of reduced wildfire risk.

Within the fire hazard zone, the project must initially install, irrigate, and maintain "Defensible Spaces" in congruence with Glendale Fire Code. Specifically:

Permitting
Verdugo Wash modification plans and specifications need be submitted to the City to secure city permits - and the site be subject to inspections - for wash improvements located within very high fire hazard severity zone. Fire officials have discretion over these minimums at all times.

Design Parameters
Landscape plans and specifications shall comply with Defensible Space parameters including location of design elements and both vegetative and non-vegetative materials selection.

Operations and Maintenance (O+M)
Future O+M planning shall explicitly address Glendale Fire Code to account for time, staff, funding, and any future permitting needed to maintain defensible spaces in the Wash within the 30-ft and 100-ft defensible space zones.

The final resulting O+M Plan shall be prescriptive for hazardous vegetation management:

Hazardous Vegetation Management
Shall occur regularly year-round and include:
- Removal of dead foliage, twigs and branches
- Safe disposal of all cut vegetation and refuse
- Soil erosion management
- Keeping roofs free from combustible matter
- Being subject to field inspections by fire official as required

Building Construction
Any building construction shall employ materials and construction methods that confer wildfire exposure protection with the designated Fire Hazard area, including compliance with applicable Building Codes:
1. California Building Code, Chapter 7A
2. California Residential Code, Section R327
3. California Referenced Standards Code, Chapter 12-7 A

Data sources: https://www.glendaleca.gov/home/showpublisheddocument/58083/637864887721530000 ; https://www.glendaleca.gov/government/departments/fire-department/fire-prevention/vegetation-management-and-brush-abatement/defensible-space ; 10 Firefree Steps, https://www.firefree.org/10steps/ ; Beatty, Russell. "Landscape Design for Fire Safety." Pacific Horticulture, 17 June 2014, https://www.pacifichorticulture.org/articles/landscape-design-for-fire-safety/ ; "City of Santa Barbara Fire Prevention Bureau High Fire Hazard Area ." City of Santa Barbara, https://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=225058 ; Detweiler, Amy Jo, and Stephen Fitzgerald. Fire-Resistant Plants for Home Landscapes, Pacific Northwest Extension, Redmond, OR, 2006 ; FHSZ Viewer, https://egis.fire.ca.gov/FHSZ/ ; "Fire Resistant Plants for Chelan/Douglas County Washington." Washington State University, Sept. 2017 ; Kuhns, Michael, and Barbara Daniels. "Firewise Landscaping - Utah." Utah Division of Forestry, Fire & State Lands, https://ffsl.utah.gov/wp-content/uploads/FirewiseLandscaping07.pdf ; "Landscaping Guidelines for Homes in Fire Hazard Severity Zones." City of Glendora, https://www.cityofglendora.org/home/showpublisheddocument/9266/635314295761300000 ; "PlantReferenceGuide." Ventura County Fire Department, Fire Hazard Reduction Program ; "Preparing Homes for Wildfire." National Fire Protection Association, https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Preparing-homes-for-wildfire ; "Professional Practice, Resilient Design: Fire." American Society of Landscape Architects, https://www.asla.org/fire.aspx ; "Prohibited-Plant-List-By-Hunt-Research-and-Dudek---July-2011." Hunt Research Corporation and Dudek and Associates, Scott Franklin Consulting Co, July 2011 ; Very High Fire Hazard Severity Zones in LRA. https://osfm.fire.ca.gov/media/5819/glendale.pdf ; (ADD GLENDALE FIRE CODES, 2017 & 2020)

GLENDALE "VERY HIGH SEVERITY ZONE" (VHFHSZ) AREAS

The City of Glendale issued a February 2008 update to the map designating "High Fire Hazard Areas" within Glendale city boundaries. The fire code stipulates the creation of "defensible spaces" in these High Fire Hazard Areas. *graphic by !melk with CALFIRE Fire Hazard Severity Zones*

CHARACTERISTICS OF HIGH AND LOW FIRE RESISTANCE VEGETATION

High fire-resistant plants
- *Leaves contain lots of moisture;*
- *Less build-up of dead wood or other plant materials (twigs, leaves, needles, etc.);*
- *Water-like sap without strong odor;*
- *Low sap or resin content;*
- *Many deciduous species.*

Low fire-resistant plants
- *Plant material (twigs, leaves, needles, etc.) that is fine, dry, or dead;*
- *Contain volatile waxes, terpenes, or oils;*
- *Aromatic leaves;*
- *Gummy, resinous, or odorous sap;*
- *Loose or papery bark.*

***Tree spacing** to promote fire resistance*

***safer:** disconnected tree canopies are safer than overlapping tree canopies*

***less safe:** scenarios where many trees canopies overlap can create a more continuous source of fuel for fire to spread.*

***Shrub spacing** to promote fire resistance*

***safer:** small groups of shrubs are safer than large groups*

***less safe:** shrubs are planted in dense clusters, with less than 15'-0" of space between groups*

Wildfire Risk Mitigation Planting Design Studies

While a universal specific standard for maintaining defensible space does not exist, the Project Team studied a variety of sources to develop preliminary planting parameters that could be employed to mitigate wildfire risk in the Very High Fire Hazard areas of the City.

grasses and perennials kept under
18" height within 70' of structures

tree canopies 15-20' apart
shrubs 15-20' apart
trees 10-30' from
structures
shrubs in groupings 10'
or less in diameter

How will the Verdugo Wash be operated and maintained?

We heard from many community members - *project proponents, skeptics, and opponents alike!* - that the issue of Operations and Maintenance (O+M) including security are a top concern: *"let's not build something that cannot be safely operated or well maintained."*

The Project Team wholeheartedly agrees with this! Good maintenance plays a vital role in park safety.

The presence of refuse, graffiti/vandalism, poorly maintained pathways, planting, and other design elements can contribute to a perception of lack of safety. Such "slips" in maintenance can offer the perception, or suggest to users that an area is uncared for and therefore lacks adequate supervision.

If ignored and physical conditions further deteriorate, a cycle of abuse can begin in which legitimate users start to avoid an area, and the space becomes overtaken by inappropriate users and uses.

Appropriate lighting, surveillance, maintenance, robust material choices, and strong design detailing are elements which can help decrease vandalism and inadvertent damage in a public space.

Studies by rails-to-trails conservancy and others have shown that trails and public open spaces themselves don't generate crime. But these spaces are not immune to it either. Since trails and public open spaces are community focal points, incidents in these spaces can generate a lot of attention. And concerns about safety, both real and perceived, can keep people away from the trail. These concerns should be addressed both before and after a trail is built through design, outreach, policing, and programming.

In this section, we:
1. summarize conversations held to date with relevant stakeholders on these topics;
2. outline the O+M planning process in future design phases;
3. share brief case studies for other public space projects that share characteristics with the Verdugo Wash to gleam lessons, best practices, and demonstrate that corridor public spaces can be safely operated and well maintained.

Operations & Maintenance (O+M) Stakeholders

The following City departments were represented in the Verdugo Wash Internal Working Stakeholder Group:

- City of Glendale Fire Department
- City of Glendale Police Department
- City of Glendale Parks Department
- City of Glendale Public Works
- City of Glendale Mobility Office
- City of Glendale Sustainability Office
- City of Glendale Community Development Office

Other O+M Stakeholders:
- Los Angeles County Public Works - Flood Control
- City of Glendale Water and Power
- Private Utility Companies

City of Glendale Internal Working Stakeholder Group

A working stakeholder group meeting was formed to discuss early strategies for operations and maintenance of the re-imagined Verdugo Wash. The following is a summary of those conversations:

General Operations & Emergency Planning
- *Follow fire resistant code requirements. Fire-resistant vegetation should be irrigated. Fire marshal to review construction plans to ensure compliance;*
- *Create operating hours (e.g. scenario: Wash only open dawn to dusk);*
- *What would the process be to clear & close the wash when necessary? (e.g. scenario: utilize controlled access points, city staff to sweep wash at the end of operating hours and secure access points);*
- *Add emergency call boxes and security cameras, consider integrating inclement weather alarm system;*
- *Design pathways to accommodate motorcycle access in the event of emergency;*
- *City bicycle/foot safety patrol preferred though requires appropriate funding; good visibility from the street allows for incorporation into existing patrols;*
- *Supports the idea of ambassadors looking over the wash, if desired by the community;*
- *Incorporate safe lighting levels that are respectful of neighbors;*
- *Separation of pedestrians and cyclists;*
- *Garbage truck clearance not necessary: utilize other methods for refuse collection.*

Sustainability
- *Prioritize stormwater retention and filtration; consider integrating cistern-collected irrigation system;*
- *Lighting should also be wildlife-friendly/dark-sky compliant & respectful of neighbors;*
- *Utilize sustainable construction materials and methods*
- *Identify mental health benefits;*
- *Identify environmental health benefits (e.g. carbon capture, air quality, reduced urban heat island effect);*
- *Ensure equitable access;*
- *Integrate ecological education opportunities.*

Los Angeles County Public Works (LACPW) Flood Control is currently responsible for operations and management of the Verdugo Wash.

The Project Team met three times with LACPW staff during the Visioning study to discuss existing O+M efforts and what is possible regarding conceptual transformation ideas for the re-imagined Verdugo Wash.

A critical path item for the transformation of the Verdugo Wash is securing permits from LACPW, which will require a prescriptive, 3-year minimum, O+M plan with verified funding source.

Other public agency and private utility companies have pipes and lines running along or crossing the Wash include:

- *Los Angeles Department of Water & Power*
- *Glendale Water and Power*
- *Southern California Edison (SCE)*
- *Southern California Gas (SCG)*
- *other private utilities (e.g. internet)*

In future design phases, a Civil Engineer would map the locations, owners, right-of-ways, and required clearances for all Verdugo Wash-related utilities (electrical, gas, phone, internet, storm, potable, sanitary, other).

The Civil Engineer would conduct meetings with municipal and private utilities staff to verify information and understand project opportunities and constraints, and would coordinate a utility plan with the design team that detailed required utility modifications.

O+M Planning Process

In future design phases, it is strongly recommended that the Project Team include a specialized Operations & Maintenance consultant who is expert in estimating the personnel, time, funding and equipment required to maintain proposed design options.

The O+M Consultant's role would involve developing options and recommendations for:
- securing the Wash (like fencing, other barriers, and access points);
- monitoring the Wash (via security cameras, emergency call boxes, alert system to warn users and managers of inclement weather);
- work closely with relevant stakeholders (e.g. City of Glendale Parks Dept) to manage O+M expectations including discussions of whether O+M will be in-house and/or contracted;
- provide estimate of staff time, equipment, and annual funding required to upkeep various design options;
- develop O+M management structure, financing, & funding sources.

This consultant would develop Operations and Maintenance strategies to integrate within the development of the overall Masterplan. In addition, the O+M Consultant would also author an O+M manual with an outline of O+M responsibilities between Glendale and LACPW with estimated costs, which is required for the permitting process with the County.

sources: Rails-to-Trails-Is-It-Safe; Project for Public Spaces-1; Park-People-Stationed-Park-Managers;

O+M case studies

The following case studies are intended to serve as benchmarks, offer insights to guide preliminary approaches to O+M, and communicate how the O+M planning process supports sustainable design.

The 606 Trail
Chicago, IL

Project Summary
elevated rails-to-trails project in very parks-poor region of the city; 2.7 miles long with 4 anchor parks; 12 access points

Capital Funding
initial opening 2015 for $95M total: $50M federal; $20M private donations; $5 million from the City of Chicago. $20M more needed for improvements including two parks

Annual Operating Budget
not yet known

Operating Hours
6am-11pm every day

Physical Security
no gates or locks to prevent entry after hours

Monitoring
Multiple cameras at every access ramp and at locations where the trail bends obscuring line-of-sight; regular 911 call boxes

O+M Stakeholders & Roles
Chicago Park District: Responsible for maintaining/ coordinating trail security
Chicago Police Dept: Provides two officers on bikes during the day and into evening past closing time; adjusts as needed. Local police beats contribute occasional foot patrols.
Department of Cultural and Natural Resources: Manages & maintains landscape; provides administration/management of contracts for refuse collection and enhanced maintenance regimes.
Trust for Public Land: Project Manager

Lessons Learned
1. Initial set of trash cans overflowed after opening weekend prompting the Parks Dept to add more. **Lesson: adapt management as needed**.

2. Some crime has been reported along the trail. However, 606 project as been credited with reducing area crime overall. A study comparing crime rates in surrounding Chicago neighborhoods in 2011 with crime rates in 2015 after the opening of the 606 showed that crime rates had fallen faster in neighborhoods around the project site than in other neighborhoods nearby. Study authors theorized that the reduction of crime was a result in increased area lighting, higher foot traffic, and community programming which are keeping trail visible and active. **Lesson: Invest in community programming and safety elements; involve police in early planning efforts.**
3. Public urination has been as issue since there are no restrooms along the trail. **Lesson: Invest in public restrooms.**

4. Due to success of the project, area rents are rising rapidly putting pressure on lower-income families. City of Chicago sponsors loan program that provides area homeowners up to $25,000 in a zero interest loan to make home repairs in return for staying there. A portion of the loan is forgiven each month the owner stays in the home. **Lesson: city to maintain project leader role in lieu of hiring parks-specific non-profit; sponsor corridor housing study to evaluate economic opportunities and address possible gentrification.**

5. Elevated condition of the former railway has led to visual privacy conflicts with adjacent residents. **Lesson: study and address possible privacy conflicts.**

6. Skateboarders use the 606 at night (site cannot be secured) **Lesson: Ensure security after hours.**

7. Some Verdugo Wash neighbors are concerned about project attracting crime. Local 606 neighbors living much larger city with significantly higher baseline crime rates than Glendale were also initially concerned about possible crime spikes. **Lesson: Invest in safety. Address in early planning stages though implementation and secure future funding sources/commitments.**

Police and trail users converse on the 606 Trail. Patrol presence is very effective strategy for maintaining corridor safety. Image source: DNA Info

page sources: Chicago Tribune; Vibrant Cities Lab; NC State Univ; DNA Info; Better Gov; Chicago Park District

In future design phases, a specialized Operations & Maintenance Consultant would be tasked to coordinate with the Verdugo Wash design team, and project stakeholders, to analyze design options, craft O+M strategies, estimate O+M costs, and write a prescriptive O+M manual, etc.

The High Line
New York City, NY

Project Summary
30ft ht elevated railway-to-pedestrian parkway project; 1.45 miles long; 13 access points (5 are ADA);

Capital Funding
Completed 2014 for $187M total; $65M raised by Friends of the High Line non-profit; $35M from major private donations;

Annual Operating Budget
$3M; funded by endowment & private fundraising

Operating Hours
changes seasonally
7am-10pm every day fall-spring
7am-11pm every day summer

Physical Security
elevated structure; access points are locked after hours

Monitoring
Abundance of cameras along the High Line; as of 2011, city assigned 11 patrol officers, seven other eyes-and-ears workers to the 3-acre High Line. Parks enforcement patrol officers walk the High Line during the day.

O+M Stakeholders & Roles
NYC Parks: owns the park
Friends of the High Line (FHL non-profit conservancy): operate park under license agreement with NYC Parks; raises funds from private and public sources each year to cover operating costs.
FHL & NYC Dept of Parks: work together on park maintenance
Community volunteers: assist with plant maintenance

Lessons Learned
1. Space is highly controlled space, so virtually no crime. Trespassing is rare and usually somebody dropping in from an adjacent building. Parks patrol officers issued 362 citations in 2011 for "quality-of-life" infractions typically for drinking, occasionally for prohibited items like dogs or bicycles. NYC Police Commissioner attributes high park safety to its highly controlled access. He also quotes high visitorship (~3M visitors annually) and security cameras that both make illegitimate uses uncomfortable. **Lesson: control access, fund patrol officers, invest in design & programming to attract routine use.**

2. Three public restrooms available. Tight, urban location required temporary O+M facilities initially; **Lesson: plan for permanent facilities.**

3. Effective public-private partnership supports maintenance needs. **Lesson: explore public-private partnership.**

Key O+M Consultant Role
During planning/design phases, a consultant was hired to study High Line O+M. This consultant determined operations/maintenance challenges and provided long-term management solutions. Challenges included: delivering materials to the elevated railway itself; restrictions on vehicle type, the complex horticultural plantings, and lack of space for traditional storage yard and construction equipment.

The Consultant identified comprehensive maintenance needs, defined daily operating costs based on maintenance staff requirements, proposed specific administrative, security and programming staff positions, designed temporary maintenance and administrative facilities and identified specialized service equipment, and developed an O+M Manual that helped define the public/private partnership that currently operates the High Line, helping prepare the Client transition from "development" mode to operating mode.

High Line's ecologically complex plantings require nuanced gardening approach. Image source: *High Line Blog*

page sources: thehighline.org; NYT High Line Low Crime, Gothamist, NYT $20M Gift, NYC Parks

O+M case studies

Buffalo Bayou Park
Houston, TX

Project Summary
Active FEMA Floodway project integrating multi-use trail system and parks; 2.3 miles long; 160 acres. Anchor park along 53-mile trail system. *"Buffalo Bayou Park is infrastructure you can live with."*

Capital Funding
2015 for $53M (majority privately funded)

Annual Operating Budget
$6.6M annual operating budget (2020) - sustained by Downtown Tax Increment Finance Zone, the Houston First Corporation, and the Houston Parks board. Security is publicly funded. *(confirm if $6.6M is for park or for wider trail system.)*

Operating Hours
6am-11pm every day in lit areas / dawn to dusk in unlit areas.

Physical Security
Park porous on all edges - no gates or locks to prevent entry after hours

Monitoring
There are 24 hour patrols of weekend security, and a hired guard who provides security from 4pm to 6am on weeknights.

O+M Stakeholders & Roles
Buffalo Bayou Partnership (non-profit): responsible for O+M
Volunteers & community service workers: support conservation and O+M efforts by removing weeds/invasive species, planting native wildflowers, and trash pick-up and silt removal after heavy rains.
Houston Police Dept: Patrol trails and parks

Lessons Learned
1. Dog parks, sand volleyball courts, and other active program zones have successfully deterred criminal behaviors in these areas. Some crime like robbery has occurred within the wider Buffalo Bayou Trail system; events typically occur under bridges and other areas with limited visibility or not quickly accessible by the main road. **Lesson: invest in community programming. Provide clear lines of sight, place extra security cameras in obscured areas and emergency phone call boxes along the corridor. Fund patrols during operating hours.**

2. Overall trail system is difficult to navigate for users. **Lesson: invest in clear maps, signage and wayfinding.**

3. Emergency first responders have difficulty locating people along the trail. **Lesson: Integrate location markers along the corridor to help users communicate their location during an emergency. Police and first responders should be trained on how to access and use the data.**

4. Buffalo Bayou Partnership has been effective in hosting event-based programming that attracts routine use and helps community engage more deeply with the landscape (e.g. environmental education). **Lesson: consider partnerships**

5. Buffalo Bayou Partnership has been successful in inviting thousands of volunteers annually to support O+M and conservation efforts, which builds community ownership. **Lesson: consider community participation**

The non-profit Buffalo Bayou Partnership invites community volunteers to participate in park conservation efforts. *Image source: Buffalo Bayou Partnership*

page sources: Houston-News-BBP-Security; BuffaloBayou.org; Buffalo-Bayou-Partnership-O+M, BuffaloBayou-2020-Annual-Report; Buffalo-Bayou-Crime

Atlanta BeltLine
Atlanta, GA

Project Summary
22-mile rails-to-trails loop

Capital Funding
unknown

Annual Operating Budget
unknown

Operating Hours
24 hours every day

Physical Security
Park porous on all edges - no gates or locks to prevent entry

Monitoring
Path Force Unit patrols 10am-1am - primarily bike patrols, but also on foot, off-road motorcycles, and all-terrain vehicles.

O+M Stakeholders & Roles
Atlanta BeltLine Inc: capital project development lead
City of Atlanta: responsible for O+M
Atlanta Department of Public Works: maintains trail lights
Trees Atlanta: *local non*-profit organization prunes trees/ clears invasive growth
Atlanta Police Dept & *Atlanta Police Foundation*: responsible for security

Lessons Learned
1. Many partnerships for funding and operation including various city and state agencies and non-profits share capital and operating costs. **Lesson: Involve stakeholders early and seek partnerships.**

2. Design follows environmental design crime prevention principles. **Lesson: integrate safety-enhancing design principles**

3. High level of safety features throughout trail. GA Dept of Transportation funded lighting installation & security camera upgrades. Bridges well lit and security cameras present throughout trail and adjacent parks. Trail features mile-marker locating system enabling fast emergency response times. **Lesson: integrate safety features**

4. High level of daily police patrols enabled by $1.8 million grant from the US Dept of Justice COPS program for military veterans. **Lesson: Develop potential grant list and hold city staff/consultant time to apply**

5. Conflicts between mobility users occur when fast bikers & skateboarders; and motorized scooters, which are prohibited, collide with pedestrians. **Lesson: Invest in good etiquette signage, clear pavement delineations (and separation when possible) for various modes, and consider enforcement operations.**

6. The BeltLine is considered safe during the day and very kid-friendly. As Atlanta suffers from relatively high base crime rate per capita, violent crimes have infrequently occurred on the trail, typically at night after patrols have left and when victims have been alone. **Lesson: high visitorship and visible patrols maintain public safety during the day. Securing the Wash and regular patrols can reduce crime risk after hours.**

7. Due to the massive surge in interest in BeltLine adjacent properties, property prices have increased pricing of such properties, especially in low-income neighborhoods. Developers have been transforming them into luxury living and pricing out former residents. Atlanta Beltline Inc has funded only a small fraction of 5,600 promised affordable housing units. Homes values within a half-mile of the BeltLine have increased 18-27% 2011-2015, leading to protests against gentrification. **Lesson: Sponsor corridor housing study to evaluate economic opportunities and address possible gentrification.**

Atlanta BeltLine bike police serve as ambassadors for visitors and patrol every day from 10am-1am. *Image source: Atlanta Magazine*

page sources: BeltLine.org-Pathway-Force; Atlanta-Magazine; BeltLine-Security-Upgrades; BeltLine-Strategic-Report

appendix A.

baseline hydrology

appendix A
baseline hydrology

The Verdugo Wash is entirely located within the City of Glendale and is a 9.4-mile-long engineered channel and a tributary of the Los Angeles River. The Verdugo Wash was originally a natural riverbed before the engineered concrete channel was constructed in the 1930s by Los Angeles County to improve the conveyance of flooding from the Verdugo catchment into the Los Angeles River.

Based on an assessment of satellite topography for the Glendale area, the natural Verdugo Wash catchment has a total area of just over 21 square miles. The figure below shows the narrow, urbanized catchment alongside the lower reaches of the Wash and the catchment picking up runoff from the Verdugo Mountains, Crescenta Highlands and the non-urban areas of Angeles National Forest. Some areas outside of the natural catchment drain into the wash via sub-surface drainage networks.

Heading upstream from the confluence with the Los Angeles River just northeast of Griffith Park, the channel extends northeast through heavily urbanized areas in the lower catchment, then north between the Verdugo Mountains and the San Rafael Hills and then it moves northwest along the eastern edge of the Verdugo Mountains. This upper part of the catchment is steeper and rockier with partial vegetation cover. The upper extremity of the channel is just south of Interstate 210 in the Crescenta Valley.

The Verdugo Wash Debris Basin Dam is the only part of the channel the Verdugo Wash that is "soft bottomed" or not lined in concrete. The basin has an approximate length of 0.3 miles and represents 3.2% of the total length of the Verdugo Wash.

Figure 2-1: ***Verdugo Wash catchment area*** *©BuroHappold*

Most of the constructed channel is rectangular in cross section, with varying widths from approximately 17 feet in the north in Crescenta Valley, to 89 feet to the south where it connects to the Los Angeles River.

Immediately downstream of the Verdugo Wash Debris Basin Dam, the channel has a trapezoidal cross section with an average bottom width of 22 feet and a top width of 73 feet. The trapezoidal channel represents approximately 9.5% of the entire length of the Verdugo Wash and passes through the Oakmont Country Club Golf Course.

Figure 2-2 top: ***The Verdugo Wash downstream close to its connection to the LA River****; bottom:* ***the wash immediately south of the debris basin where the only trapezoidal section condition exists.***

Along the channel there are six access ramps to the channel and five tributaries are identified as feeding into the Verdugo Wash, as can be seen in Figure 2 3. These have been considered when developing a potential top bank multi-modal facility.

A HEC-RAS model developed by USACE has been provided to the project team from LACFCD. This provides peak flood flows and flood depths in the Verdugo Wash for the 1:100-year event, which is a key design constraint. The USACE HEC-RAS report provides information on the cross-section channel width and depth, as well as the calculated flow depths for the 1:100-year event. The Verdugo Wash Visioning team has used this information to identify sections of the wash which may be suitable for intervention.
To ensure that the any interventions do not increase the risk of flooding to neighboring properties and surrounding areas, an assessment of the required freeboard has been undertaken.

Freeboard Classification

The Federal Emergency Management Agency (FEMA) website provides two definitions of freeboard.

a. An additional amount of height above the Base Flood Elevation used as a factor of safety (e.g., 2 feet above the Base Flood) in determining the level at which a structure's lowest floor must be elevated or flood-proofed to be in accordance with state or community floodplain management regulations.

b. Freeboard is a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed. Freeboard is not required by National Flood Insurance Program standards, but communities are encouraged to adopt at least a 1-ft freeboard to account for the one-foot rise built into the concept of designating a floodway and the encroachment requirements where floodways have not been designated. Freeboard results in significantly lower flood insurance rates due to lower flood risk.

Seeing as there is no clear guidance on what freeboard to adopt for the Verdugo Wash, the design team has used the 2 feet FEMA guidance (as suggested in point (a) above) for freeboard classifications of the existing wash. Any areas with less than 2-ft available freeboard are considered unsuitable for structural interventions. It should also be emphasized that structural interventions within the channel will reduce the available freeboard in comparison with the baseline assessment.

An analysis has been carried out using the levels provided from the USACE flood model to assess the available freeboard within the channel, presented in the forthcoming section "Opportunities & Constraints."

Climate Change

To ensure that any proposals within the Verdugo Wash are resilient and equipped to deal with a changing future, it is recommended to apply a climate change allowance. An article published in Nature by Polade et. al. (2017), titled *"Precipitation in a warming world: Assessing the projected hydro-climate changes in California and other Mediterranean climate regions,"* estimates the expected percentage increase in precipitation intensity to be approximately 20% for the events above the 99th percentile for California. This can be seen in Figure 2-4.

Buro Happold therefore recommends applying a 20% climate change allowance to the 1 in 100-year event to represent the design flood event (DFE) for the future condition. This allowance will address the predicted increase in precipitation intensity and the associated uplift in water levels within the channel. This climate change allowance is in addition to the recommended 2 feet freeboard, which represents a buffer for safety and uncertainty.

Figure 2-3: Access and Tributaries to the Verdugo Wash channel *©BuroHappold*

Figure 2-4: ***CMIP5 multi-model ensemble average changes in winter precipitation (a) frequency and (b) intensity average in different percentile categories over the Mediterranean-climate grids.*** *source: Polade et. al. (2017), p.4*

Prototypical Areas Of Study

To provide an understanding of the channel capacity for the DFE, 1 in 100-year return period plus 20% climate change allowance with a 2 feet freeboard applied, representative cross sections from the USACE model report have been assessed.

Six typical segments have been identified within the Verdugo Wash; the Debris Dam Basin is excluded from this assessment. See Figure 2-5 for an overview of the sections and their approximate associated length.

The following section provides and overview of the capacity within the identified six stretches, as well as an example cross section from the USACE model (1 in 100-year return period) based on a River Station within the given section. A site photo from the approximate location has also been included to provide more of an understanding of the channel within that stretch of the Verdugo Wash.

The flow, velocity and water depth are presented both for the 1 in 100-year event, as well as the DFE, which includes 20% climate change allowance. The cross-section area (CSA) percentage filled has also been calculated for the 1 in 100-year event. A similar exercise has been carried out for the DFE to understand the potential increase in water level because of climate change. At this preliminary stage, the velocity has been assumed to be unchanged to give an upper estimate of the likely increase in depth. When calculating the CSA utilized in the DFE, the calculation approach has been revised so that 100% does not refer to the top of bank condition (like the 1 in 100-year calculation based on the USACE) but includes the recommended allowance for 2 feet freeboard.

Figure 2-5: Typical sections throughout Verdugo Wash *©BuroHappold*

Henderson Canyon segment (RS 4570)

RS 4570	1:100[1]	DFE (20% CC + 2ft)[2]
Flow (cf/s)	9,665 cf/s	11,598 cf/s
Velocity (fs)	39.34 ft/s	39.34 ft/s
Water Depth (ft)	5.6 ft	6.7 ft
CSA Filled (%)	70%	110%

Golf Course segment (RS 25979.37)

RS 25979.37	1:100[1]	DFE (20% CC + 2ft)[2]
Flow (cf/s)	18,000 cf/s	21,600 cf/s
Velocity (fs)	53.22 ft/s	53.22 ft/s
Water Depth (ft)	6.5 ft	7.8 ft
CSA Filled (%)	65%	90%

[1] ***Calculations based on information extracted directly from the USACE model.***
[2] ***Calculations include 20% uplift in design flows for climate change and 2 feet freeboard. The resultant CSA % is based on the area remaining following subtraction of the freeboard area.***

Glorietta Tennis Park segment (RS 24755.26)

RS 24755.26	1:100[1]	DFE (20% CC + 2ft)[2]
Flow (cf/s)	34,600 cf/s	41,520 cf/s
Velocity (fs)	59.77 ft/s	59.77 ft/s
Water Depth (ft)	13.2 ft	15.8 ft
CSA Filled (%)	70%	95%

Glendale Community College segment (RS 16400)

RS 16400	1:100[1]	DFE (20% CC + 2ft)[2]
Flow (cf/s)	37,350 cf/s	44,820 cf/s
Velocity (fs)	55.57 ft/s	55.57 ft/s
Water Depth (ft)	7.6 ft	9.2 ft
CSA Filled (%)	55%	75%

Concord Street segment (RS 2847.55)

RS 2847.55	1:100 [1]	DFE (20% CC + 2ft) [2]
Flow (cf/s)	42,900 cf/s	51,480 cf/s
Velocity (fs)	51.64 ft/s	51.64 ft/s
Water Depth (ft)	9.4 ft	11.33 ft
CSA Filled (%)	65%	90%

Confluence segment (RS 1291.30)

RS 1291.3	1:100 [1]	DFE (20% CC + 2ft) [2]
Flow (cf/s)	42,900 cf/s	51,480 cf/s
Velocity (fs)	52.35 ft/s	52.35 ft/s
Water Depth (ft)	9.3 ft	11.17 ft
CSA Filled (%)	95%	140%

[1] ***Calculations based on information extracted directly from the USACE model.***
[2] ***Calculations include 20% uplift in design flows for climate change and 2 feet freeboard. The resultant CSA % is based on the area remaining following subtraction of the freeboard area.***

Hydrology Constraints

Two factors represent the major constraints for development within the Verdugo Wash from a hydrological perspective: (1) the limited freeboard available within the channel; and (2) the high velocities for the higher order events, such as the 1-in-100-year event.

Limited Freeboard

Limited freeboard means that interventions within the channel must be developed either above the water level or designed so that they can be inundated for the design flood event.

Additionally, in sections of the existing channel where the capacity is already close to the "maximum" for the 1-in-100-year event, there is not much space available for interventions within the channel, as hydrological capacity must be retained.

The base available freeboard (*not including any contingencies*) within the existing Verdugo Wash flood channel is depicted in Figure 2-11.

As already presented in the initial analysis of the Verdugo Wash, there exists very little if no right-of-way along the channel. With properties, residences, streets, parks, etc built up so close to the Verdugo Wash channel, and the constraints associated with the retention of the hydrologic function of the channel, the capacity of the channel directly influences the typology and feasibility of any intervention.

As such, interventions will need to be strategically and specifically located to discrete sections of the Verdugo Wash. Furthermore, with any intervention, it must be demonstrated that there is sufficient hydrologic capacity accommodated.

Figure 2-11: ***Freeboard classification based on the USACE model for the 1 in 100-year event*** *©BuroHappold*

0 1/4 1/2 mile

Hydrological Velocities

The velocities for the 1-in-100-year event have also been analyzed and presented visually, based on the United States Army Corps of Engineers (USACE) model. This information is depicted in Figure 2-12.

As can be seen from the Figure, high velocities are modeled for the entirety of the channel, in the downstream sections. In these sections, the velocities are in excess of 50-feet per second (or 35 miles per hour).

This fast-moving water represents a risk to any people or animals in the Verdugo Wash for the higher order return periods, and it must therefore be assured that a flood warning and evacuation plan is implemented to ensure that the appropriate evacuation is undertaken, and that - should portions of the Wash become accessible as a community park - the channel is closed off to the public prior to significant precipitation events.

These velocities also have implications for the types of interventions for consideration.

Cycling pathways on platforms and any planting within the Verdugo Wash, for example, would have to be designed and constructed in such a way to be able to withstand the modeled velocities, and ensure that debris is not transported downstream causing potential issues with the capacity.

Anticipatory Planning

The implications of climate change and the associated operation and maintenance (O&M) constitute further considerations for the future planning of the Verdugo Wash.

The future almost certainly holds an increase in precipitation intensity, which will inevitably further reduce the available capacity within the Verdugo Wash.

Thus, with any design scenario, it is recommended to plan for an additional 20% capacity to serve as a climate change allowance. With this contingency, any design scenario for the Verdugo Wash would take into account not only the multi-benefit public space aspect but also seek to preserve hydrologic function.

Additional options to reduce the impact of climate change are further explored in the "Mitigation" section (on the following spread).

The primary function of the Verdugo Wash is to convey stormwater and to do so, O&M is required. The condition of the channel itself and its concrete walls and bottom must be accessible to inspection, and repair, if required. It is also important that debris does not get trapped and accumulate within the channel. (The existing Debris Basin Dam, for example, is found to collect sediments and its information has been sought from the LACFD on the type of materials and frequency of removal.)

Figure 2-12: ***Velocity classification based on the USACE model for the 1-in-100-year event*** *©BuroHappold*

0 1/4 1/2 mile

Figure 2-13: ***Debris Basin Dam photos from the Project Team's site visit in April 2021.***

Hydrology Opportunities

A key guiding principle is to maintain the hydrologic function of the channel, but there are opportunities to better utilize this extensive piece of stormwater infrastructure. In areas with capacity, structural interventions can be implemented to provide and improve the ecological conditions, connectivity through cycle and pedestrian paths, as well as public realm. Based on the restrictions represented by the major constraints, limited freeboard, and high velocities, a 'point by point' intervention strategy can be developed seeking to maximize connectivity. The sections of the channel with the most freeboard available represent the areas with the greatest opportunities for structural interventions within the channel.

The Debris Basin Dam is one location, for example, that would serve as a good candidate for both ecological and civic enhancement. The Debris Basin Dam is understood to have limited implications for the "higher order" flood events. In addition, for more frequent return periods water can be slowed down in this particular location (instead of rapidly being transported downstream). This thereby creates opportunities for a range of vegetation / plant species.

Additionally, the Debris Basin Dam is prime area to consider groundwater recharge. **Recharging groundwater aquifers in arid environments, which often have insufficient water resources available to meet potable and non-potable demands, may help the overall natural water balance.**

A water supply assessment for City of Glendale found that 68% of the City's water is imported. Though the amount of potential groundwater recharge would be limited due to the infrequency and velocities of the higher order events, any groundwater recharge could contribute to larger offsets of urban water use.

Another - albeit more significant - idea for consideration is to somehow increase the capacity of the channel. This can be done through modifications to the various "profiles" or "cross-sections" where feasible. These are physical alterations to the profile of the channel itself - such as extending the walls or transforming the trapezoidal sections into rectangular profiles, in order to affect the baseline water level. This is explored further in the table on the following page.

Hydrology Mitigation

The following is a collection of potential mitigation strategies that can be implemented to address modifications to the hydrological performance of the Verdugo Wash.

ITEM	BENEFITS	POTENTIAL ISSUES	SUITABLE LOCATIONS
Installment of screen protection against gardens alongside the Verdugo Wash.	*Reduces the worries and hesitations neighbors along the Verdugo Wash have expressed in terms of their privacy and safety being reduced as a result of the project.*	*Reduces the worries and hesitations neighbors along the Verdugo Wash have expressed in terms of their privacy and safety being reduced as a result of the project.*	*This would be most relevant in sections of the Verdugo Wash where residential houses and garden are located just adjacent to the wash, such as the more urbanized downstream sections.*
Extend the walls of the Verdugo Wash channel vertically by building new walls on top of the existing top of bank.	*This could increase the capacity of the channel and allow for further interventions within the wash, while maintaining the hydraulic capacity.*	*This would further close off the channel and would add more concrete to the existing channel, rather than representing a re-naturalization process. Potential issues with the existing design life of the wash and the structural integrity of the added walls.*	*This would be most relevant in sections where there is limited freeboard available, such as sections upstream of the Debris Basin Dam.*
Change of channel cross-section	*By changing the trapezoidal sections of the channel to a rectangular cross-section, the water level is drastically reduced. This allows for interventions within the channel. Having tiered sections could also provide public realm along the Verdugo Wash while maintaining the hydraulic functioning of the channel.*	*Understood to represent expensive work which would have to be agreed with the Golf Course, as this is where the trapezoidal sections are located. Changes to the cross sections would have to happen during a time of year where larger precipitation events will not/ are very unlikely to occur.*	*This could be relevant in the section of the Verdugo Wash going through the Golf Course, just downstream of the Debris Basin Dam.*
Groundwater recharge	*By providing infiltration of stormwater along the wash there would be benefits in terms of groundwater recharge, which can be used to meet water demands.*	*The amount of infiltrated stormwater is understood to represent a small volume for the larger order events, where there are capacity issues in terms of interventions within the Verdugo Wash.*	*This would be suitable in areas that are permeable, such as the Debris Basin Dam. Other parks and open areas in close proximity to the Verdugo Wash could also be investigated, but that would contain conveying flood water out of the channel.*

In addition to these ideas, there are opportunities outside of the actual Verdugo Wash channel (and therefore outside of the scope area) that can affect the capacity of the channel. Such ideas will be explored in a future phase.

Wider stormwater management outside of the Verdugo Wash site boundary	*Reducing the overland flows through sustainable drainage systems, such as infiltration basins, green roofs, rain gardens, and permeable pavements. A wider green infrastructure approach to stormwater in Glendale can reduce the flows in the Verdugo Wash and thereby adjust for the flows resulting from the increase predicted in rainfall intensity because of climate change. As a result, the existing utilization of the channel can be maintained in the future. Consider opportunities within the tributaries feeding the Verdugo Wash, like Dunsmore Canyon, which could also function as key ecological connections.*	*Having the financial resourcing and locating areas suitable for intervention. From the perspective of the Verdugo Wash, the timelines of future interventions and quantified assessments of green infrastructure in the catchment would have to be considered if it is intended to compensate for the effect of climate change in the channel.*	*This would be considered suitable in the upstream sections of the Verdugo catchment as more space is available for the implementation of green infrastructure. This does however come with a host of benefits and would be beneficial also in more densely urban areas as it improves ecological conditions, reduces urban heat island effect, and increases amenity.*

appendix B.

mobility considerations

appendix B
mobility considerations

The story of the Verdugo Wash has always been about movement.

Water told the first story - finding the route of least resistance. Precipitation running down the Verdugo and San Gabriel Mountains collected in the former Verdugo Creek and was funneled between the Verdugo Mountains and San Rafael Hills through the Verdugo Canyon before washing across the alluvial plains to join the LA River.

Beyond the flow of water, we can understand the Verdugo Wash in terms of rail infrastructure, which hugged the contours of the nearby mountains to connect riders to stations in Montrose, La Crescenta, La Canada, and Tujunga.

The popularity of the automobile tells today's story best. Looking to traverse up from south Glendale and avoiding the highway - *which is a necessity for those on foot and bike* - one follows the roadways of Glenoaks, Verdugo, La Canada, and La Crescenta. This set of similar paths, intuited from the natural landscape's rich topography, is so basic we no longer register it.

However, the opportunity to transform the Verdugo Wash into a vibrant, accessible, and interconnected pedestrian and cycling spine is a very attainable future narrative. Such a corridor would entirely transform connectivity for Glendalians, serving those seeking active alternatives for purposes like health, climate, financial, recreation, and necessity.

Aligning with the City of Glendale's goals of increasing multi-modal transportation options for its residents, the Verdugo Wash's positioning and contribution to surrounding networks would provide monumental potential for a future multi-modal mobility corridor while providing public park space for Glendale's residents. The associated benefits would be numerous, including aspects of economy, public health, and safety. Strategically positioned entry points would greatly improve the Wash's visitation for recreational and functional trips, would encourage an active lifestyle, seamlessly connect commuters to major transit hubs, and provide a safe alternative for bicyclists and pedestrians.

Figure 1-1 left: ***Existing cycling times from downtown;*** *and right:* ***projected cycling times from downtown, anticipating additional entrances and the use of cycling paths in the Verdugo Wash. Per the legend, the darker the color, the faster the cycle time*** *©BuroHappold*

access point candidate study

In-depth analysis of key destinations, land uses, mobility network, apparent site constraints, and distances rationalized for pedestrians and bicyclists resulted in the following set of access points candidates. The Project Team recommends this set of candidates be further studied and discussed together with the community and relevant stakeholders.

P1: Boston Avenue *(existing access point)*

P2: Dunsmore Avenue *(existing access point)*

P5: Whiting Woods Road *looking north (existing access point)*

P6: Oakendale Place *(potential access point)*

P9: San Gabriel Avenue *(existing access point)*

P10: Glorietta Tennis Park *(potential access point)*

P13: Oak Knoll Road *(potential wildlife access point)*

P14: Verdugo Woodlands Elementary School *(potential access point)*

P3: New York Avenue *looking north (proposed access point)*

P4: Eagle Canyon Channel *(potential wildlife access point)*

P7: Shirlyjean Street *looking north (existing access point)*

P8: Basin *(existing access point)*

P11: Fern Lane / El Rito Avenue *(potential access point)*

P12: Wabasso Way *(potential access point)*

P15: Verdugo Park *(potential access point)*

P16: Lot 30 *(existing access point)*

access point candidate study

P17: E Glenoaks Boulevard Bridge *looking east-northeast (potential access point)*

P18: Geneva Street & Monterey Road *looking west (potential access point)*

P21: First German United Methodist Church *(existing access point)*

P22: Fremont Park *(potential access point)*

P25: San Fernando Road *(potential access point)*

P19: N. Brand Boulevard *(potential access point)*

P20: N. Pacific Avenue *(potential access point)*

P23: Concord Street *(potential access point)*

P24: Estelle Ave *(potential access point)*

P1: Boston Avenue

P1: Boston Avenue *(existing access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P2: Dunsmore Avenue

P2: Dunsmore Avenue *(existing access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

connection to dunsmore canyon channel (potential wildlife passage corridor to san gabriel mountains)
DUNSMORE AVE
CONNECTION TO HINDENBURG PARK
ramp can be used for wildlife access
RAMP TO WASH
INGHAM CANYON
LA COUNTY PUBLIC WORKS
CONNECTION TO CRESCENTA VALLEY COMMUNITY REGIONAL PARK

P3: New York Avenue

P3: New York Avenue *looking north (proposed access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P4: Eagle Canyon Channel

prioritized as potential wildlife crossing

P4: Eagle Canyon Channel *(potential wildlife access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P5: Whiting Woods Road

P5: Whiting Woods Road *looking north (existing access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P6: Oakendale Place

P6: Oakendale Place *(potential access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P7: Shirlyjean Avenue

P7: Shirlyjean Street *looking north (existing access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P8: Oakmont Debris Basin

P8: Basin *(existing access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

tion to leviathan's
railhead

Southern California Edison Right-Of-Way at Oakmont Country Club

potential wildlife corridor

Southern California Edison R.O.W. at Oakmont Country Club
(potential wildlife corridor)

land beneath the southern california edison row power line should be considered as a wildlife corridor from verdugo mountains to the wash

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P9: San Gabriel Avenue

P9: San Gabriel Avenue *(existing access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P10: Glorietta Tennis Park

P10: Glorietta Tennis Park *(potential access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P11: Fern Lane / El Rito Avenue

P11: Fern Lane / El Rito Avenue *(potential access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P12: Wabasso Way

P12: Wabasso Way *(potential access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P13: Oak Knoll Road

note: The working stakeholder group requested this potential access point be evaluated. The Project Team has concluded that its feasibility is compromised by the presence of existing an struture and its redundancy with other nearby potential access points (e.g. P14).

P13: Oak Knoll Road *(potential wildlife access point)*

connections to verdugo p
wildlife corridor, leading t
verdugo mountains

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P14: Verdugo Woodlands Elementary School

P14: Verdugo Woodlands Elementary School *(potential access point)*
(left: from west side from Colina Dr) (right: from east side at Crestmont Ct)

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P15: Verdugo Park

P15: Verdugo Park *(potential access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P16: Lot 30

P16: Lot 30 *(existing access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P17: E Glenoaks Boulevard

P17: E Glenoaks Boulevard Bridge *looking east-northeast (potential access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P18: Geneva Street & Monterey Road

P18: Geneva Street & Monterey Road *looking west (potential access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P19: N Brand Boulevard

P19: N. Brand Boulevard *(potential access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

PARKING GARAGE
EXISTING BRIDGE
SERVICE TITAL
RAMP TO WASH
VERDUGO WASH
E GLENOAKS BLVD
opportunity to connect to established business
downtown glendale
N BRAND BLVD
HOSPITALITY CONNECTION
CONNECTION TO BUSINESS COMMUNITY
W GLENOAKS BLVD
HILTON HOTEL
N

P20: N Pacific Avenue

P20: N. Pacific Avenue *(potential access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

MEDICAL CENTER
N PACIFIC AVE
W GLENOAKS BLVD
existing traffic light at intersection provides safer crossing of w glenoaks blvd and n pacific ave
RETAIL CONNECTION
proposed BRT routes
KS BLVD
W GLENOAKS BLVD
existing bus stop
RAMP TO WASH
RAMP TO WASH
N PACIFIC AVE
RETAIL CONNECTION
RETAIL
existing bus stop
ARDEN AVE

P21: First German United Methodist Church

P21: First German United Methodist Church *(existing access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

existing traffic light at intersection provides safer crossing of kenilworth ave and w glenoaks blvd
W GLENOAKS BLVD
FIRST GERMAN UNITED METHODIST CHURCH
BONNIE ACADEMY PRESCHOOL
RAMP TO WASH
storic bridge
VERDUGO WASH
SUPERMARKET
ARDEN AVE
HAHN AVE

P22: Fremont Park

P22: Fremont Park *(potential access point)*

fremont park could serve as an "island" of habitat and open space for humans and wildlife traveling between verdugo park and the los angeles river

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P23: Concord Street

P23: Concord Street *(potential access point)*

PATTERSON AVE
viewing platform to enjoy views of verdugo mountains, san rafael hills, and san gabriel mountains
viewing platform to enjoy views of santa monica mountains
RAMP TO WASH
VERDUGO WASH
CONCORD ST
ASH
RESIDENTIAL AREA
PATTERSON AVE
CHESTER ST
LAND USE LEGEND
COMMERCIAL
3+ UNIT RESIDENTIAL
1+2 UNIT RESIDENTIAL
OPEN SPACE / RECREATIONAL
INSTITUTIONAL (e.g. government, church)
OFFICE
MIXED USE (e.g. store+residential)
YOUTH/ELDERLY (e.g. school, daycare, senior housing)
UTILITY / INDUSTRIAL / PARKING
N

P24: Estelle Avenue

P24: Estelle Ave *(potential access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

P25: San Fernando Road

P25: San Fernando Road *(potential access point)*

LAND USE LEGEND

- COMMERCIAL
- 3+ UNIT RESIDENTIAL
- 1+2 UNIT RESIDENTIAL
- OPEN SPACE / RECREATIONAL
- INSTITUTIONAL *(e.g. government, church)*
- OFFICE
- MIXED USE *(e.g. store+residential)*
- YOUTH/ELDERLY *(e.g. school, daycare, senior housing)*
- UTILITY / INDUSTRIAL / PARKING

Access Point Evaluation

During the previous Pre-Design stage of the Verdugo Wash Visioning, the Project Team identified, studied and evaluated 23 access points along the Wash in order to - via quantitative metrics - understand the merits of such access and prioritize segments of the Wash.

This evaluation considered the following: cycling infrastructure, transit accessibility, traffic and parking, employment centers, community facilities and environmental justice. Since the Wash passes through many distinct and diverse neighborhoods, this approach also creates a framework to better understand the context around each potential access point. The findings from this evaluation were used to progress the Concept Designs and initial Project Phasing ideas.

Methodology

This evaluation was carried out by identifying a series of parameters within a 1/2-mile study area for each access point. Parameters were selected based on their impacts on improving connectivity for Glendale residents, ensuring the safety of all road users, and ensuring an equitable distribution of recreational green space to all Glendale residents. Once the parameters were identified and selected, each access point was assigned a score from 1 to 3 (low, moderate, and high) using natural breaks (Jenks). These parameters were then used to develop cumulative scores in order to evaluate the access points within the context of the overall project mobility goals.

Figure 1-2: ***Existing & potential access points along the Verdugo Wash*** *©!MELK*

Theme	Category	Parameter
Cycling	Infrastructure availability	• Linear feet of existing and proposed bike lanes • Linear feet of existing and proposed sharrows
	Pedestrian/cyclist safety	• Bicycle collisions per linear ft of roadway (2015-2019) • Pedestrian collisions per linear ft of roadway (2015-2019)
Transit	Access to transit facility	• Number of Beeline routes • Number of Beeline stops • Number of Metro Bus routes • Number of Metro Bus stops
Traffic	Level of service of adjacent street	• Level of service A or B on adjacent street
	Parking	• Parking area (sqft) • Distance to park and ride facility (ft)
Employment	Jobs	• Number of private primary jobs
Community Facilities	Parks	• Distance to nearest park
	Schools and Institutions	• Distance to nearest school
	Trails	• Distance to trailhead
Environmental Justice	Prevalence of environmental hazard	• CalEnviroScreen score (weighted by area within ½ mile)

Table 1-1: ***Parameters for access point evaluation*** *©BuroHappold*

Available Infrastructure for Cycling

The Verdugo Wash is intended to form a multi-modal spine that would greatly improve accessibility for active transportation users throughout the City of Glendale.

To improve connectivity, the Wash must also plug into existing bicycle infrastructure. For this reason, the availability of cycling infrastructure was selected as a parameter as it determines the multi-modal accessibility to the Wash from the surrounding areas. Through this parameter, areas with relatively low infrastructure can be identified as focus areas for public realm and bicycle network improvements.

Glendale's bicycle network relies heavily on sharrows, which are painted markings on vehicle travel lanes. Sharrows do not provide sufficient separation or protections for users of active transportation modes. Roadways with sharrows are de-prioritized in the analysis to evaluate cycling infrastructure more effectively. Based on this analysis, it is found that access points closer to Downtown have higher cycling accessibility than residential areas along the northern portion of the wash. Glendale Community College and adjacent areas have moderate accessibility, while several of the northern portions of the Wash have lower accessibility for cyclists.

Figure 1-3: ***Cycling infrastructure availability*** *©BuroHappold*

Pedestrian and Bike Safety

Pedestrian and cyclist safety are critical in the evaluation of the benefits of integrating access points to the Verdugo Wash.

One consideration is that access points would create alternative routes for pedestrians and cyclists away from fast-moving traffic, reducing the potential for collisions. Access points closer to Downtown Glendale tend to see more collisions based on the data, while northern portions of the Wash see relatively fewer collisions per unit length of roadway. This assessment also sheds light on which road segments and intersections adjacent to the Wash will require design interventions to mitigate pedestrian and cyclist collisions with automobiles.

Figure 1-4: ***Bicycle and pedestrian collisions (2015-2019)*** *©BuroHappold*

Transit

Transit stops adjacent to access points to the Wash increase access to the Wash, and support visitors from outside Glendale. This also encourages use of the Wash for commuting by improving access to bus service lines that connect to economic centers and employment hubs. Transit stops adjacent to access points also have the potential to become micro-mobility hubs with access to shared bicycle or scooter facilities. Access points in Fremont Park, Downtown Glendale and College Hills have high transit accessibility, and are well-suited to serve commuters. The northern portion of the Wash which passes through the residential areas like Oakmont, Whiting Woods and Crescenta Highlands have lower transit accessibility, and therefore have less potential for integrated micro-mobility stations.

Figure 1-5: ***Transit accessibility*** *©BuroHappold*

Traffic: Level of Service

Level of Service is a qualitative measure used to evaluate the quality of motor vehicle traffic service. It is measured as a ratio of the peak vehicles per hour and the designed capacity of the road network.

Level of service is typically measured from A to F, where A indicates the free, unrestricted flow of traffic and F indicates queuing and severe delays. A level of service of A or B implies that there is residual capacity in the network, suggesting opportunities to redistribute traffic within the network, widen sidewalks or increase the availability of pedestrian facilities on segments adjacent to access points.

Relative to other metrics, level of service is de-prioritized as it will require longer-term input and doesn't directly affect access to the Wash in the early phases of the project.

Access points with limited capacity for road-level interventions are concentrated along larger arteries in the Downtown area. Access points in residential areas have more potential for road diets, but this is subject to further study.

Figure 1-6: ***Vehicular level of service on adjacent street*** *©BuroHappold*

Traffic: Parking

Access points with nearby parking facilities provide additional modes of access for visitors who travel to the Wash by car.

The number of visitors to the Wash by car is expected to be low, as it is within walking distance for a significant proportion of Glendale's residents. Park and ride facilities create additional opportunities for commuters and recreational users to access the Wash.

Since the primary users of the Wash are Glendale residents, most visitors are expected to be within walking distance of the Wash. Since the Wash is already well-serviced by existing parking in Downtown Glendale as well as public park-and-ride facilities, parking is de-prioritized in the evaluation of access points. It is found that access points in Downtown Glendale are better suited for visitor use, as there is higher surface and multi-story parking availability.

Figure 1-7: ***Parking accessibility*** *©BuroHappold*

Employment

The number of jobs within the study area of each access point will determine the number of people who may use the Wash for their daily commute to work. Areas with a lower number of jobs within a ½ mile radius are more likely to be origins for commuters who will use that Wash to reach employment areas. There is a higher concentration of employment in the Downtown and confluence portion of the wash, while the northern portion of the wash sees moderate to low employment. This creates opportunities for commuters to travel to areas with high employment from the low employment areas.

Figure 1-8: ***Employment*** *©BuroHappold*

Proximity to Community Facilities: *Parks*

The Verdugo Wash has the potential to provide green infrastructure to residents across the city. It presents an opportunity to integrate existing parks like Fremont Park, Verdugo Park and Glorietta Park into the Verdugo Wash project. Access points in areas where there is a lack of green space can provide valuable access for residents who may not have existing green infrastructure near their homes. Access points near Verdugo Park, Fremont Park and Crescenta Valley Community Regional Park create opportunities to integrate the Wash into a recreational corridor. Access points in Rossmoyne and Montrose Verdugo City have limited or no park access and would benefit from additional greening interventions.

Figure 1-9: ***Proximity to park*** *©BuroHappold*

Proximity to Community Facilities: *Schools & Institutions*

Since the Verdugo Wash provides an alternative for pedestrians away from streets with high levels of traffic, it can help to create safe routes to school for families with young children. Access points near schools can be used to commute to school, as well as for recreation and after-school activities.

There are several schools across the study area that may be able to take advantage of the Wash as a commuting route. Access points near Glendale Community College are well-suited for potential commuters from other parts of the city.

Figure 1-10: ***Proximity to schools*** *©BuroHappold*

Proximity to Community Facilities: *Trails*

Access points near a trailhead can encourage enthusiasts, hikers, and recreational visitors to use the Wash as part of their visit to a hiking trail. Access points 3 through 7 can be used to access Whiting Woods Trailhead and Verdugo Mountains Open Space Preserve.

Figure 1-11: ***Trail access*** *©BuroHappold*

Environmental Justice

Environmental justice seeks to address the exposure of community environmental health burdens on people. CalEnviroScreen 4.0 is used as a metric for the exposure to environmental hazards for vulnerable populations within the Verdugo Wash study area.

This metric identifies access points which have higher levels of community environmental health burden and will benefit the most from the provision of additional green space.

Access points closest to the Ventura Freeway see the highest CalEnviroScreen scores, and would benefit the most from greening interventions

Figure 1-12: ***CalEnviroScreen scores*** *©BuroHappold*

Cumulative Evaluation

Based on the previous ten metrics presented herein, a unified ranking was developed to understand the areas which would benefit the most from having access to the Wash. This evaluation is used to inform an initial notion of phasing and design opportunities for the project, which are presented on the following pages.

Access points closer to Downtown Glendale, Confluence Park and Glendale Community College rank highly for improving accessibility and are expected to see the highest use. These access points are also well-suited to be integrated into Glendale's public transportation and bicycle network.

Figure 1-13: ***Cumulative access point evaluation*** *©BuroHappold*

Access Point Evaluation: Opportunities & Constraints

Existing access points have the potential to serve as "quick wins" and can also be used for pilot projects. Among the existing access points, "P15" and "P19" are well suited to being prioritized in the first phase of opening the wash as they provide access to jobs and Glendale Community College. Access points "P4" and "P6" have moderate accessibility but will require improvements to the cycling network to be able to provide multi-modal access to the Wash. Access points "P1", "P2" and "P3" are expected to see lower use, and are better suited to later stages of the project, as they have the potential to connect to schools and parks. Existing access points may also have design constraints due to issues of ownership of adjacent parcels, which may constrain sizing and transitions onto streets and sidewalks.

Future access points present opportunities for more ambitious design interventions and can support a wide variety of users and activities. The access to confluence park, "P23" is an important strategic access point, and create potential to connect to the LA River Bike Path in addition to a welcoming public realm for Glendale residents. "P20" and "P21" are well suited to visitor needs due to their proximity to the park and ride. In the more residential northern portion of the Wash, "P5" is well suited to serving Montrose Verdugo City, has trail access and provides opportunities for families with young children access the nearby kindergarten through safer routes than on vehicular streets.

Several access points have limited pedestrian and cycling infrastructure on adjacent streets, which are an important component to ensuring the success of the Verdugo Wash. Incorporating sidewalks, streets and intersections that support multi-modal transportation will be instrumental in realizing the mobility benefits of the Verdugo Wash project.

Connections To Existing Transportation Infrastructure

Integration with existing public transit stops, pedestrian routes and the existing bicycle network in Glendale is key to ensuring that the Verdugo Wash can function as an artery in the City's transportation network. Connections to existing facilities also help to induce future demand for the Wash and encourage visitation. BuroHappold has provided recommendations for connecting the Wash to Glendale's bicycle and transit networks.

Connections to Transit Infrastructure

Glendale's Beeline and Metro Bus routes present an opportunity to provide access to the Wash from across the city and wider region for visitors, and create alternative modes for commuters. For example, a resident living in the Mariposa, Adams Hill or Somerset neighborhoods can take a bus to the nearest Verdugo Wash access point and use a shared or personal bicycle to visit the Verdugo Mountains. Making connections along N Brand Blvd to commercial areas in Downtown Glendale will also bring economic benefits to businesses in Glendale.

Connections to Bike Network

Integrating the Wash with Glendale's bicycle network will require improvements on segments and intersections outside of the Wash. A significant amount of Glendale's existing bicycle infrastructure utilizes shared lane markings, which do not provide adequate separation between cyclists and vehicular traffic. Converting shared lane markings into dedicated bicycle facilities, particularly those connecting to the Wash, will ensure a safer environment for cyclists by minimizing conflicts between modes. Intersections adjacent to the Wash also play a role in ensuring a safe environment for pedestrians and cyclists to connect to it. The City of Glendale is in the process of updating its citywide bike plan, which will focus on improving connections to the Wash. Improvements at Confluence Park and a bridge connection to the LA River Bike path will expand opportunities for the Wash to be connected to the greater region's active transportation network. On the northern portion of the Wash, access to the trail heads at Whiting Woods and Oakmont can be integrated into the Wash so that a contiguous path connects the regional network to Glendale's trail system. A full list of recommended improvements relating to adjacent bike lane segments and intersections is detailed in Table 1-2.

Benefits Of Added Bicycle Paths

The addition of a bicycle path to the Verdugo Wash will have many benefits, among which are increased safety, access, air quality, and an increase in property values. The separation between bicyclists and automobiles through a bike trail improves safety. Separated bicycle routes are highly effective because they redirect cyclists away from vehicular traffic, reducing conflicts between modes. Having a dedicated route also discourages pedestrians from jaywalking. In transitions between dedicated and on-street facilities, lowering vehicular speeds has also been shown to improve safety as collisions are less likely to be fatal. Bicycle paths offer a parking-free alternative to getting around.

This is especially attractive for the denser neighborhoods in Glendale, where additional cycling infrastructure can alleviate parking demand. By reducing the number of car trips taken in the neighborhood, bicycle paths will not only benefit cyclists but also the neighborhood. Reducing the number of car trips means less congestion and improvements to air quality in neighborhoods with improvements to bicycle infrastructure.

Furthermore, the addition of bicycle paths has been shown to increase neighborhood desirability and thus property values across the United States. Several studies have shown that identical homes will sell for more with a bicycle path adjacent or in proximity to them than without one. Residents also cite safety and efficiency as additional benefits to their streets in areas with a more robust cycling network.

A study to determine the impact of the bicycle and pedestrian "Bush Creek trail" on property values in Bush Creek, Santa Rosa, California showed overwhelming opinion that the trail added positive value to the neighborhood. In fact, 61% of real estate agents said they used proximity to the trail as a selling point. 33% of residents indicated the trail would make their homes easier to sell, and 23% of residents said the addition of the bicycle and pedestrian path would allow their home to sell for more. It was also found that the addition of a bike trail did not lead to an increase in crime in the area.

Figure 1-14: ***Bike network integration overview*** *©BuroHappold*

Shared Or Separated Pedestrian & Cycling Paths

Since the Verdugo Wash is 9.5 miles long, its character, layout and scale will vary based on its surrounding context. A part of this variation will inform whether a dedicated bicycle lane or a shared right of way for all users.

Where possible, a dedicated bicycle lane will allow for unimpeded flows for bicyclists that allow for higher speeds and increased efficiency. This separation between pedestrians and cyclists ensures safety and minimizes the risk of collisions between pedestrians and cyclists. However, there are areas where space within the Wash may be limited due to available freeboard. A shared right-of-way may be used for pedestrians and active transportation users, and should incorporate calming mechanisms for cyclists as well as appropriate paving. There are also portions of the Wash where visitation is expected to be lower, such as the Whiting Woods and Montrose Verdugo City. In locations where these constraints occur, it may be appropriate to utilize a shared right of way, as conflicts between users are less likely in areas with low footfall. Transitions between shared and dedicated bike paths should incorporate buffer zones and appropriate signage to ensure that riders are aware of the change and to reduce their speed.

Access Point	Neighborhood	Recommended Bike Lane Improvement	Recommended Intersection Improvement
p2	Crescenta Highlands	• Dedicated lane along Dunsmore Ave	• Dunsmore & Honolulu Ave
p3	Crescenta Highlands	• Dedicated lane along New York Ave	• New York Ave & Honolulu Ave
p4	Montrose Verdugo City	• Protected connection from Honolulu Ave to Pennsylvania Ave	• Buffer from Verdugo Wash Access to Honolulu Ave • Intersection at Honolulu Ave & Pennsylvania Ave
p6	Montrose Verdugo City/ Oakmont	• Connection to Whiting Woods trailhead via Whiting Woods Rd	• Signage at Whiting Woods Rd & El Lado • Whiting Woods Rd & Honolulu Ave
p7	Oakmont/ Sparr Heights	• Connection to Camp Bob Waldorf and Verdugo Woodlands via Shirlyjean St • Connection to Honolulu Ave via Roselawn Ave	• La Crescenta Ave & Roselawn Ave • Crossing to access La Crescenta Nursery
p9	Verdugo Woodlands	• Dedicated lane at Glorietta Ave • Dedicated lane along Canada Blvd • Dedicated lane on N Verdugo Rd	• N Verdugo Rd & Glorietta Ave • Canada Blvd & Glorietta Ave
p12	Verdugo Woodlands	• Connection to N Verdugo Blvd • Improvements to Canada Blvd lane access	• Access improvements from Verdugo Wash to N Verdugo Blvd
p14	Verdugo Woodlands	• Access from Verdugo Wash to Canada Blvd via Stengel Field • Connection to Glendale Community College	• Intersection at Stengel Field & Canada Blvd • Canada Blvd & Towne St • Towne St & Campus Way
p15	College Hills	• Connection to dedicated facility on N Verdugo Rd, two-way bicycle access recommended	• Glendale Ave & N Verdugo Rd
p16	Rossmoyne	• Connections to existing routes on Rossmoyne Ave and Glenoaks Blvd	• Signage updates at intersections along Rossmoyne Ave • Bicycle signalization at E Glenoaks Blvd & N Glendale Ave
p17	Downtown/ Rossmoyne/ Verdugo Viejo	• Proposed northbound & southbound dedicated facilities on N Brand Blvd to improve connectivity to Downtown Glendale	• N Brand Blvd & Glenoaks Blvd • N Brand Blvd & Ventura Freeway ramps
p18	Fremont Park/ Glenwood/ Verdugo Viejo	• Dedicated lane on N Kenilworth Ave	• Buffer between Verdugo Wash access point and main streets
p19	Fremont Park/Glenwood	• Northbound connection to N Kenilworth Ave	• N Kenilworth Ave & Glenoaks Blvd
P20	Fremont Park	• Network improvements to Patterson Ave	• Connection to N Kenilworth Ave from Fremont Park
p21	Fremont Park/ Pelanconi	• Dedicated lane along Concord St instead of shared lane markings	• Buffer between Concord St & Verdugo Wash entrance at Faircourt Ln • Transition to dedicated bike lane at Concord St & Faircourt Ln intersection
p22	Pelanconi	• Estelle Ave to connect to Glenoaks Blvd	• Signage at intersections crossing Estelle Ave to Glenoaks Blvd
p23	Grand Central	• LA River Bike Path connection	• Bicycle intersection between Confluence Park and LA River path

Table 1-2: ***Recommended Bike Network Improvements***

Micro-Mobility Integration

Micro-mobility offers a convenient, affordable, and safe mode of transportation, and includes motorized or human powered devices that can be operated in the same facilities as bicycles. The City of Glendale is currently in the process of implementing a Shared Mobility Pilot program, which will involve electric bicycles, electric scooters, and standard bicycles. Micro-mobility is a suitable option for dense urban areas as well as suburban contexts, as it makes it easier for riders to traverse longer distances.

Figure 1-15: ***Shared bicycle docking facility in Los Angeles***

Since the Verdugo Wash is designed to be bike-friendly, it will also support micro-mobility systems in Glendale. Access points close to transit stops along the Verdugo Wash, particularly in Downtown Glendale, College Hills, and Montrose Verdugo City, can make use of micro-mobility hubs, which are docking stations for storing and charging devices. Access points near micro-mobility hubs can also include ramps or elevators for riders to enter the Wash with their device.

Parking Adjustments

Since the Verdugo Wash is expected to provide improvements to Glendale's pedestrian and bicycle networks, it is not expected to require additional parking. It is expected to replace car trips, reducing parking demand across the city. This is particularly beneficial to commercial areas in Glendale's Downtown, which currently have limited active transportation options and a significant amount of parking capacity.

For visitors from outside Glendale, the four existing park and ride facilities – Fairmont, Harvey, Lowell, and Verdugo will be key nodes that connect to the Verdugo Wash. Visitors may also park in the surface and structured parking facilities in Glendale's Downtown. A detailed parking study for the Verdugo Wash can be carried out during the pilot phase of the project to understand visitation demands to better inform the parking adjustment strategy along the Wash.

Safety, Maintenance, & Operation Considerations

The successful management of the Verdugo Wash will ensure smooth operations, effective maintenance and servicing of facilities, and safety for all visitors.

Once completed, the Verdugo Wash linear park will operate under the same rules and procedures as Glendale Community Services & Parks facilities.

The park will likely follow the same hours of operation as Glendale's other parks, which is 6:00am – 10:00pm, Monday through Sunday.

Vehicular access to streets along access points to the park will ensure that emergency vehicles like fire trucks or ambulances will be able to service the Wash throughout its hours of operation.

The Verdugo Wash will be maintaining its hydrological functions and will require additional operational considerations compared to other park facilities in the City of Glendale. These additional considerations include removal of debris along the waterways and ensuring that the park can be evacuated and access-restricted before major flood events. Based on hydrological models, the velocity of water during a 1-in-100-year flood present a risk to users within the Wash. A robust flood warning plan will be required to ensure that people are able to evacuate, and the channel is closed off to public prior to significant precipitation events.

This may be done in coordination with park management, and the Wash can be closed to the public on days where high levels of precipitation are expected. Park cleaning and operations will ensure that there is no debris blocking the waterways following an event where water flows through the channel.

Phasing Recommendations - Mobility Lens

A phased approach to the Verdugo Wash will be able to create segments that contribute to Glendale's active transportation network even at early stages of the project.

At each phase, improvements to the public realm and connections to existing transportation systems will ensure that the project is integrated with its surroundings and is welcoming for users throughout project implementation.

Pilot Stage – Phase 0

BuroHappold recommends making use of a *"Phase 0"*, or pilot stage of the project before major design changes are implemented, which identifies the minimum intervention for cyclists and visitors to be able to use the Wash. A pilot project helps to create demand for the project and encourages early adoption to make visitors comfortable with entering and using the Wash for recreational purposes. Users who may be interested in the Wash include local residents and cycling enthusiasts, who will be able to generate feedback about the experience of interacting with the Wash and their mobility patterns.

Having users enter the Verdugo Wash also helps to include it in online platforms like Google Maps, Waze and Strava. This also creates the opportunity for placemaking and programming within the Wash, such as bike repair stalls, popups, and other retail activation facilities.

Potential interventions for a pilot project to open the Wash may include the following:

- *Existing access points are opened & made accessible;*
- *Safety measures in place to avoid sliding/falls resurfacing along some areas;*
- *Ensuring that grade is ADA compliant along Wash and existing access points;*
- *Wayfinding and temporary interventions;*
- *Safety measures at adjacent intersections near existing access points;*
- *Parking locations are communicated to visitors;*

Phase 1

In this early phase of the Wash, connecting the park to the LA River bike paths will facilitate circulation and mobility from a wider catchment area, and is expected to encourage access from Glendale residents and visitors alike. This phase is expected to see the highest visitation, as it will connect to N Brand Blvd, which provides easy access to Downtown Glendale. This phase is also well connected to the Metro Bus and Beeline system, which will make it easier to access from other parts of Glendale.

Phase 2

By connecting to several schools as well as Glendale Community College, phase 2 will begin to demonstrate the commuting potential of the Wash. Further, the existing access point near the college will be easier to incorporate into the design than a new access point. This entrance will also be able to service visitors from Rossmoyne who want to use the Wash to reach Downtown Glendale and the LA River bike path.

Phase 3

This phase will include connections to the Verdugo Woodlands neighborhood, which is suburban but dense. This portion of the Wash can be integrated with Glendale's Safe Routes to School program, as it will provide alternative routes to schools that are protected from vehicular traffic. This phase of opening will also include public realm improvements at key intersections to ensure ease of access and safety for commuters and families with young children.

Phase 4

There is potential to integrate access points to the Wash with public realm improvements and sidewalk provisions within this study area. Access to the Whiting Woods trailhead and passage through the rolling green spaces through the Oakmont Country Club will be an attractor for cycling enthusiasts and trail visitors alike. Access points at this segment of the Wash will also support visitors to Montrose Shopping Park.

Phase 5

The final portion of the Wash is a longer-term priority and will be pursued based on design feedback from residents. This segment of the Wash provides opportunities to visit the Verdugo Mountains trails and connect to the Crescenta Valley Park.

opposite page, Figure 1-16: ***A potential phasing scenario*** *©!MELK*

WASH ACCESS: SCENARIO C
EXISTING ACCESS POINT
PHASE 0 - POTENTIAL ACCESS POINT
PHASE 1 - POTENTIAL ACCESS POINT
PHASE 2 - POTENTIAL ACCESS POINT
PHASE 3 - POTENTIAL ACCESS POINT
PHASE 4 - POTENTIAL ACCESS POINT
PHASE 5 - POTENTIAL ACCESS POINT
CONTEXT
GLENDALE BOUNDARY
NEIGHBORHOOD BOUNDARY
EXISTING BICYCLE NETWORK
CLASS 1: OFF-STREET BIKE PATH/MULTI-USE PATH
CLASS 2: ON-STREET BIKE LANE
CLASS 3: ON-STREET BIKE ROUTE (SHARROWS)
PROPOSED BICYCLE NETWORK
CLASS 1: OFF-STREET BIKE PATH/MULTI-USE PATH
CLASS 2: ON-STREET BIKE LANE
CLASS 3: ON-STREET BIKE ROUTE
CLASS 4: PROTECTED BIKEWAY
NEIGHBORHOOD CHARACTER
HISTORIC SITE / DISTRICT
DESTINATION POINTS
SCHOOLS / COMMUNITY INSTITUTIONS
MEDIA / ENTERTAINMENT
TRAILS
PARKS
OPEN SPACE
SAN GABRIEL MOUNTAINS
CRESCENTA HIGHLANDS
VERDUGO WASH
Honolulu Ave
Pennsylvania Ave
Foothill Blvd
MONTROSE
Montrose Ave
La Crescenta Ave
WHITING WOODS
PHASE C-5
1.91 miles
SPARR HEIGHTS
N Verdugo Rd
OAKMONT
VERDUGO MOUNTAINS
PHASE C-4
1.26 miles
Cañada Blvd
VERDUGO WOODLANDS
GREENBRIAR
VERDUGO VIEJO
PHASE C-3
2.07 miles
ROSSMOYNE
Glenoaks Blvd
COLLEGE HILLS
PELANCONI
FREMONT PARK
Ventura Freeway
WOODBURY
E Chevy Chase Dr
DOWNTOWN
N Brand Blvd
E Wilson Ave
E Broadway St
S Verdugo Rd
S Chevy Chase
Concord St
N Pacific Ave
San Fernando
PHASE C-1
1.37 miles
PHASE C-2
1.37 miles

appendix C.

interconnected ecologies

appendix C
interconnected ecologies

Unique precipitation patterns and the rich topography surrounding Glendale bore - through natural processes - the original Verdugo Wash (Creek), which was the credible water source that attracted the Tongva to the Wiqanga village just north of 210 on the Verdugo Creek. The Verdugo Wash is a central feature of how Glendale was eventually founded specifically here.

While the Wash's channelization facilitated Glendale's growth as a young American city, there were consequences on the local and regional ecologies. While this trade-off is not unique to Glendale, today's habitat areas are fragmented, often degraded, and subject to climate change - leading the scientific community to conclude that many local flora and fauna populations are at serious risk.

Ecological enhancement along the Verdugo Wash is a bona fide opportunity to position Glendale as a regional leader and support the vegetative and wildlife populations that collectively contribute to the City's identity.

Site Context

While the Verdugo Wash is located within an urban environment, the wider landscape includes a variety of natural and semi-natural habitats, including the three distinct hillside/mountain ranges within the city boundary: the Verdugo Mountains, San Rafael Hills, and San Gabriel Mountains - in addition to the numerous open spaces and parks within the city!

Important to note is the precious nature of the Verdugo Mountains, which are designated by the Los Angeles County as a Significant Ecological Area (SEA) as they are considered to support irreplaceable biological resources. The ¼ mile buffer applied to the Verdugo Wash Visioning project overlaps with the SEA at the northern extent of the Wash, as illustrated in Figure 2-6.

The City of Glendale champions habitat restoration through its "Tree Reforestation" programs, which aims to increase tree canopy coverage. As of 2009, Glendale fosters 48,760 street trees with a variety of 246 species, providing multiple

Figure 2-6 The Verdugo Mountain SEA. *©BuroHappold*

benefits to both people and wildlife. Furthermore, under the City's Municipal Code, the following habitat characteristics are also protected: Oak, Bay, and Sycamore trees; blue line streams (riparian habitats), and ridgelines. Glendale's Hillside Development Standards for new subdivisions also call for protection of natural hillsides, stream channels, habitat, and vegetation areas.

The landscape within Glendale includes several distinct vegetation and habitat types. Data relating to these different vegetation systems was obtained from the US Forest Service Region 5 using the Classification and Assessment with Landsat of Visible Ecological Groupings (CALVEG) classification system which aims to classify existing vegetation, rather than indicating 'potential vegetation' as with other natural vegetation classification systems used in the US. CALVEG maps "dominance types," indicating the main habitat type within an assigned area. (Other vegetation types may be present as an understory or mosaic component, but the system does not capture that level of detail.)

The City of Glendale CALVEG data is illustrated in Figure 2-7. While CALVEG includes 'urban' as a classification type, this has been removed from the figure to better illustrate the semi-natural habitats within the City of Glendale and those in proximity to the Verdugo Wash. Broad vegetation types have been grouped into similar colors to illustrate their distribution across the city. Scrub and shrub habitat (also known as chaparral) is the most prevalent, associated with the Verdugo Mountains and San Rafael Hills. Some of these vegetation types include those associated with trees, including oak and mahogany species which are growing at smaller heights due to environmental stresses. The scrub/shrub typology is interspersed with defined forest areas of taller, more mature trees which typically have a dominant species type such as oak, sycamore, eucalyptus, and big-cone Douglas fir. In the northern extent of the Verdugo Wash, these habitats almost directly border the Wash at the edge of the SEA.

Small, isolated pockets of annual meadow grassland typically occur around the foot of the mountains and hills; however, a small area is identified where the basin within the Verdugo Wash is located, indicating potential greater biodiversity value of the Wash in this area. The golf course which straddles either side of the Verdugo Wash at the basin is indicated to be an area of non-native/ornamental planting, alongside several other open spaces and parks within the City of Glendale. This can be typical of urban open green and recreational spaces which have been designed for amenity interest, rather than habitat value It may be the case that some non-native ornamental planting types support local native biodiversity species, such as invertebrates and birds,

Figure 2-7 ***City of Glendale CALVEG habitat typologies.*** *©BuroHappold*

that feed on pollen and nectar . Habitat value can be easily re-incorporated into these areas to promote connectivity. This is explored further in the Biology Opportunities section.

Habitats

Within the Verdugo Wash itself, much of its length is dominated by concrete with limited habitat value due to the largely hard engineered treatment of the channel for flood protection. Generally low water flow within the channel provides few opportunities for riparian habitat to establish and the hard concrete treatment of the channel prevents colonizing species from being able to establish which would aid successional plant growth. It was noted that the area in the channel that remains wet supports, at most, algal growth as illustrated in Figure 2-8, but no notable emergent or wetland plant species were noted within the water channel.

Figure 2-8 ***The Verdugo Wash, illustrating algal growth in the water channel.***

However, from a review of site photos from the walkover of the Verdugo Wash, it is apparent that there are pockets of habitat that exist sporadically along the length of the Wash. These are incidental in nature and have occurred either through natural colonization of small areas, the Verdugo Wash basin and where vegetation from neighboring property encroaches into the Wash. Additionally, built features of the Wash, such as bridges can provide artificial roosting and nesting habitats for urban adapted species such as some birds.

The most significant area of semi-natural vegetation occurs within and bordering the Verdugo Wash Debris Basin Dam. The more natural substrate in this area, potentially gathered through the settling of debris out of the Wash flow, provides a relatively large area of open habitat which appears to support natural grassland species. The boundaries to the Verdugo Wash Debris Basin Dam, further support scrub and shrub habitats (Figure 2-9) as well as sparse ephemeral type habitats in rockier substrates (Figure 2-10). Together these mosaics of habitat types may support an abundance of local flora and fauna including invertebrates, reptiles, birds, and mammals.

Detailed surveys of the Verdugo Wash Debris Basin Dam could be undertaken by a wildlife specialist to identify the habitat types and extents that exist within the basin and the species that these habitats support. This information can then be used to support the design of habitat enhancements and restoration within this area while also seeking to support community interest, open space, and providing a community nature resource.

Figure 2-9 ***The approach to the Verdugo Wash basin, illustrating the scrub habitat on the boundaries either side and wider grassland within the basin itself***

Figure 2-10 ***Rockier habitat within the Verdugo Wash basin, supporting a variety of plant species***

Species

Except for the Verdugo Wash basin area, it is considered that the Wash itself currently has limited ecological value for wildlife species to utilize the Wash as habitat for connectivity, foraging or sheltering/ nesting due to its largely open and unvegetated nature. The tall, hard edges in certain parts of the Wash, as illustrated in Figure 2-8, also likely create barriers for numerous species to access the Wash, further limiting its existing value for wildlife.

The Verdugo Wash basin has the greatest potential within the study area to support wildlife species. Scrub and trees around the periphery of the basin may support nesting bird species and provide connectivity for small mammals, birds, and invertebrates. The wider basin, with a combination of

Table 2-1 ***Example list of species recorded in areas of ecological interest connected to the Verdugo Wash***

SPECIES - *BIRD*

	VERDUGO MOUNTAINS	SAN RAFAEL MOUNTAINS	GRIFFITH PARK
California scrub-jay	✓		✓
Common raven	✓		✓
California quail	✓		✓
California towhee	✓		✓
Lesser goldfinch	✓		✓
Spotted towhee	✓		✓
Yellow-rumped warbler	✓		✓
House finch	✓		✓
Acorn woodpecker	✓		✓
California thrasher	✓		✓
Ash-throated flycatcher	✓		
Western bluebird	✓		✓
Nuttall's woodpecker	✓		✓
Dark-eyed junco	✓		
Lazuli bunting	✓		✓
Northern mockingbird	✓		✓
White-crowned sparrow	✓		✓
Black phoebe	✓		✓
Anna's hummingbird	✓		✓
Phainopepla	✓		✓
Rufous-crowned sparrow	✓		✓
Wrentit	✓	✓	✓
Oak titmouse	✓		✓
Allen's hummingbird	✓		✓
Bushtit	✓		✓
Bewick's wren	✓		✓
Hooded oriole	✓		✓
Song sparrow	✓		✓
Pacific-slope flycatcher	✓		
Black-headed grosbeack	✓		✓
Cassin's kingbird	✓		✓
Blue-grey gnatcatcher	✓		✓
Hermit thrush	✓		✓
Say's phoebe	✓		
Northern flicker	✓		
Wilson's warbler	✓		
American robin	✓		✓
Lawrence's goldfinch	✓		
House wren	✓		✓
Western kingbird	✓		
Botta's pocket gopher	✓		
Western tanager	✓		✓
Yellow-breasted chat	✓		
Lark sparrow	✓		✓
Scaly-breasted munia			✓
Brewer's blackbird			✓
Golden-crowned sparrow			✓
Bullock's oriole			✓
Brown-headed cowbird			✓
Fox sparrow			✓
Cedar waxwing			✓

SPECIES - *REPTILE / AMPHIBIAN*

	VERDUGO MOUNTAINS	SAN RAFAEL MOUNTAINS	GRIFFITH PARK
Western fence lizard	✓		✓
Common side-blotched lizard	✓		✓
Gopher snake	✓		✓
Western rattlesnake	✓	✓	✓
Western whiptail	✓		✓
Striped racer	✓		✓
Western toad	✓		✓
Black-bellied slender salamander	✓		✓
California whipsnake			✓
California kingsnake			✓
Ringneck snake			✓
Southern alligator lizard			✓
Western skink			✓

SPECIES - *BUTTERFLY*

	VERDUGO MOUNTAINS	SAN RAFAEL MOUNTAINS	GRIFFITH PARK
White-lined sphinx	✓		✓
Painted lady	✓		✓
Monarch	✓		✓
Cabbage white	✓		
Western tiger swallowtail	✓		✓
Gray buckeye	✓		
Sara orangetip	✓		✓
Gray hairstreak	✓		
Behr's metalmark	✓		
Mourning cloak	✓		✓
Umber skipper	✓		
Marine blue	✓		✓
California sister	✓		✓
Fiery skipper	✓		✓
West coast lady	✓		✓
Northern white-skipper	✓		
Acmon blue	✓		
Pale swallowtail	✓		✓
Bramble hairstreak			✓
Gulf fritillary			✓
Checkered white			✓
Western pygmy blue			✓

SPECIES - *MAMMAL*

	VERDUGO MOUNTAINS	SAN RAFAEL MOUNTAINS	GRIFFITH PARK
Mule deer	✓	✓	✓
Coyote	✓	✓	✓
Bobcat	✓		✓
California ground squirrel	✓		✓
Desert cottontail	✓		✓
Fox squirrel	✓		✓
Grey fox	✓		✓
Striped skunk	✓		✓
Mountain lion	✓	✓	✓

bare substrate, scrubby species and emergent vegetation may provide an important nectar and sheltering resource for invertebrate species which, in turn can support bird and mammal populations as a food source.

Any proposed interventions within the basin should be supported by further investigation of the current ecological properties of the area to identify if there are future management opportunities to support wildlife populations that already exist within the basin, or if there are opportunities to encourage further species into the area.

Table 2-1 provides a snapshot of species that have been recorded within the surrounding areas of ecological interest such as the Verdugo Mountains, San Rafael Hills, and Griffith Park. Due to the location of the Verdugo Wash between these three areas, it provides an opportunity to connect the areas together to support species movement and population mixing where they may otherwise be isolated from each other.

The data presented in the table is not an exhaustive list and is comprised from publicly available records submitted to iNaturalist for the Verdugo Mountains and Griffith Park areas. The San Rafael Hills are not included as a listed site on iNaturalist, and a general search for wildlife species records for this area provided few results. Therefore, the lack of species listed against the San Rafael Hills is more a reflection on less available data, rather than a true lack of species supported by the habitats.

Species recorded between the Verdugo Mountains and Griffith Park areas are similar due to the similarities in habitats that exist in both areas, consisting of chaparral and woodland habitat types.

Whilst some species are mobile and known to move between the areas, or considered likely to do so, such as ravens, coyotes and even mountain lions, smaller bird species, reptiles and butterflies will require more continuous habitat than the current urban development between the areas provided. Targeted species or habitat planting types through the Wash could help increase the permeability of the urban area of the City of Glendale to species identified within the Verdugo Mountains, San Rafael Hills, and Griffith Park.

Biodiversity Opportunities

Habitat Connectivity: Los Angeles incorporates a diverse and large expanse of natural mountainous and shrubland habitat intersected by the Los Angeles River. According to the California Coastal Conservancy, due to urbanization and channelization of the rivers, nearly 100% of original wetlands and approximately 90-95% of in-stream riparian habitat . This loss of natural habitat has led to fragmentation of the natural landscape, creating isolated patches of optimal habitat for the native wildlife. However, The City of Los Angeles has envisioned and established goals to revitalize the river and enhance its potential for the public and for biodiversity by using the river system to create habitat corridors and ecological enhancement (8).

The most significant opportunity that the Verdugo Wash Visioning represents for biodiversity is the potential to create a vegetated corridor that provides new habitat connectivity between the Verdugo Mountains, San Rafael Hills, Griffith Park, the San Gabriel Mountains, and the Los Angeles River. The Verdugo Mountains and Griffith Park are both classified as Significant Ecological Areas (SEAs) which are in proximity to the Verdugo Wash (Figure 2-14). Due to the highly urbanized environment of the City of Glendale, particularly towards the southern extent of the city, there is a physical barrier to dispersal for many species associated with the Verdugo Mountain and San Rafael Hills in the north of the city and the Los Angeles River and Griffith Park in the south. The Verdugo Wash crosses through the city in a continuous north-south length creating the potential to provide both upland and riparian connectivity, which is largely absent elsewhere in the region (x). This means that vegetating strategic parts of the channel could help join up these SEAs and support restoration of habitat links across the city (See Table 0-1 in the mitigation section for a full list of habitat connectivity and enhancement techniques).

Figure 2-14: ***Areas where improved habitat connectivity is desired*** *(source: LARRMP)*

The Los Angeles River Revitalization Master Plan (LARRMP) highlights habitats and linkages that could be established to improve habitat connectivity (Figure 2-15). The LARRMP incorporates two individual plans, The Upper Los Angeles River and Tributaries Revitalization Plan (ULART) and the Lower Los Angeles River Revitalization Plan (LLARRP). The ULART Plan proposes potential ecological connectors throughout the Verdugo Wash section.

Figure 2-15: ***Ecological Corridor Opportunities relevant to Verdugo Wash area*** *source: LARRMP*

The ecological corridor opportunities relevant to the Verdugo Wash area are:

- *The San Rafael Ecological Connection*
- *The Urban Trail Access*
- *The Confluence*

The San Rafael Ecological Connection: The San Rafael Ecological Connection is proposed to create a link between the Verdugo Mountains and the San Rafael Hills, east to west. To show a more in-depth pathway and description of this corridor the Verdugo – San Rafael Connection has been split into three mapped sections:

1. *The Oakmont Country Club to the Verdugo Mountains;*
2. *The Oakmont Country Club; &*
3. *The San Rafael Hills to The Oakmont Country Club*

Figure 2-16 shows the suggested routes for a habitat corridor linking the Oakmont Country Club section to the Verdugo Mountains SEA. The corridor appears to be a feasible option due to retained undeveloped areas (indicated by red arrows).

This proposed corridor runs through the Oakmont Country Club which has potential to increase biodiversity and form better habitat connectivity through changes to management of areas within the golf course (Figure 2-17). Management methods to promote biodiversity could include reducing vegetation gaps across the golf club by providing native tree and shrub species enabling a link to long roughs and limiting light spill on these nominated routes. This will help strengthen vegetated routes through the club grounds to serve as wildlife corridors. Reducing management intensity and frequency, in areas where feasible, will create a higher diversity and density of habitat cover, structure, and variety. Where there is opportunity to plant additional vegetation, native species would be recommended to promote a greater biodiversity. Other management practices to enhance biodiversity include avoiding, or reducing, the use toxic chemicals such as fertilizers, herbicides, and pesticides and as well as linking habitats within the golf course and

Figure 2-16: ***Zoomed in map of proposed Verdugo - San Rafael habitat connection, zoned in on potential habitat corridor routes linking the Oakmont Country Club with the Verdugo Mountains SEA*** *©BuroHappold*

ensuring wildlife corridors are established to adjacent semi-natural habitat outside the golf course to provide routes to and from the golf course area.

There are multiple resources available to aid identifying best practice for enhancing biodiversity on a golf course. Audubon International has developed a set of environmental management guidelines and have a certification scheme in place called The Audubon Cooperative Sanctuary Program (ACSP) for Golf which provides information and guidance on six key environmental components including site assessment/ environmental planning, wildlife & habitat management, chemical use reduction & safety, water conservation, water quality management, and outreach & education (11) scheme in place called The Audubon Cooperative Sanctuary Program (ACSP) (14) for Golf which provides information and guidance on six key environmental components including site assessment/ environmental planning, wildlife & habitat management, chemical use reduction & safety, water conservation, water quality management, and outreach & education (11).

"Golf Sustainable" is another resource available providing an online resource of information on sustainability and golfing. The website (15) contains articles on best practice as well as research and precedent biodiversity success stories from golf courses across Europe and North America. For example, a German golf club called St. Leon-Rot have built a biotope habitat for endangered reptiles, made from existing materials they had on site (16). The Memmingen Gut Westerhart golf course has dedicated time and effort to promote biodiversity on their golf course. Their efforts have made a significant difference with a study indicating over 60 species of bees found throughout the golf course, three of which are Red List species (17).

The Oakmont Country Club then has potential to connect to the San Rafael Hills. Figure 0-9 shows the proposed habitat corridor leading from the golf course to the San Rafael Hills. Further greening and vegetation planting will strengthen the routes purpose as a connection opportunity, particularly in the areas marked with a black square in Figure 2-19.

Figure 2-17: Zoomed in map of proposed Verdugo - San Rafael habitat connection, zoned in on potential habitat corridor routes linking The Oakmont Country Club with the San Rafael Hills *©BuroHappold*

These areas include a freeway crossing which typically conflicts with species movement due to the risk of collisions with traffic. While wildlife can cross using the existing underpass, to prevent wildlife from attempting to cross the freeway itself, fencing a section of the freeway on either side may be needed to channel wildlife towards the underpass.

An example of where wildlife fencing has been used to divert migrating wildlife over a highway rather than crossing it can be seen in Figure 2-20. The green circle in Figure 0-9 represents an additional area of connectivity that could be explored.

Figure 2-18: ***Example of biotope habitat creation for endangered lizards at The St. Leon-Rot golf course.*** *Image taken from Golf Sustainable website (Golf Sustainable 2022)*

Figure 2-19: Zoomed in map of proposed Verdugo - San Rafael habitat connection, zoned in on potential habitat corridor routes linking The Oakmont Country Club with the San Rafael Hills *©BuroHappold*

Figure 2-20: ***Example of use of fencing to channel migrating wildlife in Wyoming over bridge rather than crossing freeway.***
Photo credit: Joe Riis/National Geographic Creative

Figure 2-21: ***Liberty Canyon Wildlife Crossing Project in Los Angeles.***
image source: Resource Conservation District of the Santa Monica Mountains

The Urban Access Trail

The habitat corridor connecting the San Rafael Hills to the Verdugo Mountains through the Glendale Community College, Verdugo Park, and Bachman open space appears to be feasible in principle. However, there are several roads, and the Community College itself, which may cause limitations to the connectivity of this corridor and will need further consideration and potentially implementation of mitigation measures to avoid or reduce adverse impacts to wildlife. There is a need to consider how and where wildlife is likely to cross roads, especially major routes such as the Cañada Boulevard, North Verdugo Road, and the CA-2 freeway, and how to enable them to safely cross or bypass these features.

Currently there is a major project being carried out in the Los Angeles Region with the construction of the Liberty Canyon

Figure 2-22: ***Zoomed in map of proposed Urban Access Trail habitat connection linking the San Rafael hills with the Verdugo Mountains. The black squares represent areas that would need vegetation to support function as a habitat corridor*** *©BuroHappold*

Wildlife Crossing over the Ventura Freeway to provide a safe crossing for mountain lions and other wildlife (Figure 2-21).

Providing vegetation throughout the corridor and particularly in areas marked with a black square in Figure 2-22, as well as fencing sections of the freeway as proposed earlier, may increase wildlife and driver safety by leading them to a designated wildlife crossing. A designated wildlife route with improved habitats and vegetation structure may also be necessary to channel wildlife through Glendale Community College.

A vegetated, direct route through the City of Glendale with safe crossing points established is advised for this habitat corridor to provide its best opportunity for connecting wildlife to either side of the Wash.

The Confluence

The proposed ecological connection at the confluence may prove quite challenging for wildlife due to the heavily urbanized industrial area, two major roads, and the LA River itself. The wash is likely the best potential route for terrestrial species to travel to and from Griffith Park and the Verdugo Mountains or San Rafael Hills.

A separate project is currently proposing a pedestrian and equestrian bridge nearby and this can potentially be used to facilitate the crossing of wildlife. If this was to be used for pedestrians and wildlife, greening of the bridge on one side at least would be advised to enhance permeability and cover for crossing animals.

Floating islands, wildlife bridges or accessible ledges could benefit animals trying to cross the river and could help mitigate the chances of animal entrapment and/or drowning.

Figure 2-23: ***Zoomed in map of proposed Confluence habitat connection linking the Wash and LA River with Griffith Park SEA*** *©BuroHappold*

Due to hydrological limitations throughout the Wash as discussed in the hydrology section. the feasibility to vegetate the entirety of the Wash allowing for a continuous habitat corridor is restricted. Out of the three suggested ULART habitat corridors, the urban access trail will have the most potential due to the available freeboard of the Wash being greatest at this point, and so greater interventions within the channel can be accommodated here compared to the rest of the length of the Wash before compromising flood capacity.

The San Rafael Ecological Connection also provides potential as a habitat corridor due to incorporating the debris basin and opportunity for the golf course area through changing the trapezoidal sections of the channel to be rectangular, and thereby lowering the baseline water level. The confluence area is found to be close to capacity for the 1 in 100-year event, excluding a climate change allowance. As it is considered currently unfeasible to alter the cross section to increase the conveyance capacity, the opportunities for interventions within the channel are deemed very limited in this section. Therefore, the habitat corridor at the confluence is looking like a more challenging opportunity for connectivity.

Native Planting

Areas of the Wash where there is opportunity to plant vegetation should seek to incorporate maximum native species to support ecological restoration and connectivity. This can include a variety of planting types and species to provide a variety of habitats throughout the Wash for both people and wildlife to enjoy. A diverse mix of native grass and wildflower species planting should be incorporated to maximize the benefit across the invertebrate community. Additionally, a wider diversity of species will likely provide a longer flowering time, providing a food resource for more months than a limited species diversity could provide.

In addition to targeting native wildflower planting to provide a pollinator food resource along the Wash, native tree and shrub species should also be promoted, particularly those typical of the native chaparral scrub and oak woodland habitat types that are found in the surrounding area. Including these will provide a variety in habitat structure alongside the wildflower planting and build on the inherent benefits of providing species of local wildlife interest on the site. Where there are species of particular interest for Glendale and LA County, plants that can support these species could be incorporated into the Wash where possible to support this local biodiversity. For example, provision of native milkweed for the monarch butterfly or coastal sage scrub would benefit the California gnatcatcher.

A species list (21) was created by LA County based on factors such as whether the plants were native or appropriate to the LA River system, grow-able in nursery conditions, have success probability, will provide potential for wildlife habitat, require minimal maintenance and water, have aesthetic appeal, and propagules of the plants are available within the LA River watershed. The use of these plants was aimed to provide continuity along the LA River landscape. Some of the species communities shortlisted include coastal sage scrub, dry meadow, desert scrub, and climate-adapted trees, which may be appropriate for the Verdugo Wash Encouraging establishment of a pool, or pools, of water, even if only temporary, at the basin could be a good opportunity to create some water-associated habitat that has been lost from the Wash. It could allow for the potential restoration of a riparian-type habitat benefiting native plants and wildlife and increasing the potential to entice species that are no longer present along the Wash such as amphibious species.

Species Opportunities

Where areas of opportunity along the Wash present themselves for greening and habitat enhancement, the addition of vegetation, or features that provide support for specific species, can help entice them to the Wash and its surrounding area. This would be ideal for species of interest or concern in California.

Monarch Butterflies: during their annual migration, Monarch butterflies winter along the Californian coast (Figure 2-14) utilizing the LA River during their migration. They are an important pollinator species with a wealth of cross-cultural significance. Due to population declines and increasing threats to their survival such as habitat loss, use of pesticides, and climate change affecting habitat suitability in their overwintering grounds, the Monarch Action, Recovery, and Conservation of Habitat (MONARCH) Act 2020 was introduced which led to the establishment of the Western Monarch Butterfly Rescue Fund. Planting native milkweed along areas of the Wash will support their survival. It will provide breeding resources for monarch larva and the nectar plants which feed the adults. Protecting existing monarch habitat and avoiding herbicides and pesticides is also advised to influence this species presence along the Verdugo Wash and help expand their distribution and habitat opportunities.

Figure 2-24: ***Map of Monarch Migration Patterns.*** *image source: unknown*

Mountain Lions
Los Angeles is proudly one of two mega-cities in the world that homes a large cat population (22). Currently there is a quasi-stable population of breeding mountain lions inhabiting the Santa Monica Mountains and few individuals in the Verdugo Mountains.

However, concerns are rising for the long-term survival of this species in the County due to habitat fragmentation and encroaching urbanization. Threats facing this mountain lion population include weak genetic diversity, road collision fatalities, rodenticide poisoning, and intra-specific strife.

Los Angeles stakeholders are planning and implementing measures to increase mountain lion recovery such as the construction of a wildlife crossing over the 101 freeway in the Agoura Hills, targeted for completion in 2023.

The Verdugo Wash has the potential to deliver a suitable route for mountain lions to use as a corridor between the San Rafael Hills, the Verdugo Mountains and Griffith Park *(as shown in the previous habitat connectivity section)* - especially if the Wash is closed at night to the public with controlled, wildlife-friendly lighting where external lighting is required. Viable access points for the cats to enter/exit the Wash and suitable vegetation cover along the routes are two important features that would increase the likelihood that these corridors would be used by them.

Importantly, consideration must be given to the safety perceptions of encouraging mountain lion access along and across the Wash, given the route's proximity to residents' gardens. Interestingly, Arroyos and Foothills Conservancy (AFC) tracks mountain lions in the area and has documented their significant movements in the area already - *albeit not always successful* - including between the San Gabriel Mountains and Verdugo Mountains.

By providing designated routes within and across the Verdugo Wash that caters to mountain lions, conflict should be reduced as mountain lions have been well documented in their human avoidance behavior.

Mountain Lions reside in the natural areas surrounding and near the Verdugo Wash including this female in the Verdugo Mountains.
image source: J. Turner via LAist

California Gnatcatcher & Coastal Sage Scrub Habitat
California gnatcatchers are an important "umbrella" species for the threatened Coastal Sage Scrub habitat. This means that efforts to support the gnatcatcher necessarily integrate the sage scrub chaparral habitat, and along with that a whole host of plants and animals from that habitat.

While the California gnatcatcher is not likely present along the Verdugo Wash, there is potential for the species to expand their range due to them being in proximity of the Wash with bird conservation areas providing their preferred chaparral habitat close by (Figure 2-25) (23). Incorporating semi-open sage scrub species may attract the California gnatcatcher to areas along the Wash.

Figure 2-25: ***Map displaying California Gnatcatcher's current range, optimal habitat, and bird conservation regions in relation the Verdugo Wash.*** *image source (24)*

California Gnatcacher (Polioptila californica). *image source California Audubon*

Coastal sage scrub can exist just above the coastal bluffs as pictured above. Plants include: California Sage Brush, Black Sage, some Poison Oak, Coast Live oaks and some Monkey flowers. *image source Las Pilitas Nursery*

Coastal sage scrub can be amazing in its texture and color. Plants include: California Sage Brush, Black Sage, some Poison Oak, Coast Live Oaks and Monkey Flowers. *image source Las Pilitas Nursery*

Amphibians & Aqueous Habitats

Frogs and toads have previously inhabited tributaries of the LA River and nearby neighborhoods were allegedly named Frogtown due to the vast number of frogs that used to emerge from the river's banks.

The potential to create suitable habitat for frogs or any amphibian species is unlikely due the Wash being mostly dry with little to no water present. However, if the debris basin was managed in a way that could provide a permanent or seasonal pond, frog and toad species may colonize. If pool/pools were established at the debris basin and there were features at these pools such as shelter, shade, and food, then it may have potential to become a habitat for amphibians and other species.

Threatened frog species such as the foothill yellow-legged frogs are unlikely to occur at pools along the Wash as they are sensitive to anthropogenic activities and development and require rocky streams that flow year-round. California red-legged frogs (A) breed in ponds (both permanent and seasonal) and have been found to breed in artificial impoundments such as stock ponds.

Arroyo toads (B) also breed in seasonal shallow ponds and have been documented at other LA River basins such as Upper Big Tujunga Creek, Alder Creek, and Arroyo Seco. Other native amphibian species whose distributions show potential of inhabiting the Wash's basin include the California Toad (*Anaxyrus borea halophilus)* (C), Baja California Tree Frog (*Pseudacris hypochondriaca)* (D), California Tree Frog (*Pseadacris cadaverina)*, Western Spadefoot (*Spea hammondii*), Monterey Ensatina (*Ensatina eschscholtzii*) (E), Arboreal Salamander (*Aneides lugubris*) (F), and Black-Bellied Slender Salamander (*Batrachoseps nigriventris*) (Figure 0-15) (26).

However even if the Wash's debris basin is transformed into a permanent or temporary pool, amphibian species are still less likely than avian species (e.g. birds and many invertebrates) to occur due to limited habitat connectivity outside of the Wash; therefore further conservation management strategies would need to be considered to create connectivity for amphibians.

Some of the amphibian candidates for Verdugo Wash debris basin restoration efforts (see letter call outs in text for identification). *image sources: wikipedia*

Figure 2-26: ***Maps of amphibian species' distributions in relation to the Verdugo Wash (approximate location of Verdugo Wash represented by black circle.***
Map sources: adapted from California ERPs website ©Gary Nafis

Habitat Features

Formal Features: throughout the Wash and in adjacent spaces like the debris basin and golf course, there are opportunities to provide new habitat features to further support local biodiversity and increase connectivity success. Commonly, these are formal, built features that provide roosting, nesting, and sheltering spaces for bats, birds, and invertebrates. Such features can be mounted on large specimen trees within or in proximity to the Wash, or even on free-standing posts amongst appropriate native planting.

Examples of habitat features which could be incorporated into the Wash's design are provided in Table 0-1. A fantastic way to involve the community and also reduce costs would be to organize community projects for people, schools, and organizations to build and erect these features. While providing real, evidence-based ecological value, these features only support species that are able to adapt to a "found" space, provided they find its characteristics like location, materiality, and dimensions suitable.

Informal Features: There are many other species, however, including a plethora of fungi, invertebrates, and primary cavity nesting bird species that are unable to utilize "found" spaces. Many of these creature are involved in the decomposition processes vital to functioning ecologies, or are compelled to build their homes, like woodpeckers.

Two great examples of "informal" features for these species would be allowing dead, coarse woody debris and even erect, dead trees ("snags") to *just be* in wide open areas like the Debris Basin potentially, provided their location is considered with respect to public safety and wildfire risk. Similarly, deadwood stumps can be accelerated into invertebrate habitat by drilling holes into deadwood stumps. Many native bees create their nests in unvegetated soil; key locations to allow for this type of natural diversity should be considered in future phases.

A beautiful story that featured an informal approach to habitat feature integration was the artful reuse of a legacy hardwood tree at UC-Davis in the Native American Contemplative Garden. In 2021, a hefty 80-yo California Buckeye (Aesculus californica) succumbed to old age and broke apart. Instead of removing the tree, the Garden team elected to leave the trunk in place as "stumpery." The unique, gnarled tree had inspired the original siting of the garden. By leaving it in place, not only does this dead tree now serve as captivating public art, but it enriches the garden's ecology serving as shelter/ nesting sites for birds and small mammals and substrate for decomposing invertebrates. *image source: UC Davis Arboretum and Public Garden*

INVERTEBRATES	***Bee Bricks & Towers*** ***Freestanding bee tower and bee bricks/wood for solitary bees. Install near pollinator friendly planting. Should be positioned in a warm sunny spot, south facing, with no vegetation in front of the holes. Bee towers designed to be set into a concrete base approx 30mm into the ground. Can be purchased or constructed.***
	Invertebrate/Pollinator Walls or Individual Hotels/Features ***Can be custom designed bought or built to fit available space and local requirements using local materials including recycled/reused wood and rubble substrate.***
MAMMALS	***Mounted Bat Boxes*** ***Designed to accommodate crevice dwelling bats which can be associated with urban environments, such as the Eastern Pipistrelle, Little Brown Bat, and Big Brown Bat. Can be attached to the external walls of buildings or larger trees. Should be sited at least 3m high, away from direct artificial light and facing south/ southwest.***
	Integrated Bat Boxes ***Bat tubes, integrated bat boxes or bat bricks can be incorporated into building elevations. The tubes and integrated bat boxes can often be placed behind cladding, with only a gap for the entrance visible. Other integrated boxes come with a customizable front for adding development-specific bricks or render for seamless inclusion into the building.***
BIRDS	***Generalist Bird Boxes*** ***A variety of bird boxes can be provided across the project site, which can add to the visual amenity of open spaces as well as providing a valuable nesting site for urban bird species and educational opportunities. Boxes should include a range of open-fronted to smaller enclosed entrances to suit a variety of bird species and nesting preferences. Boxes can be placed on buildings, trees, or posts amongst vegetation. Boxes can be designed with dimensions to match target species via resource Nestwatch***

Table 0-1: ***habitat feature examples that can be integrated throughout the project site to enhance biodiversity for invertebrate, mammal, and bird species***

Climate Change & Hydrological Conditions

The main constraint for biological enhancement and increasing habitat connectivity along the Wash would be the consideration of the existing design allowance for one in one-hundred-year flood events as well as future climate change impacts that will affect extreme rainfall events, increasing perceived flood capacity requirements by 20%. Due to the capacity of water that the Wash needs to currently accommodate and the prediction of increased water volume during storm events, the feasibility of greening the Wash and establishing the proposed habitat corridors is reduced considerably.

The extent to which habitats can be created within the channel itself will largely be dictated by how much channel occurs above the one-hundred-year flood level plus 20% climate change. Interventions within the Wash to accommodate planting will reduce the available capacity due to the requirement for planters to hold enough soil to support the plants in the long-term.

As identified in the hydrology study, there are currently only a few areas within the Wash that can accommodate any intervention without compromising the flood capacity, and these areas represent the parts of the Wash that can reasonably be considered for biodiversity enhancements. In this instance, where possible, proposed vegetation should seek to join up with areas of existing greenspace and habitat identified within the City of Glendale that border the Wash, to create stepping-stones across the city where a continuous link is not feasible.

Other climate change constraints that need to be considered are predicted rainfall and temperature. Projected results show average rainfall will remain constant but will suffer more prolonged drought and more severe precipitation events. Temperatures will likely rise meaning vegetation will be vulnerable to thermal stress and drought conditions. Therefore, restricting suitable planting species to those that are likely to persist in drought conditions will help avoid the need for irrigation beyond establishment. Where planting can be incorporated within the Wash, consideration will need to be given to the type of habitats that the environment of the Wash can reasonably support.

While targeting the restoration of riparian and wet woodland habitats would support the recovery of a diminishing ecosystem within California, consideration of the water demand of these habitats will need to be given alongside the predicted flows and water levels for the Wash. If for most of the year, flows will be low and water availability for planting within the Wash scarce, it will not be reasonably feasible to support a riparian ecosystem without significant irrigation intervention which would be unsustainable.

Plants that have a higher resilience to drought may need to be incorporated to reduce the rate of planting failure in the future. Utilizing native and adapted species such as arid specialists that can cope with environmental stresses such as extremes of heat and limited water will help create biodiversity improvements along the Wash that are resilient and can adapt to the predicted effects of climate change in Los Angeles County.

Existing Knowledge

Existing detailed ecological survey information for the Verdugo Wash is currently limited in extent. The identified habitats presented in Figure 0-7 are broad habitat categories assigned based on remote habitat classification techniques with some field survey. Whether any of the habitats in proximity to the Verdugo Wash have been ground-truthed is currently unknown.

The habitat types and faunal species supported by the semi-natural vegetation identified within the Verdugo Wash basin is also currently unknown. Further investigation into any existing biodiversity data on this area will be required to better understand the existing value of the basin for biodiversity and how interventions as a part of the project can aim to support and enhance the area while also providing a key community resource. Where data does not exist, surveys by a wildlife specialist should be sought to support the project.

Current Conditions of the Wash

The existing construction of the channel limits how vegetation can be established. It is likely that in areas where habitat enhancement can be implemented, built planting beds would be required to support a suitable soil substrate to support plant-life in an otherwise barren environment.

These containers would require maintenance and higher levels of irrigation than plants that are in natural ground due to the limitation of root growth and increased rates of desiccation experienced within planting containers.
The walls of the Wash may cause animal entrapment and providing escape routes in the form of vegetation, steps, ladders, holes, and bridges would need to be considered. Should measures be explored to increase the flood capacity of the Wash by extending wall heights, this could reduce the suitability of the Wash as a habitat corridor for wildlife.

Additionally, a review of satellite imagery on Google Earth™ of the Verdugo Wash basin indicates that the basin is actively managed, with imagery across several years appearing to show that the ground gets cleared of vegetation at least every other year, if not annually. It would be useful to obtain information as to why the area is cleared, whether it is for channel or habitat maintenance purposes, and by what mechanism. Scope for adjusting the management regime to promote biodiversity can then be explored.

Human Disturbance

Disturbance to wildlife caused by the presence of humans in the Wash is another constraint to consider. The proposed opening of the Wash is being designed with the consideration to accommodate people as well as creating habitat for native wildlife. However this does present conflict as wildlife may be deterred by human activity in or nearby the Wash. Wildlife may also be hesitant to use the Wash if routes are overly or poorly lit.

Methods can be put in place to mitigate the effects of human activity and lighting on wildlife by closing the Wash

at night allowing nocturnal species a less disturbed corridor to pursue or restricting specific trails and/or access points to humans so that only wildlife can use them. Additionally, the use of wildlife friendly lighting, following the International Dark Skies Principles of Responsible Outdoor Lighting and keeping access and exit routes unlit for wildlife will increase permeability for species.

Additionally, allowing the Wash to be used as a habitat corridor for wildlife may present human-wildlife conflict constraints. A percentage of the public may not agree with having wildlife routes so close to their homes, arguing that their safety is at risk from species such as the mountain lion and coyotes that may use the Wash as a route to connecting habitats.

The table below shows multiple mitigation strategies that could be implemented to improve the Wash for wildlife and to provide increased permeability and success of the Wash to function as a habitat corridor

STRATEGY	DESCRIPTION
Ensure human access points of Wash are usable for wildlife	Increase wash wildlife connectivity and permeability by providing maximum possible wildlife access points & utilizing wildlife enhancing strategies
Continuous vegetation and habitat provided at access points and leading to them	Helps direct wildlife to access/exit points
Provide alternative routes so animals can bypass entering the Wash	Examples of this include creating wildlife bridges, gantries, or underpasses. Alternatively, green already existing bridges
Provide escape routes specifically designed for wildlife	Steps, ladders, ramps, ledges, floating islands, gaps in walls or fences etc. can be used to provide safe passage of species and mitigate the risk of animal entrapment
Use of wildlife friendly fencing	If fencing is to be used, wildlife friendly fencing ensures mobile or migrating species can pass through without harm or stress
Provision of water	Direct and/or collect water to create of small pools (e.g., spring/seep management). Even temporary collections of water are valuable for wildlife.
Close Wash off to public at night	Less disturbance at night may help permeability for nocturnal wildlife
Artificial lighting at key access points should be limited or designed to be wildlife sensitive	To ensure that nocturnal species such as bats have dark vegetation features to fly along. The International Dark Skies Association's Five Principles for Responsible Outdoor Lighting constitute a robust benchmark
Connect tree canopies	Will help provide continuity of vegetated cover - must balance this strategy with wildfire mitigation measures
Greening the Wash with native vegetation	Terraced planters, gabions for vertical planting on Wash walls, hanging and overhanging planters etc., native species, drought-tolerant species, these would need to be installed above the 1:100 water level in the DFE unless velocity mitigation measures were employed. Avoid use of non-native invasive species
Install habitat features for wildlife	Will provide shelter and other resources for wildlife. E.G. Bird boxes, bat boxes, insect hotels, cavities in walls, deadwood stumps. Habitat features would have to be placed above the 1:100 water level in the DFE.
Species-specific plant choices	Choosing plant species that have a particular benefit to specific protected, threatened, or important faunal species on a regional, national, or local or identified benefit to pollinators.

Summary Of Area Legislation & Policy/Schemes

The County of Los Angeles, the City of Glendale, and other regional jurisdictions have numerous existing plans and strategies that wholly or partly relate to the natural environment and conserving or enhancing it. The Verdugo Wash project should ensure that it aligns with the aims of these plans and utilize information relating to habitats and species considered to be of value or conservation need to ensure that the Verdugo Wash contributes to the preservation of these resources.

Greener Glendale Plan (2011)
The Plan assesses what actions the City and community have already taken to be more sustainable and recommends how to build on these efforts. Nine Sustainability Focus Areas are developed, the most relevant ones for Verdugo Wash are listed below:

URBAN NATURE
UN3 – Implement programs to increase biodiversity in Glendale: Verdugo Wash Visioning can contribute to increasing biodiversity in Glendale. The channel's inherent linear nature could provide an opportunity for additional connectivity for biodiversity through otherwise highly urban areas.

UN4 – Ensure there is accessible park and recreational open space to serve residents: Verdugo Wash Visioning can provide opportunities for accessible public space where water and its changing nature provides a key role.

WATER
WT5- Implement stormwater management practices to protect water quality and replenish local groundwater sources: Verdugo Wash Visioning has the potential to implement solutions that can contribute to improved runoff water quality; however, the concrete lined channel limits the benefits associated with replenishment of local groundwater sources and without further intervention this is likely to be limited to the Verdugo Wash Debris Basin Dam area.

WT5-E: Explore design of recreation areas that can hold runoff: Opportunities to capture runoff will be considered for new recreation areas, as well as opportunities for new recreation in areas that currently hold runoff such as the Verdugo Wash Debris Basin Dam.

OurCounty: Los Angeles Countywide Sustainability Plan (2019)
OurCounty is a regional sustainability plan for Los Angeles which outlines what local governments and stakeholders can do to enhance well-being and reducing damage to the natural environment while adapting to climate change. Twelve goals are set out to achieve this. Those providing the most opportunity for the Verdugo Wash Visioning are listed below:

Goal 5: Thriving ecosystems, habitats, and biodiversity
Verdugo Wash Visioning can create and enhance ecosystems along the channel by establishing habitats of relevance for local, native biodiversity.

Goal 6: Accessible parks, beaches, recreational waters, public lands, and public spaces that create opportunities for respite, recreation, ecological discovery, and cultural activities
Verdugo Wash Visioning can provide opportunities for accessible public space where water and its changing nature provides a key role.

LA River Master Plan (2020)
The master plan provides an introduction and context of the Los Angeles River, before addressing the future of the Los Angeles River as an inclusive and connected open space, which also includes implementation and how to integrate design and performance objectives in a multi-jurisdictional context. Nine goals are supported by actions and methods to set the strategic directions for the Los Angeles River. The most relevant for Verdugo Wash Visioning are listed below:

1. *Reduce flood risk and improve resilience:* A key component of the Verdugo Wash Visioning is to ensure that the channel still maintains it flood protection purposes and provides the necessary resilience to future climate change.

2. *Provide equitable, inclusive, and safe parks, open space, and trails:* Verdugo Wash Visioning can create an inviting space that naturally connects different areas due to channel's length.

3. *Support healthy, connected ecosystems*: Verdugo Wash Visioning can connect ecosystems, using the way the Wash crosses Glendale to connect the Verdugo Mountains, San Rafael Hills, and Los Angeles River by establishing new habitat linkages through the city.

Upper Los Angeles River and Tributaries Revitalization Plan (2020)
The ULART plan focuses on multi-benefit projects that prioritize the restoration of natural habitats, increase green areas, and open space, and engage underserved communities. The ULART planning area consists of the entire Los Angeles River watershed feeding into the point where it meets the Lower Los Angeles River Revitalization Plan in the City of Vernon.

California Assembly Bill 466 (AB 466), signed into law on September 28, 2017, is relevant for the Verdugo Wash Visioning as this legislation established the ULART Working Group and required them *"to develop, through watershed-based planning methods and community engagement, a revitalization plan for the Upper Los Angeles River, the tributaries of the (...) Verdugo Wash, and any additional tributary waterway that the working group determines to be necessary."*

The goals and the objectives of Water and Environment Committee (identified by the Working Group) are as follows:
- *Create equitable opportunities to enhance watershed health, ecosystem functions, habitat, and biodiversity; increase local water supplies; and improve water quality*
- *Reduce flood risk to communities by prioritizing natural systems*
- *Balance the utilization of available space and resources for both the environment and the community*
- *Assess all opportunities for resiliency to climate change*

Reader's Guide for the LA River Ecosystem Restoration Project (2016)
This report provides a local environmental review of the proposed LA River Ecosystem Restoration Project which proposes to restore aquatic riparian ecosystems native to the Los Angeles River along an approximate 11-mile length. The project aims to restore ecosystems in accordance with flood risk management while also providing consideration for recreation opportunities. The report highlights how historic treatment of the Los Angeles River to channel flood waters to the coast as efficiently as possible, along with urban sprawl, disconnected the river from its flood plain and significant ecological zones. This would have contributed to the 90% loss of Southern California's riparian habitat.

The report indicates the importance of contributing resources outside of the LA River Project boundary to supporting and enhancing the Los Angeles River ecologically. The Verdugo Wash is highlighted specifically as a tributary with the potential to provide connectivity between the Verdugo Mountains, San Rafael Hills, and the Los Angeles River.

The LA SEA Program
"Significant Ecological Areas (SEAs) are officially designated areas within LA County with irreplaceable biological resources." The Verdugo Mountains are one area within LA County with this designation and partially lies within the ¼ mile project buffer of the Verdugo Wash at its most northerly extent. The SEA Program aims to conserve biodiversity within Los Angeles County by designating and supporting important biological resource areas in such a way that they can sustain themselves in the long-term. While the SEA Program aims to guide development within SEAs, some of the guiding principles of the SEA Program are relevant to measures that the Verdugo Wash Visioning project could provide and support, including:

Create new places where biodiversity can be woven through urban fabric;
Ensure that individual SEAs can thrive by reducing fragmentation, creating, or preserving connectivity and habitat functionality;
Ensure the continuation of natural ecosystem, services that improves quality of life for all who live in Los Angeles County.

Verdugo Wash Visioning Study - Community Outreach
Based on community outreach workshops for Verdugo Wash, feedback items with a close link to hydrology and biology can be summarized as follows:
Ensure design and features that create safe access: the project will consider the relationship between people and the Verdugo Wash at the channel edges, and access to the Wash will be reviewed as the design progresses. Consideration will need to be given to the constraints that varying water levels within the channel will pose to access.

Create areas that provide small gathering spaces: the hydrological constraints for the Verdugo Wash are likely to mean that there will be more flexibility in creating small gathering spaces adjacent to the channel. In some areas, where the cross section and capacity of the channel provides greater flexibility, small spaces cantilevering over or extending into the Verdugo Wash footprint could be considered.

Incorporate trails and pathways: creation of trails and pathways associated with the Verdugo Wash Visioning can help support access to nature of residents who live within proximity to the Wash but potentially do not have access to natural spaces, such as where the Wash is in a more urban part of Glendale. Incorporation of habitat features around trails and pathways in these areas will create new opportunities for residents to connect with nature.

Special thanks to the Arroyos and Foothills Conservancy for contributing this "Wildlife Corridors" section.

Verdugo Wash Revisioning Report – Wildlife Corridors

Arroyos & Foothills Conservancy, June 22, 2022

Bobcat kittens above Whiting Woods in Glendale, view to Mount Lukens in background – photo by Johanna Turner

The Challenge

From river to channel. Once a flowing river from the foothills of the San Gabriel Mountains around the toe of the Verdugo Mountains, the Verdugo Wash served as a vital tributary of the Los Angeles River. The County of Los Angeles concretized the wash in the 1930s to mitigate extreme flooding in the Crescenta Valley. An unintentional consequence was fragmentation of the urban fabric and loss of habitat and biodiversity. Large remnants of mountainous islands remain, largely isolated from each other and the San Gabriel Mountains by development.

Fragmentation. The San Gabriels are relatively rich in biodiversity. Conversely, the ecological health and biodiversity of natural habitat islands within the Glendale region, namely the Verdugo Mountains, San Rafael Hills and Griffith Park, are in decline [https://www.biodiversitylibrary.org/item/211133#page/1/mode/1up]. Reestablishing and maintaining healthy, fully-functioning ecosystems requires reconnecting them with other large masses of natural habitat. For the Verdugos and the San Rafaels that means the San Gabriels; for Griffith Park it means the San Gabriels or the Santa Monica Mountains or both.

Wildlife corridors. Maintaining and enhancing connectivity for wildlife is essential to support ecosystem functions. Wildlife corridors connect isolated areas of habitat for animal movement. They allow for mating between populations to prevent inbreeding, and for mountain lions, bears, deer, coyotes, foxes and other animals to have healthy populations with good genetic diversity. They allow seasonal migration to complete life cycles and enable individuals to find food and shelter. This all results in better predator-prey relationships, and predators keep mice, rat, squirrel and other populations, like deer, balanced and under control. In addition, wildlife eat native seeds and berries then disseminate them in their scat;
they also carry them in their fur and shed them as they move about. These seeds help maintain native plant diversity and codependent relationships with reliant insects, which in turn provide food for birds. Habitat connectivity is demonstrably essential for avian species [Soule, Michael E., et al. 1988. “Reconstructed Dynamics of Rapid Extinctions of Chaparral-Requiring Bird in Urban Habitat Islands.” Conservation Biology V.2 No. 1]. It all adds up to biodiversity. [Richard Attenborough, *A Life on Our Planet*, Netflix]

Climate change. In addition, enhancing connectivity by linking natural landscapes has been identified as the single most important adaptation strategy to conserve biodiversity during climate change [Heller, N.E. and Zavaleta, E.S. (2009) Biodiversity Management in the Face of Climate Change: A Review of 22 Years of Recommendations].

Regional Habitat Connectivity

Connecting habitat islands. The Arroyos & Foothills Conservancy is working to secure passageways for wildlife between the Verdugo Mountains, San Rafael Hills, Griffith Park and San Gabriel Mountains. The goal is to create, secure and enhance wildlife corridors …

(i) between the San Rafaels and the Verdugos, where passage is extremely challenging but successfully navigated by P-41 mountain lion and Red Tag Bear #2 [https://arroyosfoothills.org/land/wildlife-corridors/hahamongna-tujunga-wildlife-corridor/validating-the-corridor];

(ii) to cross East Chevy Chase Drive in the San Rafaels, through gaps in this residential corridor;

(iii) between the San Rafaels and, to their east, the Arroyo Seco > Hahamongna Watershed Park, and then into the lower San Gabriel Mountains;

(iv) from the Verdugos on their northeast, first down to the Verdugo Wash, then up tributaries leading from check dams along the base of the San Gabriel Mountains;

(v) between the westerly Verdugos and Big and Little Tujunga Canyons, and then into the lower San Gabriels;

(vi) linking Griffith Park to the above-described corridor matrix --- giving P-22, at least theoretically, a means to find a mate and/or leave Griffith Park, his home range for more than 10 years, and bring along a host of other wildlife.

Figure 2 Regional Connectivity

If successful, wildlife will readily and safely move between these three large habitat islands and the bio-rich San Gabriels.

The Verdugo Wash. The Verdugo Wash ("Wash") divides and distances the natural habitat found in the San Rafaels from that in the Verdugos. It does the same for the Verdugos and the San Gabriels. The Wash as river facilitated connectivity; the Wash as channel interrupts and generally precludes it.

Wildlife using the Verdugo Wash. We don't know the extent of wildlife movement in the Wash. We know there is activity from eyewitness reports, but it is not documented or well understood, Wildlife cameras, strategically placed, could give us that knowledge, but permission sought from the County of Los Angeles has yet to be granted. What we do know is that wildlife access is limited and potential use of the Wash could be substantially enhanced by removing barriers and facilitating access, if only where there is no alternative route than via the Wash [see **Recommendations at Locations**, below]. Steep and deep channel sides, high fences and locked gates are some of the physical prohibitors.

Right of ways. Some of the Wash is bordered by public right-of-ways ("Right-of-Ways"), more in the upper reaches than the lower. We similarly know wildlife use these Right-of-Ways but need to document it to understand the extent. Barriers also exist, primarily fencing and steep sides to the Wash.

Crossing the Verdugo Wash. The Wash acts as a barrier to passage laterally, from one side to the other. Addressing barriers and creating passage is of primary importance if corridors are to exist and function between the Verdugos and the San Rafaels and between the Verdugos and the San Gabriel Mountains.

- Of the bridges that cross the Wash, one pedestrian bridge connecting Verdugo Park with Lot #32, in particular, shows real promise (see **Location-Specific Recommendations, Glendale Community College**, below); a few others may receive some wildlife use.
- There are a number of ramps that lead into the Wash that could be used if gates were removed or modified for wildlife access.
- Channels leading into the Wash are promising candidates for ingress and egress.

Accommodations and modifications to the Wash and Right of Ways would be an essential step toward successfully creating corridors (particulars discussed below). More study is required.

Urban-tolerant wildlife. Many wild animal species that occur within our cities are urban-adapted and tolerate a degree of proximity to humans and anthropogenic disturbances. While these populations will use human-made structures like bridges to move within the urban environment, measures such as integrating habitat and increasing permeability of such spaces help make movement practical.

All wildlife. The words “wildlife corridor” bring medium and large mammals to mind. But movement is every bit as important for the entire spectrum of animal life that is wild, such as migratory and resident birds; butterflies, bees, and other insects and arthropods; amphibians and reptiles; and small mammals.

Wildlife species requirements. Different species have distinct requirements and preferences, including when it comes to movement and passage. Universally though, all wildlife need habitat for cover, safety, relief from heat, rest, food, rearing young and sustenance. Native habitat is paramount for a myriad of reasons. Except for the Oakmont Debris Basin, the Wash is devoid of habitat, and generally the Right-of-Ways suffer the same deficiency. More natural habitat within and next to the Wash would encourage use. A highly desirable goal is to restore some of the essential functions of a natural stream or river to the Wash and Right of Way for amphibians, insects and birds.

Climate change and plants. Likewise, corridors are the most effective measure for the natural movement of plant species in response to climate change for the facilitation of pollination, movement of seeds, and the natural recruitment of native plants [https://wildlife.ca.gov/Conservation/Plants/Climate].

Biological Survey. A biological survey of organisms and habitat is needed to assess the condition of the ecological resources under consideration. One conducted by Cheryl Swift in 1990 might be helpful.

Enhancements

Figure 3 San Gabriel Mountains - Verdugo Mountains - San Rafael Hills Connectivity

This treatment -- *Revisioning the Verdugo Wash – Wildlife Corridors* -- addresses two questions:

1. What is required of the Verdugo Wash for wildlife passage between (i) the Verdugo Mountains and the San Rafael Hills, (ii) the Verdugo Mountains and the San Gabriel Mountains, and (iii) Griffith Park and the San Gabriel Mountains (Figures 2 and 3)?
2. What can be done, in the context of revisioning the Verdugo Wash, to enhance biodiversity through connectivity of the Verdugo Mountains, San Rafael Hills and Griffith Park?

As of submission of this *Verdugo Wash Revisioning Report – Wildlife Corridors* treatment the draft revisioning report is not yet available to review. However, it is

understood that the report will include a conceptual design, but that it may or may not be determinative of any final design that is adopted and implemented.

To answer the above two questions we must try to understand what wildlife will require for passage, and what all native life will require for biodiversity.

- What is minimally required of the Wash to realize the objectives?
- What is required of the Wash if a multi-benefit design anticipates minimal use of the Wash by wildlife (favoring Right-of-Ways, for instance) to realize the objectives?
- What is required of the Wash if a multi-benefit design readily accommodates wildlife in the Wash?

Enhancement considerations are influenced by the design perspective.

Two routes. For a number of reasons, when connecting large areas of natural habitat, two safe and inviting corridors between each pair should be the baseline target.

- Animals move when motivated. The north-south distances of the east end of the Verdugos and the west side of the San Rafaels are considerable. The east-west length of the Verdugos is several times longer. Multiple routes can be expected to increase overall passage.
- Different species have different requirements. Designing different routes creates the potential to address broader needs of all species.
- Effective dissemination of plant material and movement of less mobile creatures dictate multiple pathways.
- A second corridor can provide insurance if the first is not as well traveled as anticipated.
- The Liberty Canyon overpass of the 101 Fwy (Figure 4) will be 175' wide, naturally landscaped, devoted exclusively to wildlife, with a direct unimpeded travel from natural open space on one side to natural open space on the other. The routes suggested below are often narrow and circuitous, rely on hop scotching between small habitat islands, and are sometimes shared with humans.

Figure 4 Liberty Canyon wildlife overpass

Of the six Debris Basin Channels to be investigated for connecting the Verdugos with the San Gabriels, aim to utilize the two most favorable. See **Location-Specific Recommendations for Verdugos – San Gabriels Passage**, below.

For Verdugos - San Rafaels connectivity, one route should include Oakmont Country Club and a second Verdugo Park. See **Location-Specific Recommendations for Verdugos – San Rafaels Passage**, below.

There are at least two opportunities for ingress-egress for Griffith Park (see **Location-Specific Recommendations for Griffith Park - San Gabriel Mountains Passage**, below).

The two routes connecting Griffith Park with the San Gabriels are the Verdugo Wash and the Los Angeles River to the Arroyo Seco.

Bridges and ramps. In addition to the elimination of barriers to access the Right of Ways and the Wash, the modification of existing structures or construction of new ones will be called for. Existing bridges may be made to function well for wildlife with modifications, like widening or addition of parallel landscaped catwalks. In certain locations new bridges may be the better solution. Existing ramps may need to be modified and new ramps constructed. Fencing to direct and funnel wildlife will sometimes be advisable.

Design features. Design features for wildlife movement through human-built environments include:

- Native vegetation, including trees and pollinators, preferably locally sourced and grown from seed collected from extant populations that still exist in adjacent areas, with plans calling out local vs generic material; native vegetation creates and encourages biodiversity much more consequentially than non-natives.
- Continuous natural habitat, which is best for passage along a wildlife corridor.
- Where continuous habitat is not practical, wildlife will often move from one area of natural habitat to another in steppingstone fashion for relative safety, provided the next area is in a line of sight within reasonable reach.

- Existing green space like parks, gardens, and public realm areas along corridors can be used as sites for introducing native habitat.
- Quiet areas.
- Strategically subduing lighting and downlighting.
- Unlit, ‘dark’ routes for nocturnal species.
- Access points at ground level in long stretches of fence.
- Vegetation to help wildlife over tall fences.
- Properly designed, people will appreciate and benefit greatly from new landscaping.

These and other suitable design criteria can be identified and incorporated into public and private development guidelines and requirements. The goal is to invite wildlife to move safely and readily from one large area of natural habitat to another to access food, water, and potential mates; for refuges and escape from heat, wildfires, noise and other natural and man-made stressors; and to avoid potentially harmful interactions with people.

Designs must account for the entire spectrum of animal life that is wild, such as migratory and resident birds; butterflies, bees, and other arthropods; amphibians and reptiles; and small mammals, as well as large. They must also account for the facilitation of pollination, movement of seeds, and propagation of natives.

Wildlife-human interactions. Another major objective for wildlife corridors in the urban or suburban setting is to reduce wildlife-human interactions. Cars hitting wildlife is all too familiar. Bridges and culverts can provide a safe alternative. If not possible or practical for city streets, traffic calming may reduce incidents. Yellowstone National Park utilizes motion sensors to trigger warning lights when bison or other wildlife are on park roads. Successfully designed corridors are inviting to wildlife and should naturally move them along, whether through continuous habitat or in stepping-stone fashion. Animals should not have to travel through yards or public areas of human activity in route to natural areas when more suitable passage can be created.

Future Verdugo Wash designs. As the community considers designs or redesigns of the Wash now and into the future, the challenges and opportunities for wildlife discussed herein need to be evaluated and addressed -- reevaluated and readdressed, including interactions with people.

Location-Specific Recommendations for Verdugos – San Gabriels Passage

Figure 5 Verdugo Mountains - San Gabriel Mountains Connectivity

<u>San Gabriel Mountains debris basin channels</u>

Six channels lead from debris check dams in the lower San Gabriels to the Verdugo Wash ("debris channels") (Figure 5). While the Arroyos & Foothills Conservancy has some camera data from debris channel mouths, permitted access for cameras down each channel can inform us of current wildlife use and conditions.

Moving down the nine-mile length of the Verdugo Wash, the following routes have been verified by physical examination:

Verdugo Hills Golf Course to Boston Avenue

Figure 7 Verdugo Hills Golf Course - Blanchard, Cooks Canyon Debris Channels Connectivity

The abandoned Verdugo Hills Golf Course is near the headwaters of the Verdugo Wash (Figure 7). The golf course site is currently unmaintained. While some of it has reverted to natural habitat, there is much to restore and enhance with native vegetation. In addition to providing open space and habitat for wildlife, the Verdugo Hills Golf Course holds fine potential for wildlife connectivity between the San Gabriel Mountains and the Verdugo Mountains.

By moving west from the Verdugo Hills Golf Course and the headwaters of the Wash along the north side of the 210 Freeway, wildlife can cross under the 210 at the La Tuna underpass and then into the Verdugos.

To the north are the San Gabriels. The Blanchard Canyon debris channel (Figures 7 and 8) is the furthest west of the six debris channels. Bounded by access roads on either side, it cuts the shortest distance through the Verdugo Hills Golf Course and the Crescenta Valley to the San Gabriels and may be the most promising. Access for the Blanchard Canyon debris channel is needed from the golf course. Felhaber-Houk Park, a separate area of open space located to the north has an existing ramp (Figure 7-*yellow dot along Blanchard Canyon debris channel*) that could serve as an additional access point into that debris channel.

Just to the east of Blanchard Canyon lies the Cooks Canyon debris channel (Figure 7). Also bounded by dirt access roads on both sides, it may be a candidate for some type of semi-permanent or removable decking over the debris channel to aid wildlife passage through the Crescenta Valley's urban plain.

The Verdugo Wash, just south of the Verdugo Hills Golf Course, runs through a long tunnel beginning at La Tuna Canyon Road under the 210 Freeway and lets out just east of the extreme southern end of Lowell Avenue. The Blanchard Canyon debris channel starts just southeast of the golf course and intersects the Wash tunnel. The Cooks Canyon debris channel starts just north of the 210 Fwy and likewise intersects the Wash tunnel. Both debris channels and the tunnel should be studied for potential wildlife passage, including reducing the length of the tunnel to make it more appealing to wildlife.

Other candidates for passage from the Verdugo Hills Golf Course, headwaters of the Verdugo Wash, Blanchard Canyon debris channel and Cooks Canyon debris channel are nearby culverts under the 210 Freeway and the strip of habitat leading easterly along the 210 Freeway to the Lowell Avenue underpass.

Boston Avenue to Crescenta Valley Community Regional Park

Figure 9 Boston Avenue - New York Avenue, Dunsmore Canyon Debris Channel Connectivity

The ramps in and out of the Verdugo Wash on both sides of Boston Ave could be used as access points by wildlife (Figure 10). The southern bank along the Verdugo Wash, southeast of Boston Avenue, is narrower, steeper, and adjacent to residences, but can still accommodate wildlife movement.

The trail alongside the Crescenta Valley Dog Park can be enhanced for wildlife passage with native trees and shrubs, leading from Boston Avenue to the Crescenta Valley Community Regional Park.

The southern end of Dunsmore Avenue leads to a ramp which could be used for access into the Verdugo Wash. Directly across from the outlet of this ramp into the Verdugo Wash lies a tunnel (Figure 11), which runs a short distance and connects directly into the Verdugo Mountains. This tunnel could

accommodate wildlife passage in and out of the Verdugo Wash.

The Dunsmore Canyon debris channel is another narrow, steep channel which feeds into the Verdugo Wash. Its potential for decking over or other modifications for wildlife passage should be studied and considered.

Crescenta Valley Community Regional Park to Oakmont Debris Basin

Figure 12 Eagle, Pickens, Halls Canyon Debris Channels Connectivity

To the west of where Pennsylvania Avenue becomes Honolulu Avenue lies the confluence of Eagle Canyon debris channel and the Verdugo Wash (Figure 12). Eagle Canyon runs from the San Gabriel Mountains above Two Strike Park in La Crescenta, through the Crescenta Valley and into the Verdugo Wash south of Mountain Oaks.

Any future planning efforts should consider wildlife passage as part of any proposed improvements. An existing ramp where the Eagle Canyon debris channel emits into the Verdugo Wash could be used for wildlife passage.

Across the way from Eagle Canyon debris channel along the west bank of the Verdugo Wash lies another potential wildlife corridor. The bank alongside lengthy El Lado Drive leading down to the Verdugo Wash provides a connection from Mountain Oaks to Camp Bob Waldorf. This bank should be a dedicated wildlife passage and could be enhanced with plantings and strategic access points to accommodate wildlife.

Along this route lies Whiting Woods Road. This quiet, wooded road is used by wildlife to connect from El Lado Dr and the Verdugo Wash to the Whiting Woods trailhead and the Verdugo Mountains. Residents have reported sighting bear and other wildlife along this road. Access for wildlife from the Wash and El Lado Drive paralleling Whiting Woods Road (Figure 12-*Whiting Woods* route) seems like a likely route.

The southern cul-de-sac of El Lado Drive offers unobstructed access for wildlife into the hillside and canyon habitat of the Camp Bob Waldorf campus, and west into the Verdugo Mountains.

Coming from the other direction, wildlife can move from the Oakmont Debris Basin westerly along the west rim of the Verdugo Wash (Figure 12-*Wash Oakmont Wetland* route), then under Shirlyjean St. bridge to an ideal ramp (Figure 12-*yellow dot*) leading into the northeast corner of Camp Bob Waldorf (Figure 12-*Waldorf* route) or via a channel leading into the Wash at about the same location.

Location-Specific Recommendations for Verdugos – San Rafaels Passage

The following routes have been verified by physical examination:

Oakmont Debris Basin and Country Club

Figure 13 Oakmont Debris Basin, Country Club Connectivity

The Upper Los Angeles River and Tributaries Plan ("ULART") recognized the area surrounding the Oakmont Debris Basin and Oakmont Country Club as the "San Rafael Ecological Connection" (Figure 13). Ecological connections within the ULART Plan are "areas that connect the community with wildlife and nature… (T)hese are places… where neighborhoods and open space, nature preserves, or mountains meet."

Arroyos & Foothills Conservancy has, through independent analysis and ground-truthing, identified the "San Rafael Ecological Connection" area as the most promising candidate for an ecological connection between the San Rafael Hills and the Verdugo Mountains. Opportunities exist to enhance the Oakmont Debris Basin for wildlife by creating and enhancing wetland and native habitat and opening up or enhancing existing wildlife passage into the Oakmont Country Club and Verdugo Mountains.

The ULART report identified the land beneath the Southern California Edison power lines from the Oakmont Country Club into the Verdugo Mountains as the "Northern Wildlife Crossing" (Figure 13-*Oakmont SCE ROW*). The plan proposes an elevated parkway connecting the Country Club with the Verdugo Mountains. Some type of connection here for wildlife is crucial.

AFC recognizes the Oakmont Country Club golf course as an active wildlife corridor, confirmed by remote wildlife camera. Opportunity exists to enhance the ecological value of the golf course by expanding native habitat areas, reducing irrigation areas, and securing wildlife corridors, such as the Edison power lines route. As stated by the Tongva Tribal Council letter providing sustainability recommendations for this project: "Oakmont Golf Course: The golf course was once a riparian environment and flood plain as evidenced by the number of riparian trees still within the property. Recently, the course has reduced their greens to reduce their water consumption. It is highly recommended the golf course goes further and adopts the Audubon International Golf Course design for sustainability and utilizes daylighting and tributary side streams to support native non-exotic plant species for both wildlife habitation and creates swales and depressions for water sequestration."

From the southern end of Oakmont Country Club, wildlife could follow an existing ramp into the Verdugo Wash (Figure 13-*yellow dot*). A chainlink gate/fence (Figure 14) would have to be opened or retrofitted with wildlife fencing for access.

Sparr Tunnel

Figure 15 Oakmont Country Club - Glorietta Park Connectivity

Once down the golf course ramp and into the Wash, wildlife can travel south a short distance under Cañada Boulevard to an existing tunnel leading northeast from the Wash on a diagonal under Verdugo Rd. and City property at the southeast corner of Verdugo Rd. and Sparr Blvd. (“Sparr Tunnel”). The Sparr Tunnel carries water from a distant location, but does not daylight, so it would have to be opened for wildlife on the City property. They could then move a short distance up Sparr Boulevard to Bayberry Drive for easy access into the greater San Rafael Hills (Figure 15-*Sparr* route). The viability of the Sparr Tunnel should be analyzed.

From the low elevation San Rafael Hills, wildlife would proceed easterly through open space south of Bayberry Dr. toward the 2 Freeway (still *Sparr* route), then north or south (Figure 15-W*est Shoulder* route) to pass under the 2 Freeway at Stancrest Drive, near Descanso Gardens to the east, (Figure 15-*Stancrest* route) or Fern Lane, north of the Glendale Sports Complex, (Figure 15-*Fern* route) for immediate access to expansive natural open space in the interior of the San Rafaels.

Drainage culverts and tunnels under the 2 Freeway can provide additional passage for all manner of creatures and seeds and need investigation.

Glorietta Park

Glorietta Park straddles the Wash. Arroyos & Foothills Conservancy has identified the east side of Glorietta Park as a high priority site for passage between the Verdugos and San Rafaels. A new ramp would be required into the Wash, and if the design preference is to use the Wash for wildlife passage only to the extent necessary, it could be located at the north end of the park, just south of the Sparr Tunnel. When designing for a ramp, consideration could also be given to infrastructure improvements to better connect both sides of Glorietta Park.

Dedicating a wildlife corridor south through Glorietta Park along its east side, planted with native shrubs for cover, will lead to Glorietta Avenue. Installing native plants along the north side of Glorietta Avenue could give passage to Verdugo Rd.

The greatest impediment to wildlife between Glorietta Park and the San Rafaels is North Verdugo Road. The intersection of North Verdugo Road and Glorietta Avenue has been identified by local residents and Glendale City staff as prone to car accidents and a candidate for traffic-calming infrastructure. Traffic-calming could be multi-benefit — enhancing safe passage across Verdugo Rd. for pedestrians during daylight hours and for wildlife during low-traffic hours. The following should be included with traffic calming measures:

- Enhancing native landscaping on both sides of North Verdugo Road.
- Opening up chain-link fencing at Edison property to the east of North Verdugo Road.
- Installing a “wildlife crossing” signal or signage.

After crossing Verdugo Rd., wildlife would follow an Edison Right of Way to and across a quiet Mira Vista Drive into a large peninsula of natural habitat south of Los Encinos Avenue, then to Fern Lane at the 2 Freeway (Figure 16) and east under the freeway to expansive open space of the San Rafaels (Figure 15-Glorietta and *Fern* routes).

Edison route

An alternate route is the Southern California Edison right of way, commencing to the southeast of Mira Vista Drive and leading southeast to natural habitat along the 2 Freeway south of Fern Lane (Figure 15-*Fern SCE ROW* route). Then they can head

north to the Fern Lane underpass or south to the Sherer Lane underpass of the 2 Freeway (Figure 15-*SR2 South Shoulder* route).

Oak Knoll Road route

Figure 17 Oak Knoll Road Connectivity

As already described, the Fern Lane underpass of the 2 Freeway serves as a critical wildlife passage post.

Following the San Rafael Hills south from Fern Lane along the western side of the 2 Freeway (Figure 17-*SR2 West Shoulder route*) can lead to a potential corridor through private properties along Verdugo Knolls Drive (Figure 17-*Oak Knoll N* route). A wooded, riparian canyon runs through these private properties -- some with homes on them and a couple vacant parcels (Figure 18). There are signs of wildlife movement. Conservation easements and potential acquisition of vacant parcels may be desired.

The wooded canyon at Verdugo Knolls Dr empties out to Oak Knoll Road (Figure 19) — a quiet and peaceful street that wildlife may walk down as a corridor (Figure 17-*Oak Knoll* route), especially at night, early morning, and other times of low human activity and traffic. Working with neighbors to enhance native landscaping would be desirable. Wildlife can be imagined crossing Verdugo Rd. at Oak Knoll Road if there were inviting habitat on the west side of Verdugo Rd., in turn leading to the Wash, where access would need to be created. Wildlife would then use the Wash to travel south, exiting at a new ramp into Verdugo Park just south of the Cañada Boulevard overpass and north of the Skate Park (Figure 17-*Wash Oak Knoll* route).

<u>Sherer Lane Underpass</u>

The swath of hillside habitat running south from along the west side of the 2 Freeway from Fern Lane to Verdugo Knolls Dr continues south to an underpass at Sherer Lane (Figure 17-*SR2 West Shoulder* route and Figure 20) — another critical passage point that is relatively quiet and reportedly used by wildlife for passage under the 2 Freeway.

The east side of the 2 Freeway running south from Sherer Lane (Figure 17-*Sherer* and *Mountain* routes) could lead to a potential wildlife crossing of the freeway at East Mountain Street ("Mountain St.") if suitably retrofitted for wildlife, as by adding a landscaped catwalk off the side, but if not practical over a new bridge north of Mountain St. Once on the west side of the 2 Freeway they could then proceed west through the lower San Rafael Hills to Glendale Community College in the manner described below. As an alternative, installing a bridge south of Mountain St. can be considered if, as a practical matter, wildlife will cross the relatively quiet portion of Mountain St. immediately east of the 2 Fwy interchange.

Verdugo Park

Figure 21 Verdugo Park Connectivity

Big picture, given the breadth of the Verdugo Mountains two ingress/egress routes toward the San Rafael Hills would be highly desirable. The first is described above, utilizing the Oakmont Debris Basin and the Oakmont Country Club golf course. The second utilizes Verdugo Park. The route to Verdugo Park (Figure 21) should be readily apparent on Figure 22.

Figure 22 Verdugo Mountains - Verdugo Park Terrain

It moves from the Las Flores Motorway along the north side of Sunshine Road through property owned by the Arroyos & Foothills Conservancy (Figures 21 and 22-*AFC's Sunshine Preserve*), crossing Sunshine Road and continuing through uninterrupted natural open space to the upper sloping reaches of Verdugo Park (Figure 23). Wildlife then move south along this sloping half of Verdugo Park. They can move to the bottom of the slope then directly east along the north side of Stengel Field to the Wash, or they can circumnavigate Stengel Field to avoid humans. What follows is a discussion of possible routes to move between the Verdugo Wash and the San Rafael Hills.

*Figure SEQ Figure * ARABIC 23*
View east from Sunshine Preserve

Glendale Community College

Figure 24 Verdugo Park - Glendale Community College Connectivity

From the San Rafael Hills above the Glendale Community College campus, we have identified northern and southern “perimeter routes” for wildlife passage around the campus, with potential connections to Verdugo Park (Figure 24).

The northern perimeter route utilizes Campus Way (Figure 24-*GCC N*) and connects with the footbridge that spans across the Verdugo Rd. and Cañada Blvd junction (Figure 24-*GCC Bridge*). The campus perimeter leading to the footbridge onramp along Verdugo Rd. (Figure 24-*GCC N* on) would need to be landscaped with native plants to provide cover for wildlife.

The southern perimeter route follows the perimeter of the campus along Mountain St., and then along the Verdugo Rd. perimeter of the campus to the same footbridge across Verdugo Rd. and Cañada Blvd. (Figure 24-*GCC S*,).

A large lawn on the east approach to the footbridge creates a landscaping opportunity for the college. Once on the footbridge (Figure 25), potential exists to "naturalize" the interior sides with native plants to provide cover and safety for wildlife passage. This could be achieved by installing planter boxes or widening the bridge to accommodate plant life. The footbridge blocks out much of the noise from the busy Verdugo Rd., below.

This Glendale Community College footbridge leads to Lot 32, a City of Glendale owned parking lot. We anticipate wildlife using the sloping ramp leading down from the Glendale Community College footbridge to Lot 32 (Figure 26) rather than the opposing ramp with steps. Some non-parking sections of this parking lot could be softened and “greened” with native landscaping. With the removal of 2 to 4 parking spaces, a naturalized trail crossing for wildlife could be created from the Glendale Community College footbridge ramp to the bank of the Verdugo Wash.

Figure 27 Potential trail along Verdugo Wash

The bank along the edge of the Verdugo Wash (Figure 27) could be naturalized and improved with a trail, connecting the north end of Lot 32 with an existing pedestrian bridge to Verdugo Park (Figure 28). The bridge, which spans the Verdugo Wash, appears readily usable by wildlife.

Figure 28 VW crossing between lot 32 and Verdugo Park

Other opportunities for connection between Glendale Community College and Verdugo Park include

(i) constructing an overpass to connect the Glendale Community College southern perimeter route (Figure 24-*GCCS*) with a tree-lined, quiet drive alongside the south side of Glendale Civic Auditorium (Figure 24-*GCC* route, Figure 29), to a naturalized new trail heading

north along the east side of the Wash to the pedestrian bridge (Figure 28) from the northwest corner of Lot 32 into Verdugo Park (Figure 24-*GCC* route)

(ii) recommissioning a mothballed tunnel once used for people from the campus periphery to the southeast corner of the Glendale Civic Auditorium (Figure 24-*Tunnel Gate* location for the new overpass and the existing tunnel), then following the same route as above

<u>Lot 30</u>

From the hillside south of Mountain St. and west of the 2 Fwy. wildlife can follow natural habitat down to Verdugo Rd. across from Lot 30 (Figure 24-*Mountain* and *Lot 30* routes) - another City of Glendale owned parking lot. This site has potential for construction of an overpass or underpass across Verdugo Rd. from south of CII Vaquero to Lot 30 (Figure 24-see *Build Overpass*). Wildlife then go to an existing ramp at the southwest corner of Lot 30 (Figure 30) for easy access into the Wash (Figure 24-*yellow dot*). Then they move up the Wash to a partial ramp (Figure 31) below Stengel Field that would need to be lowered.

Figure 31 Drainage below Stengel Field

This route, with the newly constructed bridge over the Wash, may be the most likely candidate for southern passage between the San Rafaels and Verdugos. (Southern passage utilizes Verdugo Park; northern passage utilizes the Oakmont Country Club golf course.)

Chevy Chase and Glenoaks

Figure 32 Glendale Community College to Chevy Chase Drive, Glenoaks Boulevard Connectivity

Both East Chevy Chase Drive ("Chevy Chase") and East Glenoaks Boulevard ("Glenoaks") pass under the 2 Freeway. There is a substantial undeveloped range of hills below Chevy Chase and another below Glenoaks, as seen in the image below. It can be assumed that wildlife of all manner inhabit these ranges.

Figure 33 Ranges south of Chevy Chase Drive and Glenoaks Boulevard

Passage potential exists from the western end of both ranges to open space along both sides of the 2 Freeway (Figure 32-*Glenoaks* and *Chevy Chase* routes) leading north. On the west side of the 2 Freeway wildlife can move to the Verdugo Park complex (Figure 32-*Glenoaks* route). On the east side of the 2 Fwy. wildlife move either to potential new wildlife bridge crossing the 2 Freeway on one side or the other of Mountain St. (Figure 32-*Chevy Chase-Glenoaks* route), or on to the Sherer Underpass (Figure 32-*Mountain* route).

Drainage culverts and tunnels under the 2 Freeway can provide additional passage for all manner of creatures and seeds and need investigation.

<u>Verdugo Park to Confluence Park</u>

The confluence of the Verdugo Wash with the Los Angeles River has been recognized as an “Opportunity Area” for recreational development in the City of Los Angeles’ Los Angeles River Revitalization Master Plan. Restoration of this confluence area also features, as part of the Los Angeles River Ecosystem Restoration Integrated Feasibility Report, Alternative 20.

The construction of a pedestrian and bikeway trail along the Wash could open up access for wildlife passage from Verdugo Park to Confluence Park and the Glendale Narrows Riverwalk. Planting native trees and shrubs along the trail can serve to provide cover for wildlife moving during non-peak hours of human activity. Trail connectivity to Fremont Park should be considered, which can serve as an “island” of habitat and open space for humans and wildlife on the journey through the urban plain between Verdugo Park and the Los Angeles River.

Location-Specific Recommendations for Griffith Park - San Gabriel Mountains Passage

P-22, the world-famous mountain lion, somehow crossed two freeways to end up at Griffith Park and has been isolated there for more than 10 years. This highlights that Griffith Park is a biological island, cut off from the greater Santa Monica Mountains, of which they are a part. Is this apex predator the only species suffering such isolation? No, certainly not. All manner of wildlife are similarly constrained. Do we care about the ecological health of the world's largest urban park? If the answer is yes, we must allow it to reconnect with habitat in the greater Santa Monica Mountains, the bio-rich San Gabriel Mountains, or both for a more hopeful outcome. (Mountain lions have been documented to travel up to 10 miles in one night [mountainlion.org]. It is 'possible' for a mountain lion to get from Griffith Park to the Verdugos without having to encounter any humans in nighttime or dusk/dawn when normally expected to move.)

There are two, and only two, potential corridors to connect Griffith Park with the San Gabriel Mountains:

1. The Los Angeles River to the Arroyo Seco to the San Gabriel Mountains

2. The Los Angeles River (briefly) to the Verdugo Wash to the San Gabriel Mountains

The shorter route of the two, by far, is Verdugo Wash. Any reimagining of the Wash from its confluence with the Los Angeles River to Verdugo Park should include wildlife passage.

There are multiple locations along the Los Angeles River for movement in and out of Griffith Park. Starting upriver …

- The Los Angeles River abuts Griffith Park where it goes under the 134 Fwy at Forest Lawn and continuing westerly along the northern boundary of Griffith Park. Forest Lawn Drive would need to be passed. A channel that leads from the River under Forest Lawn Drive to a natural waterway with heavy natural habitat on the east side of 6250 Forest Lawn Drive (currently the Junior Achievement Building) needs investigation.

- In addition, the channel's walls are sloped and accessible for entry/exit; it remains sloped up to a location just downriver from 1533 Rancho Avenue, Glendale, where it narrows and the walls become vertical. Once out of the channel at this point wildlife have direct access to Griffith Park by using an equestrian tunnel under the 134 Freeway. Once out of the tunnel they cross the Main Trail then Zoo Drive to natural open space.

- Once out of the channel as above-described, wildlife could have an alternative to traveling up the channel by moving parallel along a strip of land between the River and the 134 Freeway westerly to other undercrossings. Habitat would need to be enhancemed.

- Both wildlife access and passage should be addressed and suitably included in projects relating to Confluence Park and the southern reaches of the Verdugo Wash.

- Four inlets for drainage tunnels from Warren Harding Golf Course under the 5 Freeway into the Wash can be investigated for passage.

- Physical inspection suggests that three large inlets just west of the North Atwater Bridge for tunnels leading from the Park and under the 5 Freeway would provide ready dedicated passage for all manner of wildlife, if one or more hinged 'cat's head' covers were left open.

- A horse trail moves under the 5 Freeway just south of the three inlets for easy Griffith Park access.

- Other culverts and tunnels under the 5 Freeway can provide additional passage for all manner of creatures and seeds and can be investigated.

Acknowledgements

Submitted by Arroyos & Foothills Conservancy on 6/22/2022, with contributions from:

George Ballteria, Board of Directors, Glendale Parks and Open Space Foundation; Director of Design and Construction, North East Trees; retired Director of Facilities and Senior Project Manager, City of Glendale Parks, Recreation and Community Services Agency

Shana Bonstin, Deputy Director of City Planning, Chief Sustainability Officer, City of Los Angeles, Glendale resident

Mark Duttweiler, GIS specialist

Paul Edelman, Chief of Natural Resources and Planning for the Mountains Recreation and Conservation Authority and Deputy Director of the Santa Monica Mountains Conservancy.

Dave Gallagher, Landscape Architect with Los Angeles County Public Works, Glendale resident

Mike Lawler, President, Historical Society of the Crescenta Valley.

Michael C. Long, field biologist, retired Natural Areas Administrator, Los Angeles County Department of Parks and Recreation.

Travis Longcore, Ph.D. GISP, Associate Adjunct Professor, Institute of the Environment and Sustainability, University of California, Los Angeles.

Seth P. D. Riley, Ph.D., Wildlife Ecologist and Branch Chief for Wildlife, National Park Service, Santa Monica Mountains National Recreation Area; and Adjunct Associate Professor, Department of Ecology and Evolutionary Biology, University of California, Los Angeles.

Ana Tabuena-Ruddy, Landscape Architect,; Project Development & Interagency Coordination Manager, Department of Public Works Bureau of Street Services, City of Los Angeles, Glendale resident

Jeff Sikich: Biologist, National Park Service, Santa Monica Mountains National Recreation Area.

Nancy Steele, Executive Manager, Friends of the Verde River; past Executive Director, Council for Watershed Health in Los Angeles; co-founder and President of Arroyos & Foothills Conservancy 2000-2011

Laura Stotler, retired Principal Planner, City of Glendale

Tongva Tribal Council, liaison Richard Toyon

Johanna Turner, wildlife tracker and photographer.

Amanda Zellmer, Ph.D., Associate Professor, Biology, Occidental College.

With a special thanks to Lew Phelps

appendix D.

sustainability & planning

appendix D

sustainability & planning long-term

The Verdugo Wash Sustainability Framework articulates the goals, strategies, and key performance indicators for environmental sustainability and climate resiliency as they relate to the Verdugo Wash.

It considers and integrates collected data, existing efforts, and historical context including the site's environmental history (and pre-development condition), as well as current barriers and consequences resulting from the channelization of the Wash. The framework identifies opportunities to enhance the natural environment, address climate change, and encourage habitat restoration.

This will help to identify locations for design interventions and provide an initial high-level understanding of how the Verdugo Wash can contribute to citywide sustainability efforts such as reducing the urban heat island effect, treating stormwater, reducing greenhouse gas emissions, and greening the city.

Lastly, the sustainability framework outlines opportunities to address social factors such as equitable design and equitable access to benefit the entire community.

The Verdugo Wash Sustainability Framework is principally organized around six key elements - or project focus areas. These are articulated as succinct goal statements as follows:

Within each key element, there is a vision that serves as a statement of long-term aspirations and objectives which break down the vision into implementable components. Key performance indicators that serve as a barometer of long-term sustainability and are aligned where possible with the measuring and monitoring efforts of city and regional programs and policies.

Finally, design strategies are listed that align with each of the key elements; this is not an exhaustive list of strategies, but an illustrative set that may be built upon and expanded in future design phases.

Enhance the *natural environment*
Mitigate *climate change*
Encourage *habitat restoration*
Incorporate innovative *urban design*
Foster an *inclusive economy*
Prioritize *equitable design & access*

natural environment

Vision
Improve water quality, reduce the impacts of the urban heat island effect, and advance the city's sustainability goals through conceptual design for the natural environment.

Objectives
Increase Glendale's tree canopy coverage;
Ensure there is accessible park and recreational open space to serve residents;
Implement stormwater management practices to protect water quality & replenish local aquifers;
Improve water quality;
Combat the urban heat island effect.

Key Performance Indicators
Percent tree canopy cover (number of trees);
Percent of trees planted in sidewalk planting sites
Number of residents using local parks and recreational open spaces.

Champions
Community Services & Parks
Public Works

Design Strategies
Implement best management practices (BMPs) within and adjacent to the Wash, including stormwater planters, tree well filters, vegetated swales, and vegetated filter strips;
Incorporate bio infiltration into the design of adjacent parks and public properties.

climate change

Vision
Address climate change through conceptual design strategies for urban design, hydrology, and mobility

Objectives
Combat the urban heat island effect;
Promote/encourage alternative transportation forms;
Increase Glendale's tree canopy coverage.

Key Performance Indicators
SOV trip reductions;
Citywide transportation emissions;
Tree plantings;
Cool and vegetated surface areas.

Champions
Public Works
Sustainability Office

Design Strategies
Implement urban cooling strategies that mitigate extreme heat, such as cool and vegetated surfaces, shade structures, shade trees and vines;
Provide a convenient, safe, and affordable alternative to car travel in the form of multi-use paths.

inclusive economy

Vision
Foster an inclusive and prosperous economy through conceptual strategies for urban design, equity, and mobility.

Objectives
Promote economic growth and prosperity without displacement, with a focus on local businesses and disinvested neighborhoods;
Create more opportunities for new sustainable MWBE businesses to open in Glendale;
Support green jobs training in Glendale;
Encourage sustainable business practices.

Key Performance Indicators
Cost of living proportional to household incomes;
Number of MWBE businesses;
Number of green jobs/workers in Glendale.

Champions
Community Development
Sustainability Office

Design Strategies
Develop anti-displacement protections for neighboring renters and small businesses

habitat restoration

Vision
Restore the natural and historic habitat through conceptual design strategies for urban design and mobility

Objectives
Increase Glendale's tree canopy coverage;
Increase biodiversity in Glendale.

Key Performance Indicators
Number of native plant species represented in the Verdugo Wash;
Wildlife corridors improved/added.

Champions
Public Works (Forestry Section)

Design Strategies
Use signage and platforms to educate residents and visitors about native, invasive, and climate-adapted species;
Establish wetland habitat within the soft-bottomed debris basin;
Establish habitat corridors in conjunction with efforts on adjacent properties.

equitable access

Vision
Address social equity through conceptual design strategies for urban design and mobility.

Objectives
Ensure there is accessible park and recreational open space to serve current and future residents;
Encourage the use of locally grown organic foods.

Key Performance Indicators
Percent of residents living within walking distance (1/3 mile) of a park and recreational open space

Champions
Community Development
Community Services & Parks

Design Strategies
Apply universal design principles to the access points from surrounding streets, including wide paths and ramps, accessible bathrooms, shade, and lighting;
Prioritize implementation in areas of Glendale that have less existing access to parks and open space, namely the downstream portion nearest downtown.

urban design

Vision
Deploy human-centered urban design strategies that address equity, the natural and built environment, and habitat restoration

Objectives
Incorporate Greener Glendale sustainability concepts into the Community Plans and other General Plan documents;
Incorporate green building practices into community sustainability outreach and education;
Implement SCAG Sustainable Communities Program strategies in Glendale to increase livable environments;
Promote and encourage the use of alternative forms of transportation.

Key Performance Indicators
Mode share in Glendale
Linear feet of multi-modal transport paths

Champions
Community Development
Public Works
Sustainability Office

Design Strategies
Provide access for active modes (walking, biking, and rolling) into the Verdugo Wash;
Incorporate shading and vegetation into the public space design.

The Verdugo Wash will be the beacon for urban sustainability and social equity in Glendale, enhancing the City's natural environment and addressing the climate change and biodiversity crises, and incorporating equitable design and access.

The Verdugo Wash Visioning process requires many considerations, including those related to culture, mobility, environment, health and wellbeing, and economic vitality. As an amenity space that has the potential to connect multiple neighborhoods, there is an additional opportunity to establish ecological and transit corridors. The sustainability framework that will be developed during this visioning process will articulate the goals and strategies for environmental sustainability and climate resiliency as they relate to the Verdugo Wash.

The framework will consider and integrate collected data, existing efforts, and historical context. This includes the site's environmental history (and pre-development condition), as well as current barriers and consequences resulting from the channelization of the Wash. The framework will identify opportunities to enhance the natural environment, address climate change, and encourage habitat restoration. This will help to identify locations for design interventions and provide an initial high level understanding of how the Verdugo Wash can contribute to citywide sustainability efforts such as reducing the urban heat island effect, treating stormwater, reducing greenhouse gas emissions, and greening the City. Lastly, the sustainability framework will also seek to identify opportunities to address social factors such as equitable design and equitable access to benefit the entire community.

Key elements of the sustainability plan will guide the vision to address environmental and social factors in the area. These elements will both align with existing goals and targets and incorporate newly identified opportunities and needs within the community. These key elements are expressed through the following sustainability goals:

- *Enhance the natural environment*
- *Encourage habitat restoration*
- *Mitigate climate change*
- *Benefit the entire community by incorporating equitable design and access*

Existing Efforts

The City of Glendale executed the "Greener Glendale Plan" in 2011, addressing sustainability and climate change in local government operations.

The plan outlines seven focus areas of improvement: **energy**, **water**, **waste**, **transportation**, **urban design**, **urban nature**, and **environmental health**.

At the regional level, the Los Angeles County Board of Supervisors adopted "OurCounty": the Los Angeles County-wide Sustainability Plan in 2019, which provides a regional framework for local governments and stakeholders to enhance community sustainability, adapt to climate change, and reduce damage to the natural environment. OurCounty specifically focuses on communities that are disproportionately affected by environmental pollution. These plans are foundational to future Glendale sustainability frameworks, and relevant initiatives and goals will be brought into the Verdugo Wash Visioning process.

One example of a relevant strategy or action is Glendale's Citywide Pedestrian Plan spotlight on adding pedestrian head starts and high visibility crosswalks in high collisions intersections. Additional examples can be found in the Sustainability Plan which sets objectives to increase the City's tree canopy coverage by 20,000 trees by 2035 as well as ensure that there is accessible park and recreational open space to serve residents.

The County also recently completed the LA River Master Plan, which outlines development and management goals for the 51-mile section of the LA River running through Los Angeles County. At large, the plan identifies strategies and goals to reduce flood risk, improve resiliency, provide open space, support ecosystems, enhance arts and culture, address potential adverse impacts, and promote healthy, safe water. The plan also identifies how it will work within existing and future planning documents.

At the State level, the Verdugo Wash is assessed within the Mountains Recreation and Conservation Authority (MRCA)'s Upper Los Angeles River and Tributaries (ULART) Revitalization Plan, addressing future opportunities and projects to revitalize waterfronts throughout north LA County. The plan, completed in 2020, has an emphasis on disadvantaged communities along the Verdugo Wash, Aliso Canyon Wash, Pacoima Wash, Tujunga Wash, Burbank Western Channel, Arroyo Seco, and Upper LA River. The plan's outreach process helped highlight specific community needs and desires for the Verdugo Wash. These included safe access design features, inclusion of small gathering spaces, and incorporation of trails and pathways. The plan also identifies and scores various revitalization opportunities for the tributary. These include but aren't limited to adding an educational facility, creating multi-use and mountain biking trails, and locations for enhancing wildlife corridors.

Sustainability Opportunities & Constraints
Parks & Open Space

Parks and open space are an integral part of the Glendale identity. Not only was the city initially sited within the natural beauty of three distinct hillside/mountain ranges (Verdugo Mountains, San Rafael Hills, and San Gabriel Mountains), but nearly one-third of the city's land area is either parkland or open space (including private lands). From an equity perspective, approximately 90% of Glendale residents reside within 1/3-mile of a public park or recreational open space; a notable exception being South Glendale, which lacks adequate open space. The city boasts 43 public parks as well as public school yards open to the public after-hours, and many open space trails. The City also takes on reforestation and implements habitat protection measures. These initiatives and their impacts are further discussed in the Biology section of this report.

Parks and open space
data source(s): City of Glendale Public Works, Los Angeles County Department of Public Works, Los Angeles Department of Sanitation.

Sustainability Opportunities & Constraints
Water Quality & Management

Especially in southern California, water quality and water management are important tenets of sustainability. About seventy percent of Glendale's water supply is provided from the Metropolitan Water District (MWD), which is conveyed over long distances from 1) northern California (via the State Water Project) and 2) the Colorado River (via the Colorado River Aqueduct.)

The Verdugo Wash is a central asset in Glendale's stormwater infrastructure. For these reasons, existing conditions and future precipitation levels will influence the final design vision. Water is also connected to other key sustainability themes like urban ecology, extreme heat, and climate change mitigation efforts.

Stormwater infrastructure
data source(s): City of Glendale Public Works, Los Angeles County Department of Public Works, Los Angeles Department of Sanitation.

The City of Glendale experiences a Mediterranean climate with dry hot summers and mild wet winters, though winter-drought has been common in recent years. On average, the city receives approximately 19 inches of rain per year. The rainiest months of the year, January and February, each experience approximately 3-4 inches of rain. The city contains both year-round and seasonal streams as well as extensive stormwater infrastructure.

As the Wash was channelized and the surrounding area was developed, the soil's ability to absorb rainwater decreased and runoff increased. Green infrastructure, including vegetative surfaces, can help to increase infiltration and reduce runoff from certain rain events, but stormwater infrastructure is essential in managing runoff from heavy rain events and storms, particularly for downstream and low-lying areas.

Minimal changes are expected for the annual precipitation in Glendale under both low and high emission scenarios. The average observed historical 1-day maximum is 2.8-inches, with a projected mid-century increase of 0.1-0.2 inches.

There is a projected increase of about one week in maximum lengths of dry spells compared to the historic average of 128 days. While averages aren't expected to change much in the Glendale area, California is projected to have more severe variation in wet and dry years. This can lead to "whiplash events" which are particularly important in that they contribute to and intensify various other climate hazards.

Precipitation in inches, per year in Glendale under low and high emission scenarios with observed historical values *(source: Cal-Adapt)*

When dry years are followed by very wet years, mudslides and landslides are more likely to occur. This is due to declines in vegetation during the dry years which otherwise offer soil stabilization. When wet years are followed by dry years, wildfires are much more likely. This is because the wet years allow a lot of new vegetation to grow, but it eventually dries out in the drought period – leading to increases in fuel sources for fire.

The Los Angeles Climate-Smart Cities analysis, performed by The Trust for Public Land, has identified areas where the potential for groundwater infiltration projects is highest. Their model, which accounts for riparian areas, flood-prone areas, permeable soils, wetland areas, groundwater basins, historic channels, and slope identifies much of the Verdugo Wash project area as having high potential for infiltration projects.

Number of extreme heat days in Glendale under both emission scenarios with observed historical values. The threshold (98th percentile) for an extreme heat day in this community is 97.61 degrees Fahrenheit. *(source Cal-Adapt)*

Annual average (maximum & minimum) temperature projections in Glendale, under low & high emissions scenarios *(source Cal-Adapt)*

Data from the City's latest Urban Water Management Plan shows that over 81% of water usage is from residential homes (both single family and multi-family), around 12% is from commercial use, and the remaining is split between industrial, municipal, and landscape irrigation. In 2020, the annual water usage was just over 21,000 acre-feet in total, or an average of 95.3 gallons per person per day.

Not many modifications have occurred to the Wash itself since the 1930s, but additional flood control support structures and projects have been added in the area. These projects were predominately led by the Los Angeles County Department of Public Works and United States Army Corps of Engineers. They include additional debris basins in the Verdugo and San Gabriel Mountains, as well as additional concrete lining of other major channels in the region.

There are also 5 dams and reservoirs within the City of Glendale, which were all constructed between 1930 and 1950. These include Brand Park, East Glorietta, Chevy Chase 1290 Reservoir, Glenoaks Reservoir, and Diedrich Reservoir.

Early stormwater management infrastructure was largely set in the 100-year base flood standard, grounded in frequency-based design that has proven challenging for modern day standards. The "new normal" of climate change has deemed prior storm-predictions less reliable, and has presented areas of opportunity for more sustainable, resilient, and equitable approaches. Reducing flood vulnerability in one

region may increase vulnerability in another. Therefore, sustainable urban drainage systems have introduced a more interdisciplinary and inclusive approach to current urban infrastructure design criteria.

Re-envisioning the stormwater management systems around the Verdugo Wash as a holistic network, rather than solely concrete channels, will provide a more equitable and sustainable future.

Sustainability Opportunities & Constraints

Extreme Heat

Globally, temperatures have steadily increased since the 1950s, with five of the hottest years on record occurring in the last six years.

Changes in air temperature will increase the occurrence of extreme heat, heat waves, warm nights, drought, and wildfires. When populations are exposed to extreme temperatures, heat stress can lead to broader welfare

Urban heat island priority areas
data source(s): City of Glendale Public Works, Los Angeles County Department of Public Works, The Trust for Public Land (Climate-Smart Cities).

and economic impacts. This includes heat illnesses such as heat stroke, heat exhaustion, heat fatigue, and heat cramps. Heat waves have also been shown to contribute to increased mortality rates. Extreme heat is the leading cause of weather-related deaths within the US, accounting for over a quarter of weather-related fatalities since 1990. During a 2006 California heat wave, mortality rates increased by 5% across the state, with a 12% increase in at-home deaths. In that same heat wave, the south coast region experienced a 5.6% increase in hospitalizations during peak heat-wave days. These impacts are magnified in cities due to the Urban Heat Island (UHI) effect.

Both annual average temperatures and the frequency of extreme heat days are projected to increase in the City of Glendale. The current historic average number of extreme heat days, where temperatures reach over 97.6°F, is around 4.3 days per year. By mid-century, the number of extreme heat days are projected to increase by 9.3 to 15.9 days.

The annual average maximum temperature in Glendale is expected to increase by 4.4°F to 5.8°F by mid-century, and 5.7°F to 8.6°F by late century. The annual average minimum temperatures are also expected to increase by 4.5°F to 5.9°F by mid-century and 5.7°F to 9.0°F by late century.

There is opportunity within the Verdugo Wash for additional cool and green infrastructure, to mitigate UHI effects and provide respite for residents during extreme heat days. Efforts can be focused on moderate to very high need areas, such as near the West Glenoaks entry point. These design interventions may include, but are not limited to increased tree canopies, shade structures, drinking fountains, and splash pads.

Glendale is an urban heat island, experiencing higher temperatures than outlying areas.

The Los Angeles Climate-Smart Cities analysis has identified areas where the potential for cool and green infrastructure is greatest. Extreme heat conditions occur when summer temperatures are hotter or more humid than average, reaching 10 degrees or more above average and lasting two to three days. UHIs are a direct result of a warming planet, causing infrastructure to absorb and re-emit heat at higher levels than natural landscapes. Greening of the Verdugo Wash and surrounding areas may assist in the reduction of UHI effects.

Environmental Opportunities

Environmental justice is defined within State law to mean "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation and enforcement of environmental laws, regulations, and policies." It is critically important in the Greater Los Angeles region, where the burden of environmental pollution is unequally distributed. Air pollution, proximity to industrial pollutants, and water and soil pollution are examples of the types of hazards that impact health that environmental justice communities tend to bear. It is also important to note that race is a more powerful predictor of pollution exposure than social class; racial minorities are more likely to be exposed to environmental pollution than whites of the same social class. Los Angeles County is also characterized by a particularly high level of residential segregation by race and ethnicity, and especially evident in Glendale due to its history as a sundown town.

pollution burden *(exposures)*	**population characteristics** *(sensitive populations)*
- *PM2.5* - *OZONE* - *DIESEL PM* - *PESTICIDE USE* - *TRAFFIC* - *TOXIC RELEASES FROM FACILITIES* - *DRINKING WATER CONTAMINANTS*	- *ASTHMA* - *CARDIOVASCULAR DISEASE* - *LOW-BIRTH WEIGHT INFANTS*
environmental effects	**socioeconomic factors**
- *CLEANUP SITES* - *SOLID WASTE SITES & FACILITIES* - *IMPAIRED WATER BODIES* - *GROUNDWATER THREATS* - *HAZARDOUS WASTE GENERATORS & FACILITIES*	- *POVERTY* - *UNEMPLOYMENT* - *EDUCATIONAL ATTAINMENT* - *LINGUISTIC ISOLATION* - *HOUSING BURDENED LOW INCOME HOUSEHOLDS*

Pollution & population factors

CalEnviroScreen (CES 3.0) is a state-wide screening methodology that uses environmental, health, and socioeconomic information to identify California communities that are disproportionately burdened by multiple sources of pollution and sensitive to the effects of such pollution. CES 3.0 is a composite score of 20 indicators across 4 main components, exhibited in the following matrix, and is used as a tool to reduce pollution and prioritize State infrastructure investments.

Opportunities for Sustainability

The Verdugo Wash sustainability framework can help enhance the natural environment and encourage habitat restoration while mitigating climate change.

It will ensure that equitable design and access to recreate and commute are incorporated from the beginning of the process. In doing so, it will look to include goals and policy-making recommendations outlined in UC Berkeley's targeted universalism framework. Targeted universalism aims to create universal goals, identify gaps, and address barriers in access. There are additional opportunities to reduce runoff and improve water infiltration and lessen the impacts of the Urban Heat Island in the area.

Pollution & population map: this figure outlines the CES 3.0 scores for census tracts within Glendale. The highest pollution burden is concentrated around Downtown and the western border of Glendale, intersecting the Verdugo Wash. CES 3.0 emphasizes that these census tracts experience pollution from more than one source, where populations facing socioeconomic vulnerability can be further susceptible to negative health effects.
data source(s): City of Glendale Public Works, Los Angeles County Department of Public Works, California Office of Environmental Health Hazard Assessment.

The Verdugo Wash also has an opportunity to align with and build upon strategies identified in the Greener Glendale Plan and other existing reports. These strategies may include, but are not limited to encouraging natural, low water use landscaping in yards and parkways, exploring the design of recreation areas that can hold runoff, and enhancing wildlife corridors and the native habitat. There will also be efforts to identify significant ecological areas, wildlife corridors, and habitats for preservation, including oak woodlands.

Additionally, it will be important to identify areas that are not within walking distance of recreational open space, to develop strategies for providing more equitable and universal access to the added amenities. The Verdugo Wash site has the potential to incorporate aspects of the Grayson Repowering Project. The City of Glendale Department of Water and Power has proposed to repower the Grayson Power Plant as a more reliable and efficient clean-air facility. The plant will be turned into a 260-megawatt net modern power generator with estimated commercial operation in summer of 2022.

Glendale's Tree Power Program for free shade trees is a successful project that helps eligible residential customers save energy by offering them up to three free shade trees to plant on their property. Properly planted shade trees can help residents save 10%-50% in air conditioning costs.

Challenges & Gaps for Sustainability

There are a range of upcoming challenges and study gaps that would benefit from citywide planning processes (independent of the Verdugo Wash Visioning process).

A primary task of the Visioning sustainability framework is to identify areas that are not within 1/3-mile distance of an existing public park or open space and developing strategies to provide park space for them. It will also be beneficial to produce a citywide canopy coverage inventory and analysis and adopt a canopy coverage plan.

The project will also require the development of a sustainable urban watershed planning process that addresses the ecological integrity of all Glendale water sources.

ENVIRONMENTAL OPPORTUNITIES

Environmental justice is defined within State law to mean "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation and enforcement of environmental laws, regulations, and policies." It is critically important in the Greater Los Angeles region, where the burden of environmental pollution is unequally distributed. Air pollution, proximity to industrial pollutants, and water and soil pollution are examples of the types of hazards that impact health that environmental justice communities tend to bear. It is also important to note that race is a more powerful predictor of pollution exposure than social class; racial minorities are more likely to be exposed to environmental pollution than whites of the same social class. Los Angeles County is also characterized by a particularly high level of residential segregation by race and ethnicity, and especially evident in the Glendale due to its history as a sundown town.

CalEnviroScreen (CES) is a state-wide screening methodology that uses environmental, health, and socioeconomic information to identify California communities that are disproportionately burdened by multiple sources of pollution and sensitive to the effects of such pollution. CES 3.0 is a composite score of 20 indicators across 4 main components, exhibited in Figure 46, and is used as a tool to reduce pollution and prioritize State infrastructure investments. Note that the draft CES 4.0 was in the public comment period when this analysis was conducted and the finalized version is recommended to be utilized in future phases, as it includes methodology improvements and data updates.

Figure 47 below outlines the CES 3.0 scores for census tracts within Glendale. The highest pollution burden is concentrated around Downtown and the western border of Glendale, intersecting the Verdugo Wash. CES 3.0 emphasizes that these census tracts experience pollution from more than one source, where populations facing socioeconomic vulnerability can be further susceptible to negative health effects. From an environmental justice standpoint, the downstream portion of the Verdugo Wash has the greatest potential to improve social and environmental outcomes and should thus be prioritized for the implementation of design measures.

Figure 46: Pollution and Population Factors

Pollution Burden and Population Characteristics

CalEnviroScreen Score (CES 3.0)

- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 60
- 60 - 70
- 70 - 80
- 80 - 90
- 90 - 99
- Existing Entry Points
- Verdugo Wash (Open Channel)
- 1/4 Mile Buffer
- City of Glendale

Data Source(s): City of Glendale Public Works, Los Angeles County Department of Public Works, California Office of Environmental Health Hazard Assessment.

Figure 47: Pollution and Population Map *©BuroHappold*

appendix E.

community outreach online survey results raw data

Initial Visioning Concepts: Narrow Segments

Q1 Do you live in Glendale?

Answered: 122 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	86.07%	105
No	13.93%	17
TOTAL		122

Q2 Which neighborhood do you live in?

Answered: 122 Skipped: 0

Initial Visioning Concepts: Narrow Segments
Oakmont
Pacific Edison
Pelanconi
Rancho San Rafael
Riverside Rancho
Rossmoyne
San Rafael Hills
Scholl Canyon
Somerset
Sparr Heights
Tropico
Verdugo Viejo
Verdugo Woodlands
Vineyard
Whiting Woods
Woodbury
Unsure / Prefer Not t...
I do not live in Glendale
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

Initial Visioning Concepts: Narrow Segments

ANSWER CHOICES	RESPONSES	
Adams Hill	4.92%	6
Brockmont	0.00%	0
Chevy Chase	0.00%	0
Citrus Grove	5.74%	7
College Hills	0.00%	0
Crescenta Highlands	9.84%	12
Downtown / City Center	6.56%	8
El Miradero	2.46%	3
Emerald Isle	0.00%	0
Fremont Park	0.82%	1
Glenoaks Canyon	0.82%	1
Glenwood	2.46%	3
Grand Central	0.00%	0
Grandview	2.46%	3
Greenbriar	0.82%	1
Mariposa	0.82%	1
Montecito Park	3.28%	4
Montrose Verdugo City	6.56%	8
Moorpark	0.00%	0
Oakmont	0.82%	1
Pacific Edison	0.82%	1
Pelanconi	0.82%	1
Rancho San Rafael	0.00%	0
Riverside Rancho	1.64%	2
Rossmoyne	12.30%	15
San Rafael Hills	0.00%	0
Scholl Canyon	0.00%	0
Somerset	0.00%	0
Sparr Heights	5.74%	7
Tropico	0.82%	1
Verdugo Viejo	1.64%	2
Verdugo Woodlands	7.38%	9

Initial Visioning Concepts: Narrow Segments

Vineyard	0.00%	0
Whiting Woods	4.92%	6
Woodbury	2.46%	3
Unsure / Prefer Not to Answer /	2.46%	3
I do not live in Glendale	10.66%	13
TOTAL		122

Initial Visioning Concepts: Narrow Segments

Q3 Do you work in Glendale?

Answered: 122 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	45.08%	55
No	54.92%	67
TOTAL		122

Q4 Please rate the pictures above on a scale of 1 to 5.1 being "Not Like" and 5 being "Like"

Answered: 122 Skipped: 0

Initial Visioning Concepts: Narrow Segments

	NOT LIKE	(NO LABEL)	(NO LABEL)	(NO LABEL)	LIKE	TOTAL	WEIGHTED AVERAGE
Image 01	10.74% 13	6.61% 8	15.70% 19	17.36% 21	49.59% 60	121	3.88
Image 02	9.84% 12	7.38% 9	9.84% 12	18.03% 22	54.92% 67	122	4.01
Image 03	13.22% 16	7.44% 9	11.57% 14	23.97% 29	43.80% 53	121	3.78

Q5 What else would you like to tell us about these early concepts?

Answered: 82 Skipped: 40

#	RESPONSES	DATE
1	I like the idea of having more park space in the city including areas where we can walk or ride bikes	6/24/2022 4:49 PM
2	Where is the actual Verdugo Wash? Can't see the water.	4/7/2022 7:47 PM
3	Shade is super important, and tree plantings should be done to maximize potential shade	4/7/2022 5:58 PM
4	I like the greenery, but there should be some exposed water/ creek naturalization	4/5/2022 2:39 AM
5	Safety is my biggest concern. So, keeping the concept "open" as much as possible would be best.	3/26/2022 2:57 PM
6	this is a very very bad idea, during this time especially, when the homeless situation in ALL of LA county, including in Glendale, is at an all-time high! I live near the Geneva bridge on Glenoaks, none of us (myself and my neighbors) want anything like this in our backyard (literally). My backyard as well as all of my neighbors backyards is right above the Verdugo wash. We do not want crowds of people here! Ever! Why is the city tampering with our nice and quiet neighborhood????? This is extremely upsetting, and needs to stop now!	3/15/2022 3:37 PM
7	This demonstrates a tremendous opportunity to give access to diverse open space in the neighborhoods it serves and the opportunity to provide a safer pedestrian/bike link through the City.	3/10/2022 2:20 PM
8	love the use of draught tolerant plants and organic architecture	3/5/2022 1:18 PM
9	What a nightmare for everyone who lives along the wash - complete lack of privacy. What idiots have come up with this load of crap?	2/27/2022 9:33 AM
10	I would like to see some cost figures on landscaping costs per year. How many restrooms will there be, and most important what kind of security will there be. How will it be policed because the lowered level from street view looks like a criminals delight.	2/26/2022 11:06 AM
11	Stop this project and stay out of our backyards.	2/23/2022 10:31 AM
12	Would love as many shade/native trees as possible.	2/23/2022 9:32 AM
13	Trees and shade are so important. Bike-only paths a must!!!	2/23/2022 6:48 AM
14	This project seriously lacks aesthetics and pedestrian streetscape. As such, I strongly recommend for *all* pedestrian areas to have Decorative Sidewalks / Pavers. Unfortunately, ror too long - pavers have been neglected, for most of L.A. County. Please understand: pavers are an essential part of streetscape and pedestrian-oriented design. The entire world (!) has had pavers as a standard design guideline. On the other hand, lack of pavers makes the pedestrian environment too utilitarian and bleak. In fact, as a good example of successful use of pavers: downtown Glendale (Brand Ave., etc.) has successfully implemented pavers. As you walk on Brand Blvd, you can see how outstanding - and inviting - the pedestrian environment is, thanks to the proper pavers / *decorative* sidewalks implemented. Thank you. P.S. Personally, I visit Glendale quite a lot -- both for business purposes (I have a few clients in Glendale) and for shopping.	2/20/2022 10:12 AM
15	As many native and drought-tolerant plants and flowers as possible!	2/19/2022 12:41 PM
16	We should have workout stations	2/18/2022 10:13 PM
17	Third photo makes me think of an pedestrian freeway. I'd like to see how this space can be used as more than a pretty walkway. Are there shaded areas with solar panels? Are there segments of cement that are given to artists? It seems pretty clinical at the moment. Project currently comes across as an amenity for the immediate surrounding neighborhoods.	2/18/2022 9:56 PM
18	I would implore the city to make sure that there are Beeline routes that can provide	2/18/2022 7:29 PM

	transportation to Glendale residents who do not live walking distance to these green spaces 7 days per week	
19	Less concrete and other taggable surfaces should be a priority	2/18/2022 6:24 PM
20	I like the greenery. Also in image 2, I like the steps so it doesn't feel like a person is trapped in there	2/18/2022 5:59 PM
21	More greenery & flowers would be great!	2/18/2022 3:45 PM
22	they are very similar. a lot of the plants in Glendale are not kept up (see bridge by Macys on Central Ave) and I doubt what is planted would stay green. i dont think it would get tall enough to provide shade unless it is planted mature and so i would prefer to see cactus or even colorful gravel with cloth triangle shade than unkempt greenery and trees that uproot the fresh concrete. Another option is porous material that feeds the wash. I live off Verdugo and have seen bicyclists hit by cars multiple times. I would like to see bike lanes along this area and think that is the most important thing. Additionally, as a Verdugo Woodlands elementary school alumni, i would like to see the bridge that connects them to the playground be made colorful and exciting. I would also like to see lights (can be color changing LEDs) along the renewed wash so it doesnt become an open air homeless encampment like the LA River has! I can imagine the homeless starting fires in the brush that is pictured. The lights can allow the city to use Arts funding esp if they add a place for art installations from local artists. it would be cool if a portion of the wash becomes a teen hangout based off the idea of "the zone" in the mall in the late 90s-early 2000s. would need Led lights, skate ramp portion, maybe a boba stand, shade, a phone charging station, seating, maybe a photo booth section wiht the art changing routinely, ideally near wilson middle school	2/18/2022 11:26 AM
23	separate biking and skate board paths from walking paths so as to prevent accidents between pedestrians and bicycles and skate boarders.	2/18/2022 7:54 AM
24	Please make sure it's bike friendly.	2/17/2022 9:18 PM
25	Add more native plants and trash bins	2/17/2022 5:59 PM
26	I love the concept!	2/17/2022 4:57 PM
27	I love the idea.	2/17/2022 4:06 PM
28	Like the little bridge	2/17/2022 3:27 PM
29	The walls should have some artwork, preferably to reflect the diverse ethnicities in the city, also to prevent graffiti.	2/17/2022 3:10 PM
30	Who is going to maintain these added sections to the wash?	2/14/2022 9:02 AM
31	I think this is such a fantastic idea and so great for the community. Thank you so much!	2/11/2022 2:03 PM
32	Wheelchair access at all entry points is needed. As I am a bicyclist it would be great if narrower areas could still accommodate bikes as well as walkers and joggers.	2/11/2022 11:26 AM
33	Bike paths are essential to creating value to residents, in addition to pedestrian paths and access. Trees and vegetation to add shade and dampen noise.	2/11/2022 9:52 AM
34	I don't like the stairs in Image 02. Stairs limit accessibility in a variety of ways. They're also where falls, slips, etc. happen especially when wet. I love the idea of roller blading on a path or taking a stroll to get some air. I also love the idea of being able to ride a bike on a path, too.	2/9/2022 12:20 PM
35	Good Idea	2/8/2022 9:56 AM
36	Since much of the drawings are similar, it's hard to tell with the small section shown how different the options are.	2/7/2022 1:14 PM
37	The stairs are a barrier to people with physical disabilities. Concepts need to show relationship to adjacent homes and other uses. Does there have to be so much concrete? Need to include plan views and planting plan grouped by water usage category. You need to engage with people who could be impacted by the project to explore ways to mitigate impact, such as directing the path away from residential areas.	1/28/2022 8:44 PM
38	Excited to imagine this coming to fruition!	1/27/2022 4:43 PM
39	I like the return of a more natural landscape. I would like to see it include a designated bike	1/27/2022 4:26 PM

	path. This would ensure it would be loved and used by at least one group of people.	
40	I like bike paths along here. It should connect to the LA bike path. It would be an easy way for people in Glendale to travel around by bike.	1/20/2022 9:08 AM
41	A natural earthy feel would be a nice contrast to much of Glendale's urban feel.	1/20/2022 6:43 AM
42	Bike route please !	1/19/2022 9:37 PM
43	I like having walking space but would also appreciate picnic space. The amazing parks are part of why we love living here.	1/19/2022 7:28 PM
44	Shade/tree cover	1/19/2022 5:44 PM
45	I love the idea of their being an exercise and transportation path (bikeway) here. My only concern would be designing/developing a place that will attract a homeless population like those along the LA River Bikeway across the freeway from Griffith Park. I like the overpasses, but would worry they might attract individuals that would make this path undesirable for the community to use. If Glendale has an substantive plan to help our homeless community (and I hope they do), that might allay my concerns over this issue. I'm not aware of any such plan though.	1/19/2022 5:38 PM
46	Very excited about them, I didn't imagine the whole wash would be used. What a far better use of space and boon to Glendale!	1/19/2022 5:16 PM
47	While greening these areas is critical, it's unclear whether you are talking about using native plants only, which makes for a more sustainable park especially as we look to future years where climate change will continue to reduce our water supplies. Also kind of unclear what will happen in situations where we have high water (such as when we have the rare big storms pass through that raise the rivers WAY above where this illustration seems to indicate the new ground would be.	1/19/2022 4:45 PM
48	Will there be ramps for wheelchair users and strollers?	1/19/2022 4:23 PM
49	Would encourage more multi-benefit usage: 1) mobility: bike lanes, walking paths, accessibility for people with disabilities throughout + 2) habitat creation/connectivity: include native plants for pollinators, birds, and other non-human friends + 3) reduce urban heat island effect: less concrete, more green (plants) and trees to provide shade and reduce temperatures + 4) capture water runoff/recharge aquifers: include ways (like bioswales, etc.) to capture and recycle water. Separate question: Will there be opportunity to restore some parts of the wash (removing concrete, stewarding with appropriate native plants)?	1/11/2022 1:54 PM
50	Use native California plants. They need less water, maintenance and support local wildlife. More lighting is needed for safety and/or some type of emergency button in case of danger or emergency. This system is used on some college campuses.	1/10/2022 12:00 PM
51	Concepts are splendid. What will be the actual financial cost to build AND maintain?	1/9/2022 1:38 PM
52	Big improvement over existing wash	1/6/2022 10:17 AM
53	Very exciting. Can't wait!	1/3/2022 8:50 PM
54	who will be caring for the vegetation and cleaning of these new areas?	12/28/2021 1:27 PM
55	The designs may seem appealing in isolation but they fail to reflect how they would work in residential neighborhoods, especially if these constructs would be distanced (and how and how much) from homes on the wash. It's also a stretch to envision the designs and access at night or not at peak daylight. The designs also may be concerning as to noise, extent of intrusion on existing neighborhoods	12/27/2021 11:46 PM
56	I'm not sure of the reason for the two levels. I think 2. is lovelier, but don't think we should have steps.	12/27/2021 8:16 PM
57	Living on a street in montecito park that is heavily used by cycling enthusiasts I think more thought needs to be put into separating the cyclists from pedestrians, for everyone's safety.	12/27/2021 8:06 AM
58	I like the planting and elevated levels in some areas.	12/26/2021 3:41 PM
59	They all appear very inviting. I used to walk on the Bike Path behind Dream Works. I enjoyed the "resting areas" with benches and greenery. However, I have stopped using this bike/walk way because I do not feel safe.	12/24/2021 7:31 AM

60	they are boring, commonplace, bland, uninteresting. Do something unique, bold, insane, something that will capture attention. Please don't be generic.	12/23/2021 10:07 PM
61	This is much needed for Glendale and I really hope the project gets approved. Great work on the concepts	12/23/2021 6:46 PM
62	Fix mobile version of this site so we can see what we are voting for. Also survey question answers of "Like", "Not Like" make it seem as though an elementary kid put it together.	12/23/2021 6:39 PM
63	I am hugely concerned with the capacity of the storm drainage when I have seen one of the channels completely full after a summer thunderstorm. What happens when the channels under these green spaces is overwhelmed? The water is going to go somewhere. Thanks.	12/23/2021 3:54 PM
64	i like the separation of the bike paths from pedestrian paths and the use of vegetation	12/23/2021 2:01 PM
65	These early concepts look great. I hope the use of native plants is strongly preferred. Is there a way to keep the creek daylighted? Seems a shame to cover up moving water like this and would be a big draw for the community. Also, will there be areas where high water levels/overflow will be allowed to absorb into the ground?	12/22/2021 9:00 PM
66	The next great 50-year rain storm will wipe out any development in the wash. The wash is for flood control, not a development project for someone's resume.	12/21/2021 8:00 PM
67	They look amazing!	12/21/2021 4:18 PM
68	It looks amazing. I can't wait for this to be a part of our beautiful community!	12/21/2021 2:05 PM
69	Looks great. Who is going to police the inevitable graffiti and homeless encampments.	12/21/2021 11:34 AM
70	They look so good. Really hope this happens.	12/21/2021 9:08 AM
71	Project not welcome in the LaCrescenta area	12/21/2021 9:04 AM
72	walking paths, riding paths, trees, railings, different levels	12/21/2021 7:26 AM
73	Native CA plants should be used. If possible, bike and pedestrian paths should be separate for safety.	12/20/2021 9:22 PM
74	Not sure where our property falls in these rendering.	12/20/2021 7:31 PM
75	I don't like that people are at street level - they would be going to close to my house/neighborhood.	12/20/2021 7:19 PM
76	There is nothing natural about laying concrete above concrete and planting trees in concrete boxes. It looks nice enough, but how is this restoration and water capture.	12/20/2021 6:47 PM
77	I love this idea! I worry about traffic between bikes and walkers. Any way to have two lanes or a designation here?	12/20/2021 4:55 PM
78	They are all nice but the first has more trees and feels more open.	12/20/2021 4:27 PM
79	If the Wash is to closed at night and during rain events, no need to elevate the pathway above the current level. Where appropriate, raised areas on either side of path (but inside the Wash) could contain landscaping to shield adjacent property owners and maintain privacy.	12/20/2021 4:19 PM
80	If we do a walking path only… what will bikers do- could we do a bike and sharedwalking path	12/20/2021 4:04 PM
81	I am not at all interested in having people walk, hike or cycle directly behind my house. I purchased my house because it is in a quiet, relatively safe neighborhood. This project will change all that.	12/20/2021 3:47 PM
82	Shade tree canopy is of great importance!! Drought tolerant planting are crucial as well. So far-- both elements are incorporated in a ll three renderings, and I give it a thumbs up!	12/20/2021 3:25 PM

Q6 Are you interested in receiving updates about the project? (enter email address below)

Answered: 72 Skipped: 50

Email results have been omitted to maintain participants' privacy

Initial Visioning Concepts: Wide Segments

Q1 Do you live in Glendale?

Answered: 71 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	91.55%	65
No	8.45%	6
TOTAL		71

Q2 Which neighborhood do you live in?

Answered: 71 Skipped: 0

Initial Visioning Concepts: Wide Segments
Oakmont
Pacific Edison
Pelanconi
Rancho San Rafael
Riverside Rancho
Rossmoyne
San Rafael Hills
Scholl Canyon
Somerset
Sparr Heights
Tropico
Verdugo Viejo
Verdugo Woodlands
Vineyard
Whiting Woods
Woodbury
Unsure / Prefer Not t...
I do not live in Glendale
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

Initial Visioning Concepts: Wide Segments

ANSWER CHOICES	RESPONSES	
Adams Hill	1.41%	1
Brockmont	0.00%	0
Chevy Chase	1.41%	1
Citrus Grove	4.23%	3
College Hills	0.00%	0
Crescenta Highlands	7.04%	5
Downtown / City Center	7.04%	5
El Miradero	1.41%	1
Emerald Isle	0.00%	0
Fremont Park	0.00%	0
Glenoaks Canyon	0.00%	0
Glenwood	1.41%	1
Grand Central	0.00%	0
Grandview	1.41%	1
Greenbriar	1.41%	1
Mariposa	1.41%	1
Montecito Park	2.82%	2
Montrose Verdugo City	8.45%	6
Moorpark	0.00%	0
Oakmont	0.00%	0
Pacific Edison	1.41%	1
Pelanconi	0.00%	0
Rancho San Rafael	0.00%	0
Riverside Rancho	2.82%	2
Rossmoyne	12.68%	9
San Rafael Hills	0.00%	0
Scholl Canyon	0.00%	0
Somerset	0.00%	0
Sparr Heights	4.23%	3
Tropico	0.00%	0
Verdugo Viejo	5.63%	4
Verdugo Woodlands	9.86%	7

Vineyard	0.00%	0
Whiting Woods	7.04%	5
Woodbury	4.23%	3
Unsure / Prefer Not to Answer /	4.23%	3
I do not live in Glendale	8.45%	6
TOTAL		71

Initial Visioning Concepts: Wide Segments

Q3 Do you work in Glendale?

Answered: 71 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	60.56%	43
No	39.44%	28
TOTAL		71

Q4 Please rate the pictures above on a scale of 1 to 5.1 being "Not Like" and 5 being "Like"

Answered: 71 Skipped: 0

Initial Visioning Concepts: Wide Segments

	NOT LIKE	(NO LABEL)	(NO LABEL)	(NO LABEL)	LIKE	TOTAL	WEIGHTED AVERAGE
Image 04	11.27% 8	5.63% 4	12.68% 9	19.72% 14	50.70% 36	71	3.93
Image 05	9.86% 7	8.45% 6	19.72% 14	16.90% 12	45.07% 32	71	3.79
Image 06	12.86% 9	10.00% 7	15.71% 11	17.14% 12	44.29% 31	70	3.70
Image 07	5.63% 4	2.82% 2	11.27% 8	21.13% 15	59.15% 42	71	4.25

Q5 What else would you like to tell us about these early concepts?

Answered: 52 Skipped: 19

#	RESPONSES	DATE
1	Might be a good idea to keep bicycles and pedestrians separated (separate paths)	3/26/2022 3:01 PM
2	Wall height on Images 4-7 seem much more realistically portrayed than in Images 1-3, e.g. around C.V. Park. I intend to review flood data to get a notion of how ramps in-out of the channel might disturb hydraulics at peak flow. Debris flow would be a much more damaging and expensive hazard in such a newly developed channel. Design must include review of upstream capture capacity. I see the need to always separate bike and pedestrian traffic-ways for safety.	3/10/2022 2:34 PM
3	like option 6 the best because of the area for picnics, which is something I think a lot of people enjoy	3/5/2022 1:21 PM
4	I would have the same concerns as mentioned above plus how do they clean all the garbage out of the storm drains.	2/26/2022 11:10 AM
5	Include as many shade/native trees as possible.	2/23/2022 9:34 AM
6	Trees are a must!!! shade and lush greenery please. and a bike-only path is so important.	2/23/2022 6:49 AM
7	Would love to see artwork, especially mosaic artwork on a wall or two	2/20/2022 8:46 AM
8	DESPERATELY NEEDED - allows for more user friendly areas for walking and engaging the neighborhoods	2/17/2022 6:48 PM
9	Add more seating areas with divisions.	2/17/2022 6:00 PM
10	I like it. I wonder if there's opportunity for small business shacks? Or carts?	2/17/2022 4:59 PM
11	These look nice, and I really love the concept of opening up a continuous path for walking and biking through the city - to not have to share the path with motor vehicles is very appealing.	2/17/2022 4:06 PM
12	What is the timeline for the project for design to construction	2/17/2022 3:59 PM
13	the concept is good , and we are more then happy to help you with bikes that people can rent and drive next to the park.	2/17/2022 3:38 PM
14	These look great. Hopefully more Bike paths.	2/17/2022 3:34 PM
15	Like the sitting planters	2/17/2022 3:29 PM
16	Its important to separate a bike path from the pedestrian path for safety. While the playground concept looks good, adding a playground would change the experience of the walking through the path. Walkers might find it less tranquil and stress free. There are plenty of playgrounds in Glendale. This space should be used for a more tranquil walking experience.	2/17/2022 3:14 PM
17	The water portion is completely covered? That's what the pictures look like. Somehow that doesn't make sense.	2/17/2022 3:13 PM
18	1. Does anyone remember the time we had torrential rains and the fast flowing water in the wash was within a foot or two of the top of the wash? I do. How do the designs intend to handle a massive runoff? 2. What is the estimated cost and how does the City Council plan to pay for this development?	2/14/2022 4:22 PM
19	I would like to know how close this space would be to the adjacent properties, what the height of the pedestrian and bicycle pathways would be relative to those adjacent pathways, and whether the City anticipates aquiring any easements or fee rights in the adjacent properties via emminent domain.	2/12/2022 11:47 AM
20	The area already has so many playgrounds for children. We need to promote parks to adults getting out and moving.	2/9/2022 12:23 PM

21	It seems short sighted to not feature the water that gives the wash it's reason for existing. I would prefer something similar to what Burbank has done with its Burbank Western Wash but with more integration with the water and more native landscaping	2/7/2022 3:55 PM
22	like the use of lots of natural landscaping (since this is an area that inherently has water). Also like separated bike lanes and playground areas.	1/27/2022 4:29 PM
23	Please bike routes !	1/19/2022 9:38 PM
24	I like the ones with less concrete and more trees.	1/19/2022 7:29 PM
25	Winding pathways, shade, engagement (playgrounds, etc)	1/19/2022 5:50 PM
26	See comments in other section.	1/19/2022 5:39 PM
27	I like #7 best because it separates the cyclists from pedestrians which is safer for kids and older people. Those on bikes can ride faster and use the path for sport and transportation. If play areas like in image 4 could fit a few places along in areas with less parks, great. But not as important in areas where there's already beautiful parks.	1/19/2022 5:21 PM
28	Prefer the concepts with more natural greenery and offering multi-benefits to all kinds of mobility, native plant/animal habitat, reduction of urban heat island effect through nature-based solutions (native trees, plants), recharging/recycling water where possible, maybe even installing solar panels where appropriate to generate electricity for the community.	1/11/2022 1:59 PM
29	How will you prevent drug addicts and vagrants from camping there? There needs to be precautions explained to the citizens of the city how this will be prevented. The wash seems like a lovely idea, but if it isn't thought out completely, I'm very worried about keeping it clean and safe in the long run.	1/7/2022 11:13 AM
30	These concepts make me so excited to live in Glendale!!!! What a dream to have a space that would connect us to nature, neighbors and beautiful design!	1/3/2022 8:59 PM
31	Avoid lots of vertical walls that can be spray-painted and avoid lots of flay grassy areas. Green trees/plants with walking and bike paths are perfect.	1/1/2022 7:43 PM
32	As noted in comments on 'narrow segment designs,' these depictions are difficult to contextualize in existing settings, particularly how they would stand against residential uses. These may not be offering a sense of how safe, easy to police and maintain these approaches might be, nor do they convey how they might be lit at night or how they would maintain an optimal calm and minimize noise. Yup, they are preliminary sketches and hold promise but ...	12/27/2021 11:53 PM
33	I wouldn't have pedestrians use the same paths as bikes, skates, scooters and skateboards, etc.	12/27/2021 8:24 PM
34	how are lighting and safety being approached? Will the segments close at dusk for safety reasons? how would they be secured so criminal or homeless encampments would not take hold?	12/27/2021 8:09 AM
35	I like winding paths instead of straight.	12/26/2021 3:44 PM
36	Wilber Jimenez cueto jimenezcuerow@gmail.com Calle16a#23-63 aranjuez cali valle del cauca colombia Telefono #3164680779	12/23/2021 7:24 PM
37	I love the outdoor space - perhaps we could have workout equipment as well as a play space for children.	12/23/2021 6:47 PM
38	I don't really understand the scope of the wide sections and if they will be built up on a raised platform like the smaller sections or if there is a different plan in mind for those.	12/23/2021 3:55 PM
39	i like the vegetation and, again, the separation of bike from pedestrian paths. More visibility of the surrounding areas might be nice - maybe raising the platform more so it doesn't feel so walled in and potentially unsafe?	12/23/2021 2:04 PM
40	These early concepts look great. I hope the use of native plants is strongly preferred. Is there a way to keep the creek daylighted? Seems a shame to cover up moving water like this and would be a big draw for the community. Also, will there be areas where high water levels/overflow will be allowed to absorb into the ground?	12/22/2021 9:01 PM
41	My hope is that these concepts incorporate stormwater retention and reclamation.	12/21/2021 4:19 PM

42	I think having cyclists paths separated from pedestrian paths (where possible) will provide the best and safest experience for everyone involved. A physical barrier may not be necessary, but clear delineation is key, and if there's rec areas they should adjoin the pedestrian side, not the cyclist, to prevent cross-traffic. Overall LOVING it!	12/21/2021 10:16 AM
43	How often does water run deeper than 6 feet? Deeper than 6 feet would be above the false bottom. Your design seems too risky although it is quite bold. Your wide section pictures are pretty but do not show the relation of the paths to the water channel.	12/20/2021 9:37 PM
44	Too stark. Less cement and more natural materials would be preferred. Separate bike and pedestrian paths for safety.	12/20/2021 9:24 PM
45	Please restore the natural beauty of this place - do not cap or cover the River!!	12/20/2021 8:59 PM
46	I don't want to see people staying/hanging out in the wash - but they can pass on through.	12/20/2021 7:22 PM
47	The wider wash allows for a more open space, which is visually and physically more pleasing, but it's still a raised concrete platform.	12/20/2021 7:20 PM
48	I'd again love a distinction between the bike and walking areas. Also, I'd love to see some water/the river when we can.	12/20/2021 4:57 PM
49	Looking good so far! I'm excited to see this take place. We need safe bike paths.	12/20/2021 4:13 PM
50	The path in image #5 seems excessively curvy and also does not provide great demarcation between bike and pedestrian zones.	12/20/2021 4:05 PM
51	The entire problem with this project is that it will not do what it is being purported to do; it will not provide access to business and entertainment venues as it does not come close to Old Town Montrose or downtown Glendale except for a 1-mile stretch. It also does not come close to ANY entertainment venues. The majority of the Verdugo Wash runs directly through quiet, residential neighborhoods.	12/20/2021 3:52 PM
52	I love the concept. I just hope it will withstand a 100-year flood event. I am concerned it will all be wiped away when the big flood occurs again. Also, are we looking into ways to increase stormwater capture significantly in order to lessen the impact from floods?	12/20/2021 3:47 PM

Q6 Are you interested in receiving updates about the project? (enter email address below)

Answered: 34 Skipped: 37

Email results have been omitted to maintain participants' privacy

Verdugo Wash Visioning Survey

Q1 Do you live in Glendale?

Answered: 754 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	82.36%	621
No	17.64%	133
TOTAL		754

Q2 Which neighborhood do you live in?

Answered: 754 Skipped: 0

Verdugo Wash Visioning Survey
Oakmont
Pacific Edison
Pelanconi
Rancho San Rafael
Riverside Rancho
Rossmoyne
San Rafael Hills
Scholl Canyon
Somerset
Sparr Heights
Tropico
Verdugo Viejo
Verdugo Woodlands
Vineyard
Whiting Woods
Woodbury
Unsure / Prefer Not t...
I do not live in Glendale
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

ANSWER CHOICES	RESPONSES	
Adams Hill	3.45%	26
Brockmont	0.80%	6
Chevy Chase	1.72%	13
Citrus Grove	1.86%	14
College Hills	0.27%	2
Crescenta Highlands	12.20%	92
Downtown / City Center	3.18%	24
El Miradero	1.59%	12
Emerald Isle	0.80%	6
Fremont Park	0.27%	2
Glenoaks Canyon	1.33%	10
Glenwood	3.45%	26
Grand Central	0.53%	4
Grandview	0.66%	5
Greenbriar	0.40%	3
Mariposa	0.53%	4
Montecito Park	1.06%	8
Montrose Verdugo City	9.02%	68
Moorpark	0.13%	1
Oakmont	0.80%	6
Pacific Edison	0.40%	3
Pelanconi	1.06%	8
Rancho San Rafael	0.27%	2
Riverside Rancho	2.25%	17
Rossmoyne	7.03%	53
San Rafael Hills	0.40%	3
Scholl Canyon	0.00%	0
Somerset	0.40%	3
Sparr Heights	6.63%	50
Tropico	0.40%	3
Verdugo Viejo	1.46%	11
Verdugo Woodlands	7.03%	53

Vineyard	0.27%	2
Whiting Woods	10.74%	81
Woodbury	1.46%	11
Unsure / Prefer Not to Answer /	3.18%	24
I do not live in Glendale	13.00%	98
TOTAL		754

Verdugo Wash Visioning Survey

Q3 Do you work in Glendale?

Answered: 754 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	44.30%	334
No	55.70%	420
TOTAL		754

Q4 What is your age group?

Answered: 754 Skipped: 0

ANSWER CHOICES	RESPONSES	
Under 18	0.00%	0
18 - 24	3.32%	25
25 - 34	9.68%	73
35 - 44	24.93%	188
45 - 54	19.76%	149
55 - 65	23.87%	180
65+	18.44%	139
TOTAL		754

Q5 The Verdugo Wash will create a pedestrian and cyclists spine through the City of Glendale. It will also create new opportunities for connectivity, open space, recreation, and natural habitat. How important are each of the follow attributes to you?

Answered: 754 Skipped: 0

Verdugo Wash Visioning Survey

	NOT AT ALL IMPORTANT	(NO LABEL)	(NO LABEL)	(NO LABEL)	EXTREMELY IMPORTANT	TOTAL	WEIGHTED AVERAGE
Pedestrian and cyclist routes	12.40% 93	4.67% 35	7.60% 57	13.47% 101	61.87% 464	750	4.08
Creation of new open space	12.53% 94	3.87% 29	8.27% 62	16.93% 127	58.40% 438	750	4.05
Connectivity to other neighborhoods	17.80% 133	5.35% 40	16.60% 124	20.08% 150	40.16% 300	747	3.59
Incorporation of public art	19.73% 147	12.75% 95	22.42% 167	20.81% 155	24.30% 181	745	3.17
Natural habitat restoration	6.81% 51	3.87% 29	8.68% 65	15.49% 116	65.15% 488	749	4.28
Privacy from potential users of the Wash	12.69% 94	9.72% 72	22.67% 168	16.87% 125	38.06% 282	741	3.58
Active recreation (running, exercise, etc.)	10.71% 80	4.95% 37	15.26% 114	23.16% 173	45.92% 343	747	3.89
Passive recreation (picnic in a park, etc.)	12.20% 91	7.37% 55	19.30% 144	26.41% 197	34.72% 259	746	3.64
Social events and entertainment	22.15% 165	15.30% 114	25.37% 189	18.93% 141	18.26% 136	745	2.96
Public safety	1.88% 14	2.42% 18	9.15% 68	16.82% 125	69.72% 518	743	4.50
Impact to adjacent property	8.58% 64	8.58% 64	19.17% 143	19.30% 144	44.37% 331	746	3.82
Options for pets (dog park)	26.37% 197	12.58% 94	22.89% 171	17.40% 130	20.75% 155	747	2.94
Connections to transit	20.05% 149	11.71% 87	20.32% 151	21.40% 159	26.51% 197	743	3.23

Q6 How supportive are you of transforming the Verdugo Wash into a new opportunity for multi-modal transportation and public open space?

Answered: 754 Skipped: 0

	NOT AT ALL SUPPORTIVE	(NO LABEL)	(NO LABEL)	(NO LABEL)	VERY SUPPORTIVE	TOTAL	WEIGHTED AVERAGE
♡	18.04% 136	3.18% 24	7.29% 55	8.49% 64	63.00% 475	754	3.95

Q7 What else would you like to tell us about the Verdugo Wash Visioning?

Answered: 436 Skipped: 318

Q8 Are you interested in receiving updates about the project? (enter email address below)

Answered: 449 Skipped: 305

Survey - "My Vision of the Verdugo Wash"

Q1 Do you live in Glendale?

Answered: 625 Skipped: 0

Survey - "My Vision of the Verdugo Wash"

Q2 Which neighborhood do you live in?

Answered: 451 Skipped: 174

Survey - "My Vision of the Verdugo Wash"

Q3 Do you work in Glendale?

Answered: 276 Skipped: 349

Survey - "My Vision of the Verdugo Wash"

Q4 What is your age group?

Answered: 276 Skipped: 349

Survey - "My Vision of the Verdugo Wash"

Q5 Picture 1

Answered: 276 Skipped: 349

Survey - "My Vision of the Verdugo Wash"

Q6 Picture 2

Answered: 276 Skipped: 349

Survey - "My Vision of the Verdugo Wash"

Q7 Picture 3

Answered: 276 Skipped: 349

Survey - "My Vision of the Verdugo Wash"

Q8 Picture 4

Answered: 276 Skipped: 349

Survey - "My Vision of the Verdugo Wash"

Q9 Picture 5

Answered: 276 Skipped: 349

Survey - "My Vision of the Verdugo Wash"

Q10 Picture 6

Answered: 276 Skipped: 349

Survey - "My Vision of the Verdugo Wash"

Q11 Picture 7

Answered: 276 Skipped: 349

Survey - "My Vision of the Verdugo Wash"

Q12 Picture 8

Answered: 276 Skipped: 349

Survey - "My Vision of the Verdugo Wash"

Q13 Picture 9

Answered: 276 Skipped: 349

Survey - "My Vision of the Verdugo Wash"

Q14 Picture 10

Answered: 276 Skipped: 349

Q15 The new Verdugo Wash should cater to...

Answered: 276 Skipped: 349

Survey - "My Vision of the Verdugo Wash"
Children
57.61%
28.62%
13.77%
Teenagers
43.48%
34.06%
22.46%
Older Adults
53.26%
30.07%
16.67%
Wildlife
67.03%
22.10%
10.87%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
High Priority
Medium Pri...
Low Priority

Q16 Which modes of transportation should the new Verdugo Wash accommodate?

Answered: 276 Skipped: 349

Survey - "My Vision of the Verdugo Wash"
Shared Shuttle Service
14.86%
26.09%
59.06%
Delivery Robot
3.26%
13.77%
82.97%
Equestrian
5.80%
27.90%
66.30%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
High Priority
Medium Pri...
Low Priority

Q17 Which sorts of commutes should the new Verdugo Wash serve?

Answered: 276 Skipped: 349

Survey - "My Vision of the Verdugo Wash"
Local Neighborhood...
City-Wide Mobility
64.13%
18.12%
17.75%
36.96%
32.61%
30.43%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
High Priority
Medium Pri...
Low Priority

Q18 "A key outdoor amenity for us could be..."

Answered: 198 Skipped: 427

#	RESPONSES	DATE
1	well-maintained and landscaped bike paths that connect to relevant businesses and trails.	7/19/2022 2:31 PM
2	Natural wildlife corridor and flood control. Leave it alone	5/31/2022 10:14 PM
3	Bike lanes	5/31/2022 6:44 PM
4	My property backs up to the wash. It's already heavily used by neighborhood residents though I dont have all the access they do because, I don't know why! I'd rather the wash, that IS my backyard, be available to commuters rather than just neighborhood people. Open it to the people! Blake Lemons 2912 Oakendale Pl 91214	5/16/2022 5:52 PM
5	a community garden.	4/18/2022 9:40 PM
6	Very simple: trees and a walkable path. Don't underestimate the importance of trees to our health and comfort. (more trees = more shade during the hot summers). I currently live on North Verdugo Road, and we don't have many trees and the sidewalks are either terrible or nonexistent, which is dangerous for pedestrians given how fast cars drive on Verdugo Road. A bike path would also be nice for cyclists. I can envision it akin to Riverside Park in NYC, but with the native nature of Glendale and perhaps some wildlife crossings.	4/14/2022 2:51 PM
7	bike rentals, nature kiosks, exercise kiosks	4/11/2022 12:03 PM
8	Shaded areas	4/6/2022 8:44 PM
9	Natural setting	3/18/2022 7:15 PM
10	A clean and accessible place for residents to explore and wildlife to thrive.	3/7/2022 8:46 PM
11	I love the idea of biking into Glendale city centre from Montrose with out cars.	3/7/2022 6:12 PM
12	bike rental	3/5/2022 3:09 PM
13	outdoor areas to gather and exercise	3/5/2022 1:15 PM
14	hiking and biking trails and paved pathways. access to wildlife viewing.	3/1/2022 1:01 PM
15	Safe walking and biking trails	2/27/2022 8:26 PM
16	Access ONLY from CURRENTLY existing parks - ZERO NEW access.	2/27/2022 9:30 AM
17	This project should not exist. The wash was built to protect our city from massive floods and runs though many quiet neighborhoods.	2/27/2022 8:40 AM
18	Someplace to sit down.	2/26/2022 3:57 PM
19	Green infrastructure	2/25/2022 10:04 AM
20	More natural, open space.	2/25/2022 8:48 AM
21	Connecting different neighborhoods in our community	2/24/2022 5:07 PM
22	lots of nature: trees plants open space; places to walk and ride bikes; hiking trails	2/23/2022 11:15 AM
23	walking & cycling	2/22/2022 9:57 AM
24	bicycling lane just for bicyclists and pedestrian lane next to it like in Burbank with the awesome Chandler path	2/21/2022 9:16 PM
25	Go to the park that already exists	2/21/2022 5:20 PM
26	Beautify the very ugly wash	2/21/2022 3:06 PM
27	Safety from access, crime, and homeless	2/20/2022 11:55 PM

28	Bicycle path	2/20/2022 3:55 PM
29	Shaded rest areas	2/20/2022 10:33 AM
30	Against the project. Will attract crime and polution to residences adjacent to the wash	2/19/2022 2:44 PM
31	Bike path, splash pad, playground,picnic area/outdoor tables and benches,rock climbing walls for kids/adults.	2/19/2022 12:41 PM
32	more open green space.	2/19/2022 12:21 PM
33	Sound gardens, community gardens, play spaces for kids, Bike and running paths	2/18/2022 6:06 PM
34	Roller skate path, cycling	2/18/2022 6:01 PM
35	food and beverage vending within select sections	2/18/2022 2:21 PM
36	Connectivity between natural areas	2/17/2022 8:32 PM
37	walking and biking	2/17/2022 6:34 PM
38	Wasting taxpayer money!	2/17/2022 5:55 PM
39	Bike and pedestrian paths	2/17/2022 4:06 PM
40	Pedestrian nature walking	2/17/2022 4:00 PM
41	Safe, shady, grade separated bike paths. Access to small retail services along the way - bike repair and rental, cafes, boutiques	2/15/2022 8:02 PM
42	don't know	2/15/2022 12:34 PM
43	to just leave it alone	2/15/2022 10:40 AM
44	Improved bike access	2/14/2022 2:37 PM
45	More safe, park/green space.	2/13/2022 11:13 AM
46	nature appreciation in wider sections of the wash, like LA river is reclaiming	2/11/2022 10:39 PM
47	consideration of reality. Your pictures all show greenways near shopping and city environments, but in reality this pathway is through residential areas, not convenient to shopping or workplaces.	2/11/2022 11:36 AM
48	Enjoying wild life in a natural setting.	2/8/2022 9:28 AM
49	None, it is used as a wash, not a public place. Any funds used to create a public space out of the wash is a waste.	2/7/2022 5:21 PM
50	A city without a "developed" wash.	1/27/2022 5:24 PM
51	More open green space	1/27/2022 4:49 PM
52	an area that provides access for walking, cycling, etc surrounded by greenery. We would love for it to become an alternative to a park outing, with more to do as there is more distance to cover.	1/27/2022 4:40 PM
53	park space	1/7/2022 5:03 PM
54	Walking/biking paths	1/7/2022 2:15 PM
55	we have enough already. This is expensive and intrusive to existing property owners	12/29/2021 2:19 PM
56	Walking, bicycling	12/27/2021 11:38 PM
57	maintaining the original design intent of the wash: flood control during massive rain events. This needs to be fully understood by all participants so we don't have the loss of life the rain storms of the 1920-30s brought to the Glendale region	12/24/2021 10:54 AM
58	Not needed	12/21/2021 10:36 PM
59	Dining & Restaurants	12/20/2021 5:29 PM
60	To whom ever reads this we do not need this in our front lawns, why would we want to spend	12/20/2021 4:16 PM

	over 100 million dollars to rebuild a wash that will just bring in more traffic random people parking on our dead end streets.	
61	Trees and native shrubs.	12/20/2021 10:58 AM
62	Disability playground	12/19/2021 9:52 AM
63	This is a terrible project for all the neighborhoods that will be impacted. People bought property because the area was QUIET and SECLUDED. No one in these area likes the idea.	12/17/2021 12:39 PM
64	bicyle lanes	12/14/2021 3:13 PM
65	Trees and benches.	12/10/2021 2:42 PM
66	Biking connections to the larger regional grid and parks	12/10/2021 12:59 PM
67	Car use reduction	12/10/2021 12:17 PM
68	walking paths, dog parks	12/10/2021 11:56 AM
69	In the above photo, what happens when the water level is higher than the little center depression? How do people get down into there?	12/5/2021 9:28 PM
70	Leave it alone.....not in favor of project	12/5/2021 1:22 PM
71	Cycling lanes and walking paths	12/2/2021 9:24 AM
72	Small stage for outdoor plays & music	12/1/2021 2:52 PM
73	Enjoying the weather with friends -- grass or seating	11/30/2021 8:28 AM
74	A biking and walking trail from CV park to Shirleyjean Street. This would be inexpensive. No need to make this into a massive, neverending, infeasible project. Run it up the southwest side and it would abut almost zero residences.	11/28/2021 1:57 PM
75	that it is safe with no crime or homeless	11/21/2021 4:49 PM
76	A pedestrian/bike path	11/20/2021 3:14 PM
77	Trees, trees, and more trees	11/18/2021 8:42 AM
78	Saving the wildlife. Leaving flood channels free to do their intended work, controlling flood waters. Creating places to harness water to be used to ameliorate drought conditions would be of greater benefit to all.	11/17/2021 9:51 AM
79	1. connective corridors for wildlife, 2. spaces for collective native plant rehabilitation/stewardship by community members, 3. safe separated routes for green transportation (bike/ebike/walking/e-shuttles) for community members to travel within the neighborhood and to neighboring communities, 4. living, flowing streams with less/no concrete for the community to steward and enjoy	11/14/2021 10:28 AM
80	I see this as more about mobility than places to hang out, but that's just me. Preference for as much green space as possible, and as little new hardscape as we can get away with. Highest priority by far for cycling and pedestrian uses. In the past I have ridden my bike on the streets of Glendale, and it's just not safe.	11/13/2021 12:08 PM
81	wildlife protection and preservation of natural landscape of the valley	11/11/2021 11:53 PM
82	an exhaust-free, concrete-free, ecozone that helps reduce ambient heat and sequester carbon.	11/11/2021 9:38 PM
83	Unifying for all Glendale residents	11/11/2021 10:50 AM
84	Bike paths, picnic areas, recreation/relaxation areas	11/10/2021 10:01 PM
85	A safe space	11/10/2021 8:29 PM
86	Access to both the LA River and to most of Glendale away from cars.	11/10/2021 7:43 PM
87	being able to reduce the use of cars by having safe opportunities to use a bike or walk without fearing for one's life	11/10/2021 7:32 PM
88	Bike path and connection to LA River bike path	11/10/2021 7:27 PM

89	regular (non-electric) bike path connecting to LA River	11/10/2021 3:45 PM
90	Simple low-maintenance workout equipment	11/10/2021 2:05 PM
91	elevated bike path in case of light rains. LIGHTS	11/10/2021 1:54 PM
92	Drug traffic, burglary, and Homeless homesteading.	11/10/2021 10:57 AM
93	Small shops along route like the coffee shop at La river bed. Spoke bicycle cafe. Or Trails cafe in Griffith Park.	11/10/2021 10:46 AM
94	A greenway where bicyclists and pedestrians can safely ride and walk without conflicting paths while also recreating habitat and creating a safe space with viewing stations where people can pause.	11/10/2021 10:34 AM
95	Cafe's or picnic areas	11/10/2021 10:33 AM
96	a safe place for wildlife and walking/cycling	11/10/2021 10:21 AM
97	bike path, benches, green spaces	11/10/2021 9:51 AM
98	Nope	11/9/2021 7:05 PM
99	Adjacent recreational space	11/9/2021 1:10 PM
100	Design, this should feel like it was meant to provide a space for recreation. Paved walk and bike paths , bridges, safe space for family exploring. Night access with uplighting to beautify the urban city living.	11/9/2021 11:08 AM
101	genuine bicycle & pedestrian infrastructure	11/8/2021 7:13 AM
102	California Native Plantings	11/8/2021 5:59 AM
103	Using my bike instead of the car.	11/7/2021 10:10 PM
104	Biking	11/7/2021 7:32 PM
105	connecting bike paths, bird sanctuary, animal habitat	11/7/2021 6:12 PM
106	Allow Kabob outside	11/7/2021 12:54 PM
107	Green space, native plant, wildlife	11/7/2021 7:31 AM
108	Nature priority	11/7/2021 6:29 AM
109	No connection to LA river	11/6/2021 2:23 PM
110	Just having more green space!	11/6/2021 2:07 PM
111	Signage with information on the views, hyper local historic events, access to business services nearby, etc.	11/6/2021 12:17 PM
112	Educational and wayfinding signage, rest stops with seating, hydration stations, and bike repair stations. California native trees and landscaping and stormwater BMPs along the path is also desired as well as low level lighting that doesn't disturb wildlife or residents.	11/6/2021 10:54 AM
113	Green space and walking/biking trails	11/6/2021 9:37 AM
114	a flood control channel	11/5/2021 11:10 AM
115	Destination for Entertainment	11/4/2021 3:20 PM
116	Less concrete!!!! More seamless integration with neighborhood	11/4/2021 12:52 PM
117	A vehicle free place to ride a bicycle, scooter, etc that is not encroached upon by homeless encampments or next to freeway pollution or stagnant water.	11/4/2021 9:42 AM
118	A park area and a metro connection.	11/4/2021 12:51 AM
119	Anything with nature.	11/3/2021 10:57 PM
120	Safe biking infrastructure; painted bike lanes are not a satisfactory solution.	11/3/2021 6:23 PM
121	Kachipori	11/3/2021 5:05 PM

122	Free bike sharing Library and playgrounds	11/3/2021 3:39 PM
123	A well-lit path that allows for safe walks at night.	11/3/2021 3:15 PM
124	proper avenues for cycling where it's not dangerous. Being able to get from one end of the city to the other without the use of cars.	11/3/2021 3:06 PM
125	Visually striking architecture that fits into a natural landscape	11/3/2021 3:04 PM
126	Playground	11/3/2021 2:50 PM
127	Cycling	11/3/2021 2:43 PM
128	Biking/walking trail	11/3/2021 1:24 PM
129	Bike paths	11/2/2021 11:09 AM
130	I really don't like the idea of having a bicycle pad and back on my house I am posts on this project 100%	11/1/2021 12:58 PM
131	Not supportive of this project, this is something that the vast majority of the local residents do not want or need	11/1/2021 8:58 AM
132	picnic areas with shade	10/31/2021 3:59 PM
133	safety	10/31/2021 11:35 AM
134	A separate bike and pedestrian path from vehicular traffic.	10/30/2021 12:53 PM
135	Please don't make my backyard a park!!!! I will move out of Glendale and never shop here again AND tell my 70,000 FaceBook friends what a nightmare Glendale is!	10/29/2021 6:15 PM
136	bike paths and water features	10/29/2021 6:02 PM
137	Safe Pedestrian corridor doe local neighborhood, not as a destination spot for others. Would be nice to be more visually walkable with more shade trees.	10/29/2021 5:48 PM
138	...a lack of intrusion on the existing serenity.	10/29/2021 3:19 PM
139	Natural walking areas	10/29/2021 2:44 PM
140	place to safely ride bikes and go for walks.	10/29/2021 2:32 PM
141	open space, lots of trash cans	10/29/2021 2:28 PM
142	None - against the wash being a bike trailing Sycamore Woods and Whiting woods	10/29/2021 2:17 PM
143	Leaving things as they are.	10/29/2021 2:07 PM
144	A chanel that would serve pedestrians while percolating water into the aquifer.	10/29/2021 10:09 AM
145	Biking to downtown LA	10/28/2021 9:44 PM
146	Proper flood control to avoid the severe damage and loss of life as experienced in Glendale before chanelizing of the wash. As this happened so long ago, I fear the acute danger may be overlooked at a time when we are to.d global weather catastrophe is upon us. Safety has to remain the primary priority.	10/28/2021 9:43 PM
147	useful both as a transit way and as a destination itself like a gathering space with outdoor events, art installations, etc.	10/28/2021 9:34 PM
148	a place to cycle without automotive traffic	10/27/2021 7:52 PM
149	None. Leave it as is. It's only going to attract homeless tents to neighborhoods like Whiting Woods that currently have NO WASH TRAFFIC	10/27/2021 12:20 PM
150	park like atmosphere	10/27/2021 9:51 AM
151	A return to a more natural setting. Restoring as much of the wash to its original splendor as possible while still providing function.	10/27/2021 8:56 AM
152	shared space for natural community building	10/27/2021 8:20 AM
153	Accessibility, a long nature walk, safe biking lane	10/27/2021 7:53 AM

154	recreation	10/27/2021 7:36 AM
155	Separate areas for pedestrians and cyclists and equestrians if you will allow them. No shuttles or vehicles! But access to the street for public transportation is fine. Only a few areas of the city are zoned for horses, so it probably isn't a realistic path for horses - especially if you want to promote people getting out of their cars and biking or walking to work.	10/27/2021 7:29 AM
156	A way to get to griffith park that isn't the freeway, so pedestrians and cyclists could get there. The only bridges are in equestrian areas	10/26/2021 11:15 PM
157	Clean, safe, outdoor space that allows people to enjoy the outdoors without fear of getting run over by bicycles or cars.	10/26/2021 11:04 PM
158	pathways for bikes/e-bikes, electric scooters, and pedestrians	10/26/2021 7:38 PM
159	open green space	10/26/2021 4:55 PM
160	Restroom access along the path	10/26/2021 10:30 AM
161	large outdoor spaces that people in apartments can enjoy (similar to how people in houses can enjoy their yards).	10/26/2021 9:21 AM
162	a walking/biking path	10/25/2021 11:39 PM
163	Bike riding paths.	10/25/2021 10:15 PM
164	Historical art and sculpture displays with seating close by. Native plant gardens. Walkable trails.	10/25/2021 9:57 PM
165	Totally opposed to this	10/25/2021 7:50 PM
166	Nurturing the nature and environment and the health and well being of the people to benefit the community as a whole.	10/25/2021 6:56 PM
167	Safe bike path	10/25/2021 6:36 PM
168	Urban art; concessions; picnic facilities; open space; TONS of trees	10/25/2021 4:08 PM
169	Paths to walk and bicycle. Tables and chairs to sit and enjoy the scenery. A place where families can go with their kids.	10/25/2021 4:01 PM
170	Bike lane	10/25/2021 3:43 PM
171	paved, dedicated pedestrian/bike-only lanes	10/25/2021 3:41 PM
172	Cycle paths & shaded rest stops	10/25/2021 3:33 PM
173	Somewhere to walk that isn't just a concrete barrier. Love these pictures and feel like there's so much potential to make the Wash a desirable place.	10/25/2021 3:02 PM
174	Preservation of a tranquil environment	10/25/2021 2:46 PM
175	Cycling paths from La Crescenta to LA River bike path, which would include a bridge over to West side of LA river.	10/25/2021 2:21 PM
176	no cycling path	10/25/2021 2:18 PM
177	Walking, exercise stations. In the downtown area sports fields.	10/25/2021 2:13 PM
178	run/walk/bike path with green spaces (please see belt line in Atlanta for reference)	10/25/2021 1:23 PM
179	Outdoor meeting space	10/25/2021 12:49 PM
180	The thing I would love to see is to get rid of the concrete in Verdugo Wash and go back towards the natural river that it used to be.	10/25/2021 12:46 PM
181	a safe, green bike path that connects local neighborhoods to parks in a beautiful way. I currently feel very cut off from other neighborhoods by dangerous streets.	10/25/2021 12:24 PM
182	A safe place to ride a bicycle for kids and adults.	10/25/2021 12:20 PM
183	cycling and nature walks	10/25/2021 12:03 PM
184	We are very satisfied with the current level of amenities within the city. No need for any more.	10/25/2021 11:57 AM

185	a car traffic free area to ride, run & walk	10/25/2021 11:50 AM
186	We are very satisfied with our current amenities. There is no need to create more in a Wash that is intended to carry water during storms like today!	10/25/2021 11:50 AM
187	a continuous multi-user path punctuated by park-like areas that are only accessible by low-impact modes of transportation. I.e., encourage users to travel in the space to use specific areas.	10/25/2021 11:30 AM
188	A safe bike path with no cars.	10/25/2021 11:19 AM
189	None of these things. It should stay the way it is without a path through established neighborhoods	10/25/2021 11:16 AM
190	Safe walking and biking pathways through the city and into LA and Burbank.	10/25/2021 10:46 AM
191	Bike paths, bike paths, bike paths.	10/25/2021 10:16 AM
192	Bike/walking paths taking advantage of the wash	10/25/2021 10:13 AM
193	bike paths	10/25/2021 10:07 AM
194	walking trails	10/25/2021 10:04 AM
195	class 1 bike paths that allow biking around the city in separate lanes	10/25/2021 10:03 AM
196	Walking and biking paths with no danger from cars	10/25/2021 10:02 AM
197	not spending money on feasibility studies	10/23/2021 5:49 PM
198	safe walking / biking trails; restoration of natural habitat and flora; alleviation of the eyesore of the current concrete wash	10/23/2021 1:09 PM

Q19 "The Verdugo Wash should be unique and memorable because...?"

Answered: 182 Skipped: 443

#	RESPONSES	DATE
1	it is beautifully landscaped and maintained and safe for families and children to use recreationally	7/19/2022 2:31 PM
2	It works	5/31/2022 10:14 PM
3	It accommodates to all types of commute	5/31/2022 6:44 PM
4	there should not be any place cleaner than this. It should be taken care of very well and it should be a place where animals and plants are not removed from their homes.	4/18/2022 9:40 PM
5	The Verdugo Woodlands is already a special place with the Verdugo mountains, trees, and historic architecture. The new wash should seek to emulate that as much as possible in its design. We need to prioritize green spaces with native plants, walkable spaces, and wildlife crossings. We should not prioritize vehicles. A few commercial spaces (small cafes/teahouses) could be ok, but they should NOT dominate the space.	4/14/2022 2:51 PM
6	the ability to be surrounded by nature in the middle of Los Angeles	4/11/2022 12:03 PM
7	It expresses harmony with local ecology	4/6/2022 8:44 PM
8	People can be in nature and move around the neighborhood easily	3/18/2022 7:15 PM
9	Glendale is special and Southern California is naturally an optimal place for natural beauty to exist and be maintained. Any location where that can be enhanced is wonderful.	3/7/2022 8:46 PM
10	A mountain bike track would be great.	3/7/2022 6:12 PM
11	family centric for locals	3/5/2022 3:09 PM
12	it's a beautiful location with a lot of access points and great bridges	3/5/2022 1:15 PM
13	it can provide opportunities for recreation and valuable wildlife habitat.	3/1/2022 1:01 PM
14	It highlights native flora and fauna	2/27/2022 8:26 PM
15	Wildlife access ONLY	2/27/2022 9:30 AM
16	This project should not exist. The wash was built to protect our city from massive floods and runs though many quiet neighborhoods.	2/27/2022 8:40 AM
17	It has a natural feel	2/25/2022 10:04 AM
18	We should be proud of the area we live in.	2/25/2022 8:48 AM
19	its location and history	2/23/2022 11:15 AM
20	it could fit in to various neighborhoods	2/22/2022 9:57 AM
21	Glendale doesn't have a bicycling and pedestrian specific space yet like in Burbank with Chandler path. Right now I don't feel safe to ride anywhere except sidewalks.	2/21/2022 9:16 PM
22	We don't currently have any paths for separated bike, ped and vehicles	2/20/2022 11:55 PM
23	Glendale threads the needle of being a suburban urban city	2/20/2022 10:33 AM
24	Against the project.	2/19/2022 2:44 PM
25	Glendale is such a diverse family community, it should reflect that.	2/19/2022 12:41 PM
26	it beautifies an area while still preserving the fundamental purpose of a storm channel and preserving the privacy and safety of nearby residents.	2/19/2022 12:21 PM
27	It is safe even if it rains....	2/18/2022 6:01 PM

28	It provides a recreational corridor between regional open spaces	2/17/2022 8:32 PM
29	It should be left alone and not improved to provide little benefit to the community	2/17/2022 5:55 PM
30	beauty incorporated into a functional design	2/17/2022 4:06 PM
31	Friendly nature and walking areas with plenty of open light	2/17/2022 4:00 PM
32	It will connect Glendale and get people together.	2/15/2022 8:02 PM
33	don't know	2/15/2022 12:34 PM
34	It never happened	2/15/2022 10:40 AM
35	Improved bike safety (by providing an alternative to surface streets)	2/14/2022 2:37 PM
36	It's an opportunity to create urban park space - in the section between Central and Kenilworth- in a city that is becoming increasingly dense in adjacent areas (south of the 134 fwy)	2/11/2022 10:39 PM
37	it will destroy existing protected oaks and sycamores and wildlife, and pose a fire danger to surrounding neighborhoods.	2/11/2022 11:36 AM
38	Beautiful untouched outdoor space blending with exposure to more people exploring it sensibly	2/8/2022 9:28 AM
39	This should not even be considered. There are better uses for tax money.	2/7/2022 5:21 PM
40	Because it keeps structures safe from catastrophic flooding.	1/27/2022 5:24 PM
41	Art opportunities	1/27/2022 4:49 PM
42	It's location and layout is so unique, and should definitely be highlighted for such.	1/27/2022 4:40 PM
43	it is a natural river with reinforced wall. we should keep the character of teh river	1/7/2022 5:03 PM
44	of it's beautiful setting	1/7/2022 2:15 PM
45	it is a flood channel , not a recreation area carved into people's back yards who don't want it.	12/29/2021 2:19 PM
46	Merging nature and city	12/27/2021 11:38 PM
47	it has a purpose to serve	12/24/2021 10:54 AM
48	Should not exist	12/21/2021 10:36 PM
49	Its access to other parts of Glendale	12/20/2021 5:29 PM
50	I have already began the procress of going door to door to boycott this.	12/20/2021 4:16 PM
51	Our local ecology is unique and memorable.	12/20/2021 10:58 AM
52	It's smack dab in the middle of this city.	12/19/2021 9:52 AM
53	Leave it alone and do not do this project.	12/17/2021 12:39 PM
54	It doesn't need to be unique and memorable, just convenient for bicycles, like the Ballona Creek Bike Path	12/14/2021 3:13 PM
55	there are co-benefits of exercise via walking, cycling, community building, and reducing air pollution with carbon-free methods of transport.	12/10/2021 2:42 PM
56	It is a vast unused space that could be transformed into something beautiful that also solves transportation issues in a green/sustainable way while preserving and helping native flora and fauna.	12/10/2021 12:59 PM
57	It's beautiful	12/10/2021 12:17 PM
58	nature	12/10/2021 11:56 AM
59	This looks dangerous. Where do people go once they're at this bank?	12/5/2021 9:28 PM
60	It could serve as a safe bike and walk path	12/2/2021 9:24 AM
61	It is provides a practical solution for safe and eco / health friendly commuting, beautifies the and strengthens the community by providing space for healthy outdoor activities with family	12/1/2021 2:52 PM

	and friends, intentionally supports the local eco-system by utilizing local native plants and plant communities, honors the original Native American tribes that lived on this land by implementing their wisdom in designing plant communities, rain water gardens, and signs & plaques that note their history. The Verdugo Wash should be a leader in eco / green/ sustainable design. I highly recommend consultation with Shawn Maestretti and Leigh Adams of Studio Petrichor. I just took a 4 part class with them and it changed my entire outlook and understanding of sustainable building possibilities.	
62	We are the Jewel City :)	11/30/2021 8:28 AM
63	It's an easily available natural resource.	11/28/2021 1:57 PM
64	it will be safe with no crime or homeless	11/21/2021 4:49 PM
65	It adds smog scrubbing trees and other plants to an area that is now concrete covered	11/18/2021 8:42 AM
66	it protects the wildlife.	11/17/2021 9:51 AM
67	exemplary stewardship of the land on which we all share and live on	11/14/2021 10:28 AM
68	It will serve as a testament to the fact that architecture can be beautiful and efficient. It should no longer be an eye sore to the people of Glendale	11/11/2021 11:53 PM
69	it is a beautiful greenway traversing the city that encourages people to run, walk, skip and use it instead of their cars to get around the city	11/11/2021 9:38 PM
70	It will be unique and memorable, just because it exists.	11/11/2021 10:50 AM
71	it connects disparate parts of the city and brings communities together in new and creative ways	11/11/2021 9:05 AM
72	It should show a history of Glendale. Highlight details of Glendale History - areas of interest	11/10/2021 10:01 PM
73	then people will treasure it	11/10/2021 8:29 PM
74	It would be a necessary green space in Glendale for all to get through Glendale.	11/10/2021 7:43 PM
75	it helps save the environment by having safe ways to walk or bike--it helps the city to catch up to forward thinking cities and communities	11/10/2021 7:32 PM
76	Way to get around the city without a car. Nice place to recreate locally.	11/10/2021 7:27 PM
77	it can be a well-designed regular (non-electric) bike path connecting to the LA River	11/10/2021 3:45 PM
78	It's a place for health and exercise in a high-traffic (high GHG emissions) area.	11/10/2021 2:05 PM
79	Natural scenery similar to those up in the hills around it. Placards similar to those found in the sports complex loop hike which talks about local wildlife, plant life, and history of Glendale area.	11/10/2021 1:54 PM
80	Public art space along the wall space	11/10/2021 11:43 AM
81	If you are going down the wash there is nothing to see but concrete and peering into peoples front and backyards till you get to the open space just above the Oakmont Country Club.	11/10/2021 10:57 AM
82	Glendale connects so many cities.	11/10/2021 10:46 AM
83	It touches almost every part of the City of Glendale and will better connect the community to the rest of Los Angeles.	11/10/2021 10:34 AM
84	It integrates the local natural habitat, is beautiful and fun to visit!	11/10/2021 10:33 AM
85	it is a good mix of city and wilderness life.	11/10/2021 10:21 AM
86	it should be walkable and connect different glendale neighborhoods	11/10/2021 9:51 AM
87	Fish	11/9/2021 7:05 PM
88	It touches so many parts of Glendale	11/9/2021 1:10 PM
89	Right now its waisted space whereas it could be multi use and benefit the community. Another option is gardens that help feed local community or homeless, or could be of a benefit to local restaurants, etc. if done right as part of multiuse city effort.	11/9/2021 11:08 AM

90	Reflect our native Tongva culture and all the cultures that make us what we are today.	11/8/2021 5:59 AM
91	of it's natural beauty and urban convenience.	11/7/2021 10:10 PM
92	it is part of glendale	11/7/2021 7:32 PM
93	right now it is ugly and anything to change that would be great.	11/7/2021 6:12 PM
94	Its clean	11/7/2021 12:54 PM
95	Green space, native plant, wildlife	11/7/2021 7:31 AM
96	It is important for wildlife.	11/7/2021 6:29 AM
97	It is only accessible to Glendale residents.	11/6/2021 2:23 PM
98	It should preserve the natural, back to nature aspect of the foothill communities.	11/6/2021 2:07 PM
99	Water is life.	11/6/2021 12:17 PM
100	It will encourage walking, biking, and use of public transit in Glendale as well as motivate folks to be outdoors more.	11/6/2021 10:54 AM
101	It doesn't make sense to progress with something less.	11/6/2021 9:37 AM
102	no, not really	11/5/2021 11:10 AM
103	Bring more people together	11/4/2021 3:20 PM
104	Of the length and different personalities of different sections	11/4/2021 12:52 PM
105	It is a hidden gem which locals can reliably enjoy without competing for space with special events (Like with the Rose Bowl) or an unsustainable number of tourists (see the Griffith Observatory).	11/4/2021 9:42 AM
106	It makes life convenient for residents first and foremost.	11/4/2021 12:51 AM
107	Glendale residents deserve it.	11/3/2021 10:57 PM
108	We don't need overbearing and costly car infrastructure dividing our neighborhoods. Think beyond the car & set a national example of a people-centered community.	11/3/2021 6:23 PM
109	Is good	11/3/2021 5:05 PM
110	It's for families	11/3/2021 3:39 PM
111	You have local artists that paint murals along the pathway and show off Glendale's creative heart!	11/3/2021 3:15 PM
112	it appeals to a broad range and allows for improvement within the neighborhood.	11/3/2021 3:06 PM
113	most of the parks in Glendale are boring and this gives us a chance to have one really cool park	11/3/2021 3:04 PM
114	Unique design	11/3/2021 2:50 PM
115	Nature	11/3/2021 2:43 PM
116	Glendale needs more than the commercial Americana zone to identify with	11/2/2021 11:09 AM
117	It's not it's a mistake	11/1/2021 12:58 PM
118	Retain natural	10/31/2021 8:39 PM
119	of its views, native plants, pleasant walkways, and water features	10/31/2021 3:59 PM
120	safety	10/31/2021 11:35 AM
121	It is functional and safe.	10/30/2021 12:53 PM
122	It should be left ALONE!	10/29/2021 6:15 PM
123	it connects us to nature	10/29/2021 6:02 PM
124	Neighborhood friendly	10/29/2021 5:48 PM

125	...it keeps our neighborhoods from being washed away as happened a century ago.	10/29/2021 3:19 PM
126	It should add to and integrate into the existing environment.	10/29/2021 2:44 PM
127	it's a fun place to enjoy being outside	10/29/2021 2:32 PM
128	it cost hardly anything to build.	10/29/2021 2:28 PM
129	None - against the wash being a bike trailing Sycamore Woods and Whiting woods	10/29/2021 2:17 PM
130	It carries water.	10/29/2021 2:07 PM
131	of its natural beauty, not a lot of architectural constructions.	10/29/2021 10:09 AM
132	More nature good	10/28/2021 9:44 PM
133	?	10/28/2021 9:43 PM
134	it runs from a suburban/semi-wilderness area where wildlife is prioritized, and is an important connector to a vibrant semi-urban area.	10/28/2021 9:34 PM
135	it should be more attractive than the existing concrete channel, and also return to our aquifer some or a lot of the water which is now rushing out to the ocean.	10/27/2021 7:52 PM
136	It's fine the way it is. Spend money elsewhere.	10/27/2021 12:20 PM
137	this is glendale	10/27/2021 9:51 AM
138	The Verdugo mountains hold a beauty that rivals many more well know areas. This project will give a chance to display that natural beauty. The more condensed areas can be developed into urban gathering areas utilizing what for most of the year is wasted space.	10/27/2021 8:56 AM
139	It exhibits the shared cultures that enrich our city	10/27/2021 8:20 AM
140	It can be a very valuable car-free transit area for people to bring kids and or pets	10/27/2021 7:53 AM
141	a beautiful safe place to unwind and exercise, play, read and behold the beauty.	10/27/2021 7:36 AM
142	Some of the pictures are confusing. There is too much bacteria in that water for people to enter. During rainstorms it is too dangerous. Are you proposing closing it off from it's intended *drainage* purposes? It should be memorable as a recreational area and also cater to those biking to work to save the streets from traffic and the air from more pollution.	10/27/2021 7:29 AM
143	It is ecologically minded and preserves and enhances the wetlands	10/26/2021 11:15 PM
144	It's natural more like the Pasadena Arroyo.	10/26/2021 11:04 PM
145	let's make it into more than the water catch basin it is now. Give it back to nature	10/26/2021 10:43 PM
146	parts of can be made beautiful (my absolute favorite part of Seoul was what they have done with Chong-gye-cheon stream...parts of it were nearly magical at night)	10/26/2021 7:38 PM
147	The community will be able to enjoy a multiplicity of green, and other spaces (a la the highline) for a safe, eco, healthy, sustainable and inspiring experience that knits together vast areas of the community that are currently cutoff and divided by concrete.	10/26/2021 4:55 PM
148	It could be a downtown Glendale gathering spot	10/26/2021 10:30 AM
149	of the unique balance of wild and open spaces and commerce spaces Glendale has	10/26/2021 9:21 AM
150	It connects a largely urban area to nature original to the area.	10/25/2021 10:15 PM
151	Highlight the historical aspects of the area. Provide wildlife corridors.	10/25/2021 9:57 PM
152	Totally opposed to this	10/25/2021 7:50 PM
153	it will benefit the community for so many decades to come without leaving negative trace.	10/25/2021 6:56 PM
154	It ties together parts of the city	10/25/2021 6:36 PM
155	It helps make Glendale a destination for all of Southern California	10/25/2021 4:08 PM
156	It is important for families to have good memories about living in Glendale.	10/25/2021 4:01 PM

157	Access to walking trail	10/25/2021 3:43 PM
158	it preserves and facilitates wildlife and the natural landscape while providing long-route recreational opportunities for users	10/25/2021 3:41 PM
159	large concrete walls could have visually pleasing murals. water features could be incorporated into rest areas	10/25/2021 3:33 PM
160	It could be something that links together all of Glendale.	10/25/2021 3:02 PM
161	Glendale residents deserve a place to connect their parks and recreation areas.	10/25/2021 2:21 PM
162	it shoul;d remain a wash only	10/25/2021 2:18 PM
163	Design	10/25/2021 2:13 PM
164	maintain native plants	10/25/2021 1:23 PM
165	It is a river in Los Angeles County that moved from being concrete lined toward being the natural river that it used to be.	10/25/2021 12:46 PM
166	there's very few things like it in the area and it could be part of L.A.'s Olympic infrastructure.	10/25/2021 12:24 PM
167	People will want to visit. It should be a safe place for teens to hang out. There should be an emphasis on preserving nature and consideration for the environment.	10/25/2021 12:20 PM
168	it reflects the beauty and environmental integrity of the Woodlands	10/25/2021 12:03 PM
169	The Wash should not be touched. It should be used as intended ONLY. To carry water during storms.	10/25/2021 11:57 AM
170	we have a lot of talent to make it that way	10/25/2021 11:50 AM
171	The Wash should function as it was intended. It was never intended, and should never be intended, to be a path for people.	10/25/2021 11:50 AM
172	it is a signal that the Los Angeles area is evolving its car-dominated and cement-covered culture into one that is more balanced with nature.	10/25/2021 11:30 AM
173	It will be the only bike path in Glendale, Burbank or Pasadena that is safe and beautiful and that you can use to get from place to place.	10/25/2021 11:19 AM
174	Nothing to say here. This will not be of any benefit to our neighborhood	10/25/2021 11:16 AM
175	It's fun and useful.	10/25/2021 10:46 AM
176	It is an opportunity to utilize the geography and much of the beauty of the area that we don't currently have	10/25/2021 10:13 AM
177	The Verdugo Wash is unique and memorable, rich with history.	10/25/2021 10:12 AM
178	It can bring a relaxing oasis to our urban community.	10/25/2021 10:04 AM
179	It is a beautiful and memorable part of Glendale	10/25/2021 10:03 AM
180	Beautiful natural scenery and peacefulness	10/25/2021 10:02 AM
181	it's not. it's a wash	10/23/2021 5:49 PM
182	it should showcase how to provide beautiful, useful spaces for people while also honoring nature and the purpose that the wash serves to keep our area safe during flooding. We CAN design spaces that are functional AND beautiful - let's use this as an opportunity to showcase that!	10/23/2021 1:09 PM

Q20 "The Verdugo Wash could become the 'IT PLACE' to visit, if we had..."

Answered: 190 Skipped: 435

#	RESPONSES	DATE
1	neighborhood support, regular city-led maintenance	7/19/2022 2:31 PM
2	Poor leadership. No one wants this.	5/31/2022 10:14 PM
3	Better public transportation	5/31/2022 6:44 PM
4	a clean, natural, safe environment for all of our plants and animals.	4/18/2022 9:40 PM
5	We need more green, walkable spaces in Glendale, not more commerical build-up. Central Glendale already has the Americana, galleria, and luxury apartments and restaurants. We need more green spaces to walk, run, bike, picnic, and play. We also need more wildlife crossings. As climate change gets worse, both humans and animals will suffer. Please focus on replacing concrete with native habitat wherever possible.	4/14/2022 2:51 PM
6	more involvement with nature	4/11/2022 12:03 PM
7	Safe cycling and pedestrian routes for kids	4/6/2022 8:44 PM
8	Empathizes nature and encourages people to enjoy outdoor recreation	3/18/2022 7:15 PM
9	A fun bike path with access to coffee shops and local restaurants, that integrates into the natural environment and allows local animals to thrive.	3/7/2022 8:46 PM
10	A mountain bike track.	3/7/2022 6:12 PM
11	access to Montrose	3/5/2022 3:09 PM
12	native, sustainable plants mixed with modern, organic architecture	3/5/2022 1:15 PM
13	paved pathways and unpaved, wildlife viewing, mildly graded access between Montrose and downtown.	3/1/2022 1:01 PM
14	I'm completely against this. I see only headaches, distress and burglaries for everyone who lives on the wash.	2/27/2022 9:30 AM
15	This project should not exist. The wash was built to protect our city from massive floods and runs though many quiet neighborhoods.	2/27/2022 8:40 AM
16	The area we live in has beautiful mountains with trails and vistas. It would be great to have continuity to those areas in the look and feel of the Verdugo wash	2/24/2022 5:07 PM
17	lots of hiking and biking trails; nature; less asphalt	2/23/2022 11:15 AM
18	beautiful open spaces	2/22/2022 9:57 AM
19	bicycling and pedestrian specific designated lanes.	2/21/2022 9:16 PM
20	A WELL DESIGNED space that allows full containment of rain events with recreational opportunities while ensuring the safety of participants as well as adjacent neighbors. Not sure how you will achieve this. Super important.	2/20/2022 11:55 PM
21	A better understanding of the various cultural make ups of all its residents	2/20/2022 10:33 AM
22	Against the project.	2/19/2022 2:44 PM
23	Safe places for kids to enjoy outside biking and walking without being worried about cars rushing by.	2/19/2022 12:41 PM
24	millions more to spend than we have and didn't have to worry about a hundred year flood that would wipe out our investment.	2/19/2022 12:21 PM

25	Separate bike and pedestrian paths for safety, nature space that invites walking, running , and biking	2/18/2022 6:06 PM
26	cycling tours with buses to take us back up the hill	2/18/2022 6:01 PM
27	pedestrian and cyclist separation, family oriented with very very high levels of public safety	2/18/2022 2:21 PM
28	Access to the wash and the ability to use it as a corridor between recreational sites like parks and open spaces	2/17/2022 8:32 PM
29	a walking and biking path	2/17/2022 6:34 PM
30	Left it alone! Huge waste of money. Some things should be left unchanged under the influence of progress.	2/17/2022 5:55 PM
31	establish a bike path superhighway for the entire city.	2/17/2022 4:06 PM
32	Something like the highline in Manhattan	2/17/2022 4:00 PM
33	Access to safe, protected Class 1 bike lanes	2/15/2022 8:02 PM
34	don't know	2/15/2022 12:34 PM
35	not built a walkway for transients to set up a tent city with beautiful views.	2/15/2022 10:40 AM
36	Improved bike access	2/14/2022 2:37 PM
37	altered where it exists, so it's closer to city highlights and not along residential neighborhoods.	2/11/2022 11:36 AM
38	Well though out Environmental impact	2/8/2022 9:28 AM
39	no crime, it was clean, homeless don't live there, families feel safe, trash is picked up	2/7/2022 9:08 PM
40	This is a bad idea. Encouraging people to use this space for anything else other than what was intended is a terrible waste of money.	2/7/2022 5:21 PM
41	...if we had no vision of how this proposal will trash our city.	1/27/2022 5:24 PM
42	Art and green space	1/27/2022 4:49 PM
43	Easy access from our home, and it was filled with fun adventures that can be found by foot or by bike! Surrounded by greenery is a plus, as it would be great for the environment.	1/27/2022 4:40 PM
44	nearby amenities	1/7/2022 2:15 PM
45	it will become the IT PLACE for criminal activity and homeless camps impacting properties adjacent to and near the wash. The police have no resources to patrol it and it will be a lawless zone.	12/29/2021 2:19 PM
46	Public safety-security / calm	12/27/2021 11:38 PM
47	lots of outdoor string lighting and places for food vending	12/27/2021 11:17 AM
48	?	12/24/2021 10:54 AM
49	Not needed	12/21/2021 10:36 PM
50	More entertainment at the Was	12/20/2021 5:29 PM
51	This will not be n it place i guarantee crime rates will go up home burglers will go up aswell let alone the trash and dog feces. And whomever was in charge of making the making what it would look like never lived in our community let alone raise children around here.	12/20/2021 4:16 PM
52	it built.	12/20/2021 10:58 AM
53	Security, restrooms, disability access	12/19/2021 9:52 AM
54	Do NOT make this the IT place. THAT IS THE PROBLEM. Do not do this project.	12/17/2021 12:39 PM
55	We don't need to over-engineer it. Let's just have a safe bike path then upgrade over time.	12/14/2021 3:13 PM
56	Accessible walking, cycling and green space.	12/10/2021 2:42 PM
57	Bike lanes and green spaces	12/10/2021 12:59 PM

58	Less of a mind towards money and more of a mind towards nature	12/10/2021 12:17 PM
59	fish	12/10/2021 11:56 AM
60	Where do people go when they reach this drop off?	12/5/2021 9:28 PM
61	bike lanes, native plant restoration, places to sit and watch nature, and businesses on the bank of the creek/wash that look onto water	12/5/2021 6:05 PM
62	no thank you	12/5/2021 1:22 PM
63	Music	12/2/2021 9:24 AM
64	Enough lighting & security. Safe & clean public restrooms. Cafes and food carts along the route. Protected bike / ebike/ scooter / e scooter/ skateboard / & pedestrian paths that provide practical routes through our neighborhoods and areas conducive to social gatherings = picnic tables and entertainment space. A couple of clean and well kempt dog parks - no dirt! Yuck! - Would be a huge bonus. Dogs on leashes should definitely be allowed to run alongside their owners.	12/1/2021 2:52 PM
65	Seating -- no BBQ	11/30/2021 8:28 AM
66	No desire to make it the "it place."	11/28/2021 1:57 PM
67	a safe place to go with no homeless	11/21/2021 4:49 PM
68	A truly scenic pathway through the city	11/18/2021 8:42 AM
69	This survey is not addressing the worries of the neighborhoods being impacted by the Verdugo Wash project. If you look at the L.A. River walk, you will see graffiti and homeless people. This would definitely not give you an IT PLACE to visit.	11/17/2021 9:51 AM
70	clean, safe, green ways for people living in and around the neighborhood to get from one place to another that doesn't rely on having one's own car. for example: safe/separated bike paths, walking paths, electric shuttles to name a few ideas. large trees and shaded paths are also desirable and necessary in adapting to a changing/warmer climate.	11/14/2021 10:28 AM
71	Many clean trails and LOTS OF SHADE to walk and bike through. If park space is created picnics and community gathering will make the destination extremely desirable and enjoyable	11/11/2021 11:53 PM
72	many easy access points and pedestrian bridges crossing from one side to the other over it so that people have views of the beautiful wash itself and the mountains to the north.	11/11/2021 9:38 PM
73	MAINTENANCE, must be friendly, clean, pleasant, not yucky.	11/11/2021 10:50 AM
74	easy transit access, variety of open spaces connected with low-intensity commercial space	11/11/2021 9:05 AM
75	Bike paths, connectivity, beautiful and relaxing place to be	11/10/2021 10:01 PM
76	Great pedestrian and cyclist access combined with green space that people can use for recreation.	11/10/2021 7:43 PM
77	safe ways to commute via bike or on foot	11/10/2021 7:32 PM
78	Access points, a path and vegetation	11/10/2021 7:27 PM
79	many access points, well designed regular (non-electric) bike path that connects to the LA River, lots of usable space and good public art/murals	11/10/2021 3:45 PM
80	The general area along the Verdugo Wash between Central and Glendale is very unfriendly to pedestrians and bicyclists. Central, Brand and Glendale are all "IT" places, but making the Verdugo Wash accessible to these retail stores and offices would provide a natural flow to these areas. Currently the wash is more of a traffic hinderance and blight.	11/10/2021 2:05 PM
81	A space (like a stage) which could be used to host small scale events	11/10/2021 1:54 PM
82	Serene with nature at the forefront	11/10/2021 11:43 AM
83	no use for it. It was built for flood control not a pedestrians and bicyclist! Living next to the wash for 35 years I've seen the water more than halfway full many times when it rains. Anything the city plans to build or plant in the sections with vertical concrete walls will eventually end up in the LA River. It will rain again!	11/10/2021 10:57 AM

84	Safe, wide bike lanes.	11/10/2021 10:46 AM
85	Improved and created green spaces along the Wash where communities can pause and connect with nature. We need to create access to the Wash and support local businesses and communities to thrive along the Wash.	11/10/2021 10:34 AM
86	Access and cool places to hang out and visit with friends and family...venue for live performances, food...	11/10/2021 10:33 AM
87	easy access and a safe environment	11/10/2021 10:21 AM
88	a bike path!	11/10/2021 9:51 AM
89	Not sure	11/9/2021 7:05 PM
90	Connections to make it useful beyond just a one-and-done visit or been-there-done-that experience.	11/9/2021 1:10 PM
91	Connecting it to our city as another means of green transpo - the idea of going from Montrose to Glendale and then connecting with Burbank and LA is a huge win for green energy and making LA more of a connected city	11/9/2021 11:08 AM
92	Riverwalk in San Antonio has river tours. We could have tour shuttles Our tour would showcase art in the Wash and California Native plants.	11/8/2021 5:59 AM
93	a clean, safe and well-lit path.	11/7/2021 10:10 PM
94	bike route	11/7/2021 7:32 PM
95	I don't want it to become the "it place" to visit. I just want it to be aesthetically pleasing, have lots of bike paths and running paths, areas to sit and watch birds, and to re-wild as much of the wash as possible.	11/7/2021 6:12 PM
96	Outdoor kabob pits, free and open to all	11/7/2021 12:54 PM
97	Please don't make it the IT place to visit	11/7/2021 7:31 AM
98	Safe for humans and animals	11/7/2021 6:29 AM
99	Safety	11/6/2021 2:23 PM
100	Carefully planned amenities that didn't overcrowd the space and create a tremendous amount of congestion.	11/6/2021 2:07 PM
101	a small fraction of the amenities noted here	11/6/2021 12:17 PM
102	Segments that reflected the character of the many neighborhoods along its path through art, amenities, planting, etc. The greenway is well-maintained and safe at all times of day. Provides connectivity to transit and neighborhood destinations and does not intrude negatively into adjacent neighborhoods.	11/6/2021 10:54 AM
103	More green space and easy to access.	11/6/2021 9:37 AM
104	why would I want that at all?	11/5/2021 11:10 AM
105	Fun, gathering, something new entertaining	11/4/2021 3:20 PM
106	Cool lights, having a performance platform, rises platforms for when it rains and the wash gets full, and a decent amount of risen platforms to have food vendors, etc for night markets	11/4/2021 2:54 PM
107	Multiple points of access, and multiple points of interest.	11/4/2021 12:52 PM
108	I don't want it to be the IT PLACE.	11/4/2021 9:42 AM
109	A subway stop/metro connection (that is not a bus).	11/4/2021 12:51 AM
110	Well maintained area.	11/3/2021 10:57 PM
111	something close to the city center	11/3/2021 6:27 PM
112	Don't throw good money after poor car infrastructure. Make our city beautiful and transportation accessible for non-car users. Need to slow down traffic with visual aids e.g narrow lanes by adding trees closer to roadways and adding curbed separation between car traffic vs	11/3/2021 6:23 PM

	pedestrian/cycling users. Follow Norway's example of bike friendly, people friendly infrastructure.	
113	Whores	11/3/2021 5:05 PM
114	Local Sculptors from Glendale	11/3/2021 3:39 PM
115	A few small nearby restaurants, a coffee shop with local flair, small businesses not far from the trail that cater to folks who want to walk to a meal or a local outing.	11/3/2021 3:15 PM
116	proper lighting, paths, greenery and a clean / safe environment.	11/3/2021 3:06 PM
117	Really cool architecture, good bike paths, and a big park that doesn't have encampments	11/3/2021 3:04 PM
118	Cool designs	11/3/2021 2:50 PM
119	Free flowing bike and walking path	11/3/2021 2:43 PM
120	Food stands—people go where the food is! And concerts and movie screenings.	11/2/2021 11:09 AM
121	We don't need a bicycle path on the wash spend the money for another important resource	11/1/2021 12:58 PM
122	To not deal with this project	11/1/2021 8:58 AM
123	No never. Not that special	10/31/2021 8:39 PM
124	durable signage with historical markers along with viewpoint gathering places	10/31/2021 3:59 PM
125	safety	10/31/2021 11:35 AM
126	I view this project as creating a journey not a destination.	10/30/2021 12:53 PM
127	NOTHING! Leave it alone!	10/29/2021 6:15 PM
128	bike paths leading to the center of glendale and transit stations	10/29/2021 6:02 PM
129	Don't want it to be an IT a place in our area. Could be more of a spot near Verdugo Park or CV Park.	10/29/2021 5:48 PM
130	...lousy city leadership.	10/29/2021 3:19 PM
131	Not sure I want it to be the IT PLACE in our local neighborhood but a scenic way to get there.	10/29/2021 2:44 PM
132	food/drinks along the wash for people to ride bikes/walk to for dinner. Like food carts and bars along a path	10/29/2021 2:32 PM
133	only neighbors using it	10/29/2021 2:28 PM
134	None - against the wash being a bike trailing Sycamore Woods and Whiting woods	10/29/2021 2:17 PM
135	Why would we want this?	10/29/2021 2:07 PM
136	sustainable regional landscaping around natural swales and pathways	10/29/2021 10:09 AM
137	Freeway park cap over 134	10/28/2021 9:44 PM
138	Unique spaces that meld the urban and the natural. It would be ideal if it also connected to the LA River bike path.	10/28/2021 9:34 PM
139	safe and convenient access, that is also safe and convenient for those living near the wash	10/27/2021 7:52 PM
140	We don't need more people to come to Glendale who don't live here. We already have some of the biggest malls in the Southland and plenty of parks. This is a total waste of money and will wind up like the LA Wash - Full of homeless encampments, graffiti and trash.	10/27/2021 12:20 PM
141	a place that emphasizes social gatherings	10/27/2021 9:51 AM
142	A good mix of wild natural areas and more developed areas which emphasize the wash as a waterway rather than a storm drain. More than just a means for people to commute, but an escape. A place where you could ride your bike home from work and forget about your day, or take your children to explore and see birds that most people never imagine live in our creeks and rivers.	10/27/2021 8:56 AM
143	integrated transit through the wash so it becomes a part of the everyday commute of residents	10/27/2021 8:20 AM

	in the city	
144	Walking/biking along a river with ducks/fish/plants	10/27/2021 7:53 AM
145	a horse trail, bike trail, walking trail and most important lush beautiful landscaping. It must be a safe place.	10/27/2021 7:36 AM
146	...proper policing to keep the homeless from turning it into a tent city. Keep it beautiful AND safe.	10/27/2021 7:29 AM
147	Better access and more ecological protections	10/26/2021 11:15 PM
148	The vision to keep it a simple natural space.	10/26/2021 11:04 PM
149	paths that connect to amenities, restaurants, bus stops. make it a recreation place	10/26/2021 10:43 PM
150	greenery and art	10/26/2021 7:38 PM
151	the vision, and political will, capital and imagination to create a sustainable, and safe greenspace beloved by locals and visitors alike.	10/26/2021 4:55 PM
152	paths and transit connections	10/26/2021 10:30 AM
153	connections to all the other parts of the city	10/26/2021 9:21 AM
154	Safe and clean bike paths that families could navigate.	10/25/2021 10:15 PM
155	The improved amenities as suggested here. Safe.	10/25/2021 9:57 PM
156	Totally opposed to this project. This survey is totally one way with no way to articulate thoughts and feedback	10/25/2021 7:50 PM
157	Beautify as a breath of fresh air with nature to nourish the well being of the community young and old.	10/25/2021 6:56 PM
158	A bike path that is well-lit, safe, and clean	10/25/2021 6:36 PM
159	State of the art infrastructure	10/25/2021 4:08 PM
160	Bicycle paths, walk paths, food vendors for quick bites. Tables and benches. Art works, fountains.	10/25/2021 4:01 PM
161	Multiple points of entry/exit	10/25/2021 3:43 PM
162	paved pedestrian/bike-only paths that were safe and maintained	10/25/2021 3:41 PM
163	IF it would connect to LA River/Griffith Park cycle path	10/25/2021 3:33 PM
164	Safety	10/25/2021 3:10 PM
165	I think if it had food stands or live music and art exhibits it would be a great place to have everyone around LA (and outside of LA) come to visit.	10/25/2021 3:02 PM
166	natural features, no trash, no graffiti	10/25/2021 2:46 PM
167	Cycling/pedestrian paths to connect parks, i.e Crescenta park, Verdugo park, etc.	10/25/2021 2:21 PM
168	should never become the "it" place to visit	10/25/2021 2:18 PM
169	Sports fields in the downtown area.	10/25/2021 2:13 PM
170	connections to neighborhood pockets that offered restaurants and shops while serving as am exercise/commuter path for pedestrians and cyclists (agains, see belt line in Atlanta for reference)	10/25/2021 1:23 PM
171	Space for outdoor vendors and community events.	10/25/2021 12:49 PM
172	Natural river instead of concrete lined.	10/25/2021 12:46 PM
173	an accessible space that is safe for children / families at all hours of the day.	10/25/2021 12:24 PM
174	Outdoor music venue, public art	10/25/2021 12:20 PM
175	amenities, cafes, safety	10/25/2021 12:03 PM

176	"It Place" for potential criminal behavior? Break-ins of the homes that abut the Wash? New places for the Unhoused??	10/25/2021 11:57 AM
177	a safe & fun way to get around	10/25/2021 11:50 AM
178	"It place"? What is this question intended to convey?	10/25/2021 11:50 AM
179	features that ensured safety for all users during all times of the day.	10/25/2021 11:30 AM
180	A safe bike path that is beautiful.	10/25/2021 11:19 AM
181	We do not need an IT place in our neighborhood, period	10/25/2021 11:16 AM
182	Aesthetically pleasing biking and walking	10/25/2021 10:46 AM
183	Dedicated bike paths and dedicated walking (pedestrian) paths. Would be a fantastic addition to our neighborhood here and a wonderful opportunity to not only link various neighborhoods but also allow a safe space to ride bikes, run, and walk, without constant fear of being hit by a speeding vehicle. I bike almost every day and I've been hit by a vehicle multiple times in the last year, due to reckless driving here in Rossmoyne, including hit and runs. Thankfully no major injury so far, but it is still a very dangerous activity to embark upon here in Glendale due to dangerous and reckless speeding vehicles.	10/25/2021 10:15 AM
184	I don't want it to be the IT PLACE, I just want it to be a recreational outlet for Glendale residents	10/25/2021 10:13 AM
185	neighborhood accessibility	10/25/2021 10:07 AM
186	scenic routes woven throughout the city	10/25/2021 10:04 AM
187	Bike paths, pedestrian paths, benches, shade, canal side dining.	10/25/2021 10:03 AM
188	Places to gather and rest, skating/scooting areas	10/25/2021 10:02 AM
189	it will never be a place to visit	10/23/2021 5:49 PM
190	a truly stellar design that integrates form and function, meets the environmental needs of the wash, and gives the neighborhood a safe and beautiful place to exercise	10/23/2021 1:09 PM

Survey - "My Vision of the Verdugo Wash"

Q39 Do you work in Glendale?

Answered: 70 Skipped: 555

Survey - "My Vision of the Verdugo Wash"

Q40 What is your age group?

Answered: 70 Skipped: 555

Survey - "My Vision of the Verdugo Wash"

Q41 Picture 1

Answered: 70 Skipped: 555

Survey - "My Vision of the Verdugo Wash"

Q42 Picture 2

Answered: 70 Skipped: 555

Survey - "My Vision of the Verdugo Wash"

Q43 Picture 3

Answered: 70 Skipped: 555

Survey - "My Vision of the Verdugo Wash"

Q44 Picture 4

Answered: 70 Skipped: 555

Survey - "My Vision of the Verdugo Wash"

Q45 Picture 5

Answered: 70 Skipped: 555

Survey - "My Vision of the Verdugo Wash"

Q46 Picture 6

Answered: 70 Skipped: 555

Survey - "My Vision of the Verdugo Wash"

Q47 Picture 7

Answered: 70 Skipped: 555

Survey - "My Vision of the Verdugo Wash"

Q48 Picture 8

Answered: 70 Skipped: 555

Survey - "My Vision of the Verdugo Wash"

Q49 Picture 9

Answered: 70 Skipped: 555

Survey - "My Vision of the Verdugo Wash"

Q50 Picture 10

Answered: 70 Skipped: 555

Q51 The new Verdugo Wash should cater to...

Answered: 70 Skipped: 555

Survey - "My Vision of the Verdugo Wash"
Children
52.86%
35.71%
11.43%
Teenagers
38.57%
41.43%
20.00%
Older Adults
47.14%
44.29%
8.57%
Wildlife
78.57%
14.29%
7.14%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
High Priority
Medium Pri...
Low Priority

Q52 Which modes of transportation should the new Verdugo Wash accommodate?

Answered: 70 Skipped: 555

Survey - "My Vision of the Verdugo Wash"
Shared Shuttle Service
12.86%
44.29%
42.86%
Delivery Robot
2.86%
11.43%
85.71%
Equestrian
7.14%
27.14%
65.71%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
High Priority
Medium Pri...
Low Priority

Q53 Which sorts of commutes should the new Verdugo Wash serve?

Answered: 70 Skipped: 555

Survey - "My Vision of the Verdugo Wash"
Local Neighborhood...
City-Wide Mobility
70.00%
20.00%
10.00%
47.14%
30.00%
22.86%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
High Priority
Medium Pri...
Low Priority

Q54 "A key outdoor amenity for us could be..."

Answered: 53 Skipped: 572

#	RESPONSES	DATE
1	local plant and animal ecosystem, immersive so it transports you into nature	2/24/2022 5:22 PM
2	Ability to see wildlife in its natural habitat.	2/22/2022 10:22 AM
3	Leave as is. It will attract transients.	2/19/2022 2:32 PM
4	encouraging	2/17/2022 3:22 PM
5	seating and safe / accessible walkways	2/17/2022 3:08 PM
6	flood control	2/9/2022 8:12 AM
7	cycling, walking	2/8/2022 11:15 AM
8	bike path	1/24/2022 8:54 PM
9	Bike and walking paths.	12/26/2021 3:38 PM
10	More bike paths	12/20/2021 4:45 PM
11	... shade/shelter from the heat that blends with the natural environment.	12/13/2021 3:30 PM
12	Connected walking trails between neighborhoods that are safe and beautiful.	12/11/2021 7:19 PM
13	Places to sit and lots of native CA plants (preferably with some informational markers to teach people about them) and a SHADED bike and walking path. Please consider a system such as the Permavoid system to capture storm water for your plant basins - to avoid having to do much supplemental drip irrigation. It also helps with compaction of tree roots by bikes and walking paths that abut tree root areas.	12/10/2021 6:23 PM
14	Integrating nature successfully with walkways-less concrete more nature.	12/10/2021 2:24 PM
15	pedestrian/bike path	12/3/2021 10:07 PM
16	Bike paths	11/18/2021 2:31 PM
17	This is a terrible idea the wash should only be used for flood control. My house backs up to wash. When I bought my house this was and still is a residential neighborhood. Not zone for this project.	11/18/2021 12:59 PM
18	connecting with nature	11/14/2021 9:50 AM
19	Easy access	11/10/2021 10:13 AM
20	being able to safely traverse the city without having to drive, and reach key destinations in our neighborhoods.	11/9/2021 7:29 PM
21	Bench areas	11/9/2021 2:58 PM
22	An amphitheater for outdoor concerts surrounded by hanging gardens and beer gardens :)	11/4/2021 10:31 AM
23	Sitting areas, benches and tables	11/4/2021 9:41 AM
24	Safety	11/4/2021 8:39 AM
25	Access to the wash	11/4/2021 7:20 AM
26	Public restrooms	11/4/2021 12:21 AM
27	Accessibility for disabled people. Shade. Some seating areas throughout. No standing water for mosquitos	11/3/2021 11:55 PM
28	Walking and cycling trails.	11/3/2021 11:20 PM

29	A big pretty park	11/3/2021 10:15 PM
30	Safe and ecologically friendly bikeways	11/3/2021 10:13 PM
31	Green and easy to navigate for all no electric scooters or Bikes and water stations and shade	11/3/2021 8:48 PM
32	Bike and walking paths similar to frog town river marsh. The wash should be returned to its natural state. Pocket parks and independent small businesses should dot the route.	11/3/2021 7:33 PM
33	significant outdoor seating that is not solely limited to picnic tables and park benches with no meaningful shade.	11/3/2021 6:27 PM
34	Green space	11/3/2021 5:47 PM
35	Clean restrooms + lots of shade & native plants.	11/3/2021 5:21 PM
36	Benches/seats for the elderly and Parents w/young kids.	11/3/2021 5:11 PM
37	Outdoor brewery or cafe	11/3/2021 4:45 PM
38	Bike path	11/3/2021 3:46 PM
39	Walking Path	11/3/2021 3:34 PM
40	water features, ample seating, and shade	11/3/2021 2:28 PM
41	Smooth dirt trails for gentle walking. Occasional benches. If cyclist paths are to be created, they MUST be distinctly separate from pedestrian paths.	11/3/2021 10:40 AM
42	Nature. Though I believe assets would be better used elsewhere. There are 6.3% of GUSD children that are homeless. Funds should be used for the less fortunate not the privileged.	10/31/2021 3:09 PM
43	Leaving the tranquil canyon neighborhoods out of the plan. There is already a bike path on Honolulu	10/30/2021 2:55 PM
44	a bike/hike path that connected to other bike/hike paths in the area; shady rest areas along the way would be much appreciated.	10/28/2021 11:57 AM
45	a community garden.	10/28/2021 11:48 AM
46	A space where local residents can go to and go for a walk, stop at a small riverside cafe for a cup of coffee with a neighbor	10/27/2021 10:13 AM
47	natural open spaces	10/26/2021 8:37 PM
48	Wetland areas for wildlife viewing; large meadow areas for being outside; safe trails to get around the city on bike, on foot, etc that is completely separate from cars / vehicles	10/26/2021 6:21 PM
49	walking and cycling paths. areas to restore biodiversity.	10/25/2021 9:47 PM
50	children's play space	10/25/2021 5:21 PM
51	Shared space with water and trees. Seoul, Korea comes to mind.	10/25/2021 4:04 PM
52	Bicycle routes specific to entrances into the Verdugo Wash	10/25/2021 12:33 PM
53	Bike paths that connect all the neighborhoods the Verdugo wash passes through	10/25/2021 10:14 AM

Q55 "The Verdugo Wash should be unique and memorable because...?"

Answered: 51 Skipped: 574

#	RESPONSES	DATE
1	it is a connective tissue across north and south Glendale, into other cities and across environmental ecosystems	2/24/2022 5:22 PM
2	It enables humans to see wildlife and the area as it once looked.	2/22/2022 10:22 AM
3	Leave as is. It will attract transients	2/19/2022 2:32 PM
4	it will give people place to go and have fun outside	2/17/2022 3:22 PM
5	Would give residents a place to congregate/get exercise	2/17/2022 3:08 PM
6	without flood control, key outdoor amenities get destroyed.	2/9/2022 8:12 AM
7	recreation mobility away from automobile traffic	2/8/2022 11:15 AM
8	bike path	1/24/2022 8:54 PM
9	It offers scenic views and pedestrian and bike transportation routes in neighborhoods and the city.	12/26/2021 3:38 PM
10	Because it is! Currently its a wasted opportunty. It has the potential to support many activities, be both directly useful and beautiful, an asset instead of a zero (or liability, depending on your opinion). It has the potential to transform Glendale.	12/20/2021 4:45 PM
11	... of the connections the visitor would feel to the natural environment.	12/13/2021 3:30 PM
12	It will preserve and highlight the ecological diversity of Southern California while making Glendale a unique destination as well.	12/11/2021 7:19 PM
13	It connects things people want to do without requiring a car! And in a beautiful, contemporary and creative way that connects with nature and emphasizes our beautiful natural landscape. The project could have a throughline, but every section could have it's own little twist that makes it unique! Like a discovery - ok, where are we going now...and then peaceful parts where you can escape the noise of the city and connect with nature. And please integrate plenty of shade in creative ways. If there is a connection somewhere, I really think it would be smart to have a solar covered portion that you can bike through - where all that solar could go to one of GWP's feeders along the way. It could be an open tunnel area for shade and POWER.	12/10/2021 6:23 PM
14	It will help bring the community together for positive outdoor and social interaction which in turn will help promote better connection and well being in Glendale.	12/10/2021 2:24 PM
15	of its beauty	12/3/2021 10:07 PM
16	It should cater to outdoor activities that are the result of human power, no e bikes, carts, scooters, horses, etc.	11/18/2021 2:31 PM
17	Its there to protect us from floods and only floods.	11/18/2021 12:59 PM
18	it respects nature around it and its neighboring communities	11/14/2021 9:50 AM
19	it should be an escape from the city.	11/10/2021 10:13 AM
20	it can be a transformative project for all of Glendale, not serving just one neighborhood but by everyone and for everyone, all while paying respect to our local ecology.	11/9/2021 7:29 PM
21	Nature, less build environment.	11/9/2021 2:58 PM
22	in the end you will remember the times spent outdoors, not indoors. And those who like spending times indoors are the same ones who dismiss this beautiful concept.	11/4/2021 10:31 AM

23	It's apart of our city	11/4/2021 9:41 AM
24	It represents Glendale	11/4/2021 8:39 AM
25	It will serve as an example for the LA River restoration	11/4/2021 7:20 AM
26	It helps and preserves local wildlife	11/4/2021 5:22 AM
27	It's construction was a net zero climate build, that is ecologically and economically friendly that serves communities of all backgrounds.	11/4/2021 12:21 AM
28	It's clean and accessible to people of different ages	11/3/2021 11:55 PM
29	it can be beautiful and a place where people can gather to work and play.	11/3/2021 11:20 PM
30	Glendale residents and families deserve it	11/3/2021 10:13 PM
31	Should it , if your gonna make memorable add native art and history that we stole for the original inhabitants including Mexicans but not Spaniards or Missions	11/3/2021 8:48 PM
32	It offers a great walk/bike ride with amenities for eating, picnicking and independent retail shops.	11/3/2021 7:33 PM
33	Proximity to urban development	11/3/2021 6:33 PM
34	it is a sustainable place that fosters environmental goals while providing more greenspace to visitors and residents.	11/3/2021 6:27 PM
35	Glendale is naturally beautiful. Man-made additions should follow that example.	11/3/2021 5:21 PM
36	Because it is!	11/3/2021 5:11 PM
37	Slice of nature through the city	11/3/2021 3:46 PM
38	It's balance of beauty and function	11/3/2021 3:34 PM
39	Glendale needs more iconic and memorable locations.	11/3/2021 2:28 PM
40	It feels like wilderness. No urbanization no shops no paving over everything, no intrusive bright lights. This is a beautiful area to enjoy NATURE. It should NOT be the Glendale version of City Walk San Antonio.	11/3/2021 10:40 AM
41	It should be used for the purpose intended - the wash becomes a torrent in a heavy rain.	10/30/2021 2:55 PM
42	its unique high desert topography, geology, and wildlife should be highlighted and celebrated.	10/28/2021 11:57 AM
43	of its plant and animal diversity and leisure bike paths.	10/28/2021 11:48 AM
44	It can provide a natural connective pathway across a portion of the City where residents can have outdoor activities, commute to work or just relax	10/27/2021 10:13 AM
45	it integrates the natural landscape with recreational park land and commuting routes that encourage pedestrian and bike traffic	10/26/2021 8:37 PM
46	A place to get to around the city safely but also places to do things no other city has like allow skateboarding, equestrians, and things to do along the trail. Have it go to Verdugo Park with it's skatepark, to Montrose with it's shopping and farmers market, to Golden Road brewery, the LA river, etc	10/26/2021 6:21 PM
47	it connects people to the natural environment.	10/25/2021 9:47 PM
48	It represents the largest undeveloped in the area.	10/25/2021 5:21 PM
49	It is a waterway running through Glendale that can be repurposed for public space and green watershed.	10/25/2021 4:04 PM
50	It presents the history of our area and could be made to add water to our ground water instead of flowing into the ocean	10/25/2021 12:33 PM
51	It also functions as a beautiful nature habitat for native plants and wildlife	10/25/2021 10:14 AM

Q56 "The Verdugo Wash could become the 'IT PLACE' to visit, if we had..."

Answered: 51 Skipped: 574

#	RESPONSES	DATE
1	less concrete and more natural vegetation and irrigation.	2/24/2022 5:22 PM
2	... beautiful, natural scenery.	2/22/2022 10:22 AM
3	Leave as is. It will attract transients	2/19/2022 2:32 PM
4	it	2/17/2022 3:22 PM
5	bike paths	2/17/2022 3:08 PM
6	a lack of flood control and made the news during the next catastrophic rains.	2/9/2022 8:12 AM
7	mobility infrastructure	2/8/2022 11:15 AM
8	bike path	1/24/2022 8:54 PM
9	Pop up parks, sidewalk cafes, outdoor theater/music spaces.	12/26/2021 3:38 PM
10	It has to be inviting, and properly tied into the adjacent areas (don't make the mistake Boston made when they took down the southeast expressway...)	12/20/2021 4:45 PM
11	More local art work like the mosaic at Deukmejian park. Also an ecological bent to encourage respect for our natural world.	12/11/2021 7:19 PM
12	A way to cycle onto it from the Riverside Rancho that did not involve ANY time on the streets with cars...we would likely bike if we could get there with our 13 year old. That could be possible if the path connects to the LA River path and would be amazing! We would love to use it to get to various eating establishments, a quite, shady spot to read, a basketball court for the kiddo, chess tables for the seniors, a movie theatre, many things! We'd need a place to put our bikes to go into establishments. Would be great to have outside places to sit and eat on the way. An outdoor stage destination would be very cool too - if you could get there on a bicycle and enjoy an afternoon of music or dance for example, that would be very nice. I also would love more artwork integrated that is inspired by the nature of our area, such as the new mosaic by Hannah Maximova just installed at Deukmejian. I don't know if it's possible - but any connections for kids to their schools so they can stay safe on it getting from home to school would be great too. Lastly, thinking of my less mobile mom, I think having a way for folks that can't walk too far to be able to enjoy it too would be good. If we had like a park and ride kind of thing...where you park, pop on an electric trolley and that takes you to the an entrance point to the path, that might be nice - or some parking that you can make use of to join the path if you are coming from farther away.	12/10/2021 6:23 PM
13	A beautiful oasis which serves the communities need for exercise, socializing, commuting and fun inventive dining and cafe options.	12/10/2021 2:24 PM
14	pedestrian/bike path	12/3/2021 10:07 PM
15	Public support for the project and a realistic timeline for completion.	11/18/2021 2:31 PM
16	If this passes it will ruin my quality of life. It will attract crime, homelessness, noise and great risk to the environment .	11/18/2021 12:59 PM
17	as little impact on the environment as possible	11/14/2021 9:50 AM
18	Beautiful trails	11/10/2021 10:13 AM
19	a willingness to embrace a project that brings us all together, and celebrate our environment and bring to focus our reliance on local resources like the Wash.	11/9/2021 7:29 PM
20	free access	11/9/2021 2:58 PM

21	Small cafes	11/6/2021 11:03 AM
22	Normal residents who didn't complain and feel threatened by a great outdoor fortress	11/4/2021 10:31 AM
23	A location where nature and people can enjoy in harmony	11/4/2021 9:41 AM
24	More family activities	11/4/2021 8:39 AM
25	A noted landscape designer create the surrounding habitat	11/4/2021 7:20 AM
26	Trails to walk	11/4/2021 5:22 AM
27	Public restrooms and plenty of space to relax and play. Throw a cute cafe in the middle of it and allow small locally owned vendors to sell food, hold free public outdoor movie screenings, and for the love of god, keep police presence at a minimum. Make this a space all people can enjoy. Make the place feel unique and not like one of those cheaply made cube condos being built everywhere that "look sleek" but are just the embodiment of a slim sans sarif font. You have the ability to make something amazing! Do it!	11/4/2021 12:21 AM
28	Maybe like bike rentals or a farmers market sometimes	11/3/2021 11:55 PM
29	lots of nature, like a little oasis in the city.	11/3/2021 11:20 PM
30	It doesn't need to be "fancy" and "cool" or waste a ton of water. It just needs to be safe and respectful	11/3/2021 10:13 PM
31	We don't want a it place we want a Glendale Niegborhood place we pay enough to enjoy it , please don't make it a shooting location	11/3/2021 8:48 PM
32	Pocket parks, urban art, independent cafes and perhaps a brewery.	11/3/2021 7:33 PM
33	water features and extensive shade. The instagram, social media worthy moments and places will come naturally after that. A place that both works for commuting and congregation.	11/3/2021 6:27 PM
34	Scenic hiking & safety.	11/3/2021 5:21 PM
35	lights and access (bikes, skates, etc.	11/3/2021 5:11 PM
36	an outdoor venue or music space or a handful of outdoor-oriented breweries, restaurants and cafes	11/3/2021 4:45 PM
37	Beaity	11/3/2021 3:46 PM
38	Places to gather	11/3/2021 3:34 PM
39	outdoor event space	11/3/2021 2:28 PM
40	I dont want it to be the IT place! Keep it natural! Not a new crowded Disneyland!	11/3/2021 10:40 AM
41	Making quiet neighborhoods into "IT PLACE" to visit is completely wrong, we purchased out home to live in a tranquil canyon, not a recreational area that will bring noise and crime to our neighborhoods	10/30/2021 2:55 PM
42	lighting at night and separate walkways and bike paths.	10/28/2021 11:57 AM
43	a place for the community to safely bike and run, similar to the Pasadena Rose Bowl.	10/28/2021 11:48 AM
44	small cafe and coffee stands spread across, snack bars, bike rental areas, green space for picnic areas, art and other installments.	10/27/2021 10:13 AM
45	access to independent commerce nodes, such as restaurants and places that serve beer &/or wine nearby - either along the wash or within a block. The Wash itself could be a feature from the restaurants if it was made to feel less "concrete-y" and the pedestrian/bike paths ran alongside.	10/26/2021 8:37 PM
46	Connections to the other bike paths, to the LA River, to Griffith Park and other parks / recreation and restaurants, bars, etc.	10/26/2021 6:21 PM
47	the abundance of native flora and fauna restored. bike paths, walking paths, and beautiful landscape is all we need. please don't add a lot of junk!	10/25/2021 9:47 PM
48	native self-sustaining plants.	10/25/2021 5:21 PM

49	Pedestrian and cycling, picnic area, splash area.	10/25/2021 4:04 PM
50	Bike routes to access points. separate pedestrian and bicycle lanes. No equestrian lanes. Staging events along the wash and into the LA River trails. Encouraging excersise.	10/25/2021 12:33 PM
51	Park amenities like picnic benches and water refill stations, as well as adjacent businesses like coffee shops or restaurants that open out to the wash	10/25/2021 10:14 AM

Survey - "My Vision of the Verdugo Wash"

Q21 Do you work in Glendale?

Answered: 99 Skipped: 526

Survey - "My Vision of the Verdugo Wash"

Q22 What is your age group?

Answered: 99 Skipped: 526

Survey - "My Vision of the Verdugo Wash"

Q23 Picture 1

Answered: 99 Skipped: 526

Survey - "My Vision of the Verdugo Wash"

Q24 Picture 2

Answered: 99 Skipped: 526

Survey - "My Vision of the Verdugo Wash"

Q25 Picture 3

Answered: 99 Skipped: 526

Survey - "My Vision of the Verdugo Wash"

Q26 Picture 4

Answered: 99 Skipped: 526

Survey - "My Vision of the Verdugo Wash"

Q27 Picture 5

Answered: 99 Skipped: 526

Survey - "My Vision of the Verdugo Wash"

Q28 Picture 6

Answered: 99 Skipped: 526

Survey - "My Vision of the Verdugo Wash"

Q29 Picture 7

Answered: 99 Skipped: 526

Survey - "My Vision of the Verdugo Wash"

Q30 Picture 8

Answered: 99 Skipped: 526

Survey - "My Vision of the Verdugo Wash"

Q31 Picture 9

Answered: 99 Skipped: 526

Survey - "My Vision of the Verdugo Wash"

Q32 Picture 10

Answered: 99 Skipped: 526

Q33 The new Verdugo Wash should cater to...

Answered: 99 Skipped: 526

Survey - "My Vision of the Verdugo Wash"
Children
48.48%
40.40%
11.11%
Teenagers
43.43%
40.40%
16.16%
Older Adults
58.59%
35.35%
6.06%
Wildlife
85.86%
12.12%
2.02%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
High Priority
Medium Pri...
Low Priority

Q34 Which modes of transportation should the new Verdugo Wash accommodate?

Answered: 99 Skipped: 526

Survey - "My Vision of the Verdugo Wash"
Shared Shuttle Service
25.25%
34.34%
40.40%
Delivery Robot
11.11%
12.12%
76.77%
Equestrian
17.17%
35.35%
47.47%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
High Priority
Medium Pri...
Low Priority

Q35 Which sorts of commutes should the new Verdugo Wash serve?

Answered: 99 Skipped: 526

Survey - "My Vision of the Verdugo Wash"
Local Neighborhood...
64.65%
28.28%
7.07%
City-Wide Mobility
56.57%
29.29%
14.14%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
High Priority
Medium Pri...
Low Priority

Q36 "A key outdoor amenity for us could be..."

Answered: 73 Skipped: 552

#	RESPONSES	DATE
1	Transportation corridors and larger spaces for communal gatherings.	7/11/2022 4:24 PM
2	Connections to transit, or other pedestrian corridors.	6/20/2022 3:07 PM
3	Places for people to rest	5/31/2022 7:57 PM
4	A playground so that kids can be entertained.	5/30/2022 11:53 AM
5	A park	5/29/2022 9:59 PM
6	A little more organization between bike paths and walking paths.	5/29/2022 7:31 PM
7	A park and/or an outdoor space to play.	5/29/2022 7:02 PM
8	bicycle and pedestrian routes, natural habitat restoration, and the creation of new open spaces.	5/28/2022 2:27 PM
9	Benches/tables with shading for resting.	5/26/2022 1:39 PM
10	Water fountains and trash bins	5/22/2022 10:43 AM
11	A bike path from the la crescenta/montrose area through downtown glendale to the LA River Bike Path/Griffith Park	5/20/2022 6:07 AM
12	The Verdugo wash should prioritize the protection of the natural environment - a key outdoor amenity is to facilitate wildlife crossings and use park land for stormwater capture.	5/6/2022 9:26 PM
13	I think that Verdugo Wash should be for the wildlife but also for the indigenous people of the area. This should not become a buildings or a place to commute from. The Verdugo Wash is home to indigenous people, plants, and animals and they deserve to live where they originally came from. The indigenous people where forcibly removed from their home and now the city of Glendale is trying to move them out of their home now.	5/6/2022 10:07 AM
14	adding more bike trails and greenery.	5/5/2022 9:09 AM
15	a beautiful view of the natural habitats of the wildlife and animals. It would be important to divert the water from the Verdugo Wash to create natural riparian areas on adjacent lands, while excess water can return to the channel.	5/4/2022 5:12 PM
16	more interactive fountains.	5/3/2022 9:55 AM
17	Nice places to walk and hang out with friends and family.	5/2/2022 10:26 AM
18	I think that accessible paths for different types of transportation would make the Verdugo Wash more accessible and enjoyable for a lot more people.	4/28/2022 9:20 AM
19	Specific biking trails to allow people to take in the beauty of nature while not adding to pollution.	4/27/2022 1:32 PM
20	Clearly designated bike lanes in every street to promote non-fuel consuming transportation.	4/22/2022 11:12 PM
21	a place to relax.	4/21/2022 10:09 PM
22	Well kept walkways all throughout the wash	4/21/2022 11:26 AM
23	A key outdoor amenity should be preserving the land for animals. Some animals used to live there and had their land taken away, so you should preserve and protect the land for animals but also for harmless things that would prevent the environment from thriving.	4/21/2022 11:14 AM
24	The feeling of being out in nature again. I would like wildlife crossings to help facilitate wildlife passage out of neighborhoods to natural lands.	4/21/2022 11:06 AM
25	Longer cycling trails and hiking trails for families and children. It would make more people want	4/21/2022 11:05 AM

	to visit.	
26	A monument or land acknowledgment acknowledges the fact that the land belongs to the Tongva nation. It is also very important that the Tongva people are very involved in this project.	4/21/2022 11:02 AM
27	Bike Trails	4/21/2022 11:00 AM
28	Wildlife crossings for native animals	4/21/2022 10:58 AM
29	Maybe a fountain or a lake/pond.	4/21/2022 10:55 AM
30	wildlife crossings to facilitate wildlife passage between the Verdugos and San Rafaels and between the Verdugos and San Gabriels. Also, it would be great to replace concrete with habitat wherever possible. Look for opportunities to divert water from the Verdugo Wash to create natural riparian areas on adjacent lands. Excess water can return to the channel.	4/21/2022 9:49 AM
31	Bridges	4/21/2022 9:32 AM
32	places for cyclists and pedestrians to walk. In order to enable the Verdugo Wash to become a place that can create connections and improve mobility, lots of pathways can help build an open feel.	4/20/2022 8:53 PM
33	Nice well kept parka and more mature reserves	4/20/2022 8:11 PM
34	Cleaning up the water.	4/20/2022 4:40 PM
35	Keep it natural, but stay respectful to wildlife and the well-being of the location.	4/20/2022 2:44 PM
36	an undeveloped natural space for people to relax in.	4/19/2022 9:23 PM
37	Bicycle paths.	4/19/2022 2:22 PM
38	Bicycle paths.	4/19/2022 2:22 PM
39	an outdoor gym/exercise area.	4/19/2022 12:47 PM
40	A playground for children.	4/19/2022 12:46 PM
41	A path for wildlife to cross and to not be disturbed by people but still a good tourist destination to attract attention.	4/19/2022 11:43 AM
42	Everything	4/18/2022 3:02 PM
43	I think a communal deck could be beneficial, a place with chairs, tables, shade, and outlets. A place where a person could be comfortable and take a break.	4/13/2022 8:23 PM
44	A great neighborhood asset	4/11/2022 4:59 PM
45	Wifi	1/19/2022 5:43 PM
46	A rei-magination of the debris basin as outdoor recreational spots.	1/17/2022 12:11 PM
47	maximize permeable pavements to increase groundwater recharge, maximize greenspace to combat the urban heat island effect	12/13/2021 4:48 PM
48	Shade	11/18/2021 12:01 PM
49	bike path	11/15/2021 12:50 PM
50	walking, running, and hiking trails	11/14/2021 9:08 PM
51	Native California shade trees, benches, and biking and walking paths	11/13/2021 2:29 PM
52	safe non vehicular travel	11/11/2021 7:53 AM
53	Separated and directional bike lanes separate from walking lanes and another section (other side of wash with occasional bridges) for non-bikers and non-walkers eg. equestrians.	11/10/2021 6:54 PM
54	A bike skills park, as appears in the City of Glendale Trail Master Plan, and other planning documents.	11/10/2021 10:32 AM
55	Riparian restoration providing a green park through the city for wildlife and a pathway for recreation. Although it can certainly function as a commuter path, I prefer the focus to be on	11/10/2021 10:12 AM

	recreation in a more natural environment.	
56	safe biking	11/10/2021 9:52 AM
57	Room for our animal and wildlife freinds	11/8/2021 12:58 PM
58	Walking path	11/8/2021 7:07 AM
59	opportunities for physical exercise and access to "nature"	11/7/2021 4:38 PM
60	safe walking and biking surrounded by greenery, not hardscape.	11/7/2021 3:08 PM
61	Making the Verdugo Wash a park space that encourages safe and enjoyable mobility via foot and bike (no vehicles) while proving recreational locations throughout.	11/7/2021 4:47 AM
62	Bike path connecting to Atwater Village bike path.	11/4/2021 10:45 AM
63	Bike Lanes	11/4/2021 5:51 AM
64	More scenic walking opportunities.	11/4/2021 12:02 AM
65	Beauty	11/3/2021 11:19 PM
66	Great wayfinding!	11/2/2021 10:37 AM
67	Social gathering place with coffee cart.	10/29/2021 4:36 PM
68	Walking path and wildlife corridor areas, with natural vegetation, access to water, dark skies and sheltered from active recreation.	10/27/2021 1:57 PM
69	greenery	10/26/2021 9:23 PM
70	A simple, utilitarian design that has a chance of being constructed in our lifetime and can be realized sooner than later.	10/26/2021 5:52 AM
71	A safe and inviting outdoor space to meet others, relate to the presence of nature, while also encouraging an active transport connection to the rest of Glendale and the rest of the County.	10/25/2021 5:39 PM
72	It would be nice if this area included artwork on the walls and if there was a way to integrate a safe transit path for when there is heavy rain perhaps like a catwalk. This could connect Downtown Glendale to the Americana and the mall or just to the library.	10/25/2021 1:48 PM
73	Safe cycling opportunity	10/25/2021 11:29 AM

Q37 "The Verdugo Wash should be unique and memorable because...?"

Answered: 75 Skipped: 550

#	RESPONSES	DATE
1	It challenges the idea that LA and Glendale must cater to the needs of cars and drivers.	6/20/2022 3:07 PM
2	the scenery	5/31/2022 7:57 PM
3	It's a place for families and communities to gather and connect.	5/30/2022 11:53 AM
4	it needs to be respected as native land	5/29/2022 9:59 PM
5	Of the beautiful landscape it brings.	5/29/2022 7:31 PM
6	It is in a great location.	5/29/2022 7:02 PM
7	it improves environmental sustainability.	5/28/2022 2:27 PM
8	It should be both functional and recreational.	5/26/2022 1:39 PM
9	The community and making sure everything is clean	5/22/2022 10:43 AM
10	Glendale has an eclectic mix of cultures and history. I hope that any design incorporates plenty of local art and also accessibility to the many interesting pockets of Glendale.	5/20/2022 6:07 AM
11	It would be a center for biodiversity in the area, a key area for wildlife crossings, known as an example of how humanity's impact on the environment can be reversed.	5/6/2022 9:26 PM
12	The Verdugo Wash is already a very important place for a lot of indigenous because it is their home. The city of Glendale can't just take a place that already is important. The Verdugo Wash is unique and it's home to so many animals, people, and plant. Don't take their home away.	5/6/2022 10:07 AM
13	it's a great area of land that could be beautiful.	5/5/2022 9:09 AM
14	it would recreate the natural habitat for the animals and wildlife there. The animals would be able to return to their natural habitats without worry about the danger of humans around. The Verdugo Wash would become a model for other cities to follow in restoring habitats for wildlife. It would be important to divert the water from the Verdugo Wash to create natural riparian areas on adjacent lands, while excess water can return to the channel.	5/4/2022 5:12 PM
15	it has a unique and memorable name.	5/3/2022 9:55 AM
16	it is a great place for recreational and daily use and is a beautiful spot in Glendale.	5/2/2022 10:26 AM
17	The Verdugo Wash is a beautiful and unique part of the Los Angeles area. The Verdugo Wash should be brought back to its original state of constant water flow and a natural habitat for our wildlife.	4/28/2022 2:03 PM
18	It is a great place with a lot of diversity and culture. Something like that should not be silenced, it should be celebrated and preserved.	4/28/2022 9:20 AM
19	It is a path where beautiful native plants and history are present, which is why it should be conserved and memorable.	4/27/2022 1:32 PM
20	Of its contributions to the ecosystem and people who live in the area, as well as the historical significance.	4/22/2022 11:12 PM
21	It accommodates native flora/fauna and is clean.	4/21/2022 10:09 PM
22	It is one of the most special places in Glendale	4/21/2022 11:26 AM
23	The Verdugo Wash should be unique and memorable because it should be a place where everyone is allowed to be and the environment should be protected and not endangered. They should transform it and keep in mind that the land has history behind it and it should be respected.	4/21/2022 11:14 AM

24	They replaced the concrete with nature and habitats. The balanced nature and new buildings to make it seem refreshingly like nature, but still with modern touches.	4/21/2022 11:06 AM
25	The Verdugo Wash should be unique and memorable because of the unique plant life that only resides in the Los Angeles Region. It will attract tourists, and the attraction site will become memorable.	4/21/2022 11:05 AM
26	It can be a symbol of unity between the city and the Tongva people. It can also be an area where wildlife that have been affected by the concrete structures can thrive within the city of Glendale.	4/21/2022 11:02 AM
27	It is accessible by all people, regardless of disability.	4/21/2022 11:00 AM
28	It connects nature to urban living in a unique way	4/21/2022 10:58 AM
29	It is a very beautiful setting and place, and it is a place where you can see genuine untouched nature.	4/21/2022 10:55 AM
30	it can be a place for wildlife to stay in a modern world where we've previously driven them out of their homes.	4/21/2022 9:49 AM
31	It can be a good addition to a community.	4/21/2022 9:32 AM
32	of lots of greenery and native plants. It would be epic if it somehow highlighted the history of the land.	4/20/2022 8:53 PM
33	Of the nature	4/20/2022 8:11 PM
34	It is special to many people.	4/20/2022 4:40 PM
35	It will set an example for other washes, and ultimately create a domino effect in improving the environment.	4/20/2022 2:44 PM
36	of how unique an oasis of natural space is in an urban area	4/19/2022 9:23 PM
37	It will include wildlife and general wilderness as well as touches of urban civilization.	4/19/2022 2:22 PM
38	It will include wildlife as well as urban civilization.	4/19/2022 2:22 PM
39	it is an opportunity to embrace modern design and technology while also honoring the city's native roots and ecosystems.	4/19/2022 12:47 PM
40	Because it cares about wildlife, while being a great place to explore and visit	4/19/2022 12:46 PM
41	It kinda blends the urban feel of the city with the nature and beauty of the area.	4/19/2022 11:43 AM
42	It needs it	4/18/2022 3:02 PM
43	Of many pieces of modern art along the way that connects back to California's history. Such as the indigenous tribes that once lived here and the occupation of the Spanish setlers.	4/13/2022 8:23 PM
44	It should be utilized as the property use is now under utilized	4/11/2022 4:59 PM
45	it's safe	1/19/2022 5:43 PM
46	Of its unique placement along the Verdugo Mountains and because of the history of the watershed and importance to all starting with Native American presence and occupation for thousands of years to white settlement and displacement of Native American presence to modern times. And because the setting and landscape are dramatic, beautiful, and potentially redeeming.	1/17/2022 12:11 PM
47	it's clean, natural, educational, and values its native heritage and knowledge of endemic flora and fauna	12/13/2021 4:48 PM
48	It should include endemic species & ecosystem diversity	12/13/2021 2:19 PM
49	of being natural	11/18/2021 12:01 PM
50	it serves as a connection to all of Glendale and the la river and beyond. - it should be naturalized, safe, and beautiful.	11/15/2021 12:50 PM
51	it's beautifully landscaped, safe even for women walking alone at night, and architecturally elegant	11/14/2021 9:08 PM

52	It is an asset for wildlife and people alike.	11/13/2021 2:29 PM
53	It preserves natural habitats for flora and fauna, using native plants and minimal human structures	11/11/2021 7:53 AM
54	It will be a safe method of travel apart from 4 wheel vehicles. It could be a model for similar developments in other cities.	11/10/2021 6:54 PM
55	It could become a living, ecologically functional centerpiece for the city of Glendale.	11/10/2021 10:32 AM
56	It once was the lifeline for the people who lived here before us. The channelization destroyed that. To restore the creek that once flowed through our city returns what we lost.	11/10/2021 10:12 AM
57	it maintains the natural landscape	11/10/2021 9:52 AM
58	It's green and good	11/8/2021 12:58 PM
59	it touches so many parts of the city	11/8/2021 7:07 AM
60	it provided a means to physically connect our community in a more personal way than motor travel	11/7/2021 4:38 PM
61	natural	11/7/2021 3:08 PM
62	It's an opportunity to connect neighborhoods with a continuous bike and pedestrian path that could allow for safe foot and bike mobility along with recreational spots throughout, while proving a location for ingenious plant life a place to thrive.	11/7/2021 4:47 AM
63	It manages flood risk as well as gives residents a place to be.	11/4/2021 10:45 AM
64	It is in GLENDALE	11/4/2021 7:35 AM
65	Takes you through the heart of Glendale	11/4/2021 5:51 AM
66	Of the seamless interplay between the built and natural world.	11/4/2021 12:02 AM
67	Of how it caters to so many so efficiently	11/3/2021 11:19 PM
68	It caters to all users of all age groups and is a safe and enjoyable walking, biking, scooting, and rolling path for all, ages 8-80.	11/2/2021 10:37 AM
69	the city residents deserve it.	10/29/2021 4:36 PM
70	the hard concrete channel can be reversed and replaced with soil cement that can provide flood protection, yet can be planted. The Verdugo Wash also has capacity for wildlife corridors to connect among wildlife islands in the Verdugo, San Rafael and San Gabriel mountains.	10/27/2021 1:57 PM
71	it's beautiful	10/26/2021 9:23 PM
72	It's green. Comfortable. Safe. Convenient.	10/26/2021 5:52 AM
73	It can be another important way for locals to connect to their local land while also being practical for transportation and connection between parts of the city and county. There are many trails in the region, but many are either inaccessible due to the challenge (almost all have some degree of length or steepness that is either totally inaccessible to some, or at the very least not always desired when trying to access nature) or the lack of connection to other wild areas. It was a beautiful feature of our local landscape prior to channelization, and it can be beautiful again. Our region will only benefit from our citizens' access to such natural bounty.	10/25/2021 5:39 PM
74	It would be beautiful to create an outdoor picnic wildlife watching zone integrated with water ecology bringing awareness of recycling storing or on bird migration	10/25/2021 1:48 PM
75	It connects all of Glendale	10/25/2021 11:29 AM

Q38 "The Verdugo Wash could become the 'IT PLACE' to visit, if we had..."

Answered: 75 Skipped: 550

#	RESPONSES	DATE
1	Iconic architecture	7/11/2022 4:24 PM
2	Safe access for bikes and pedestrians, and lots of spaces to hang out and create community.	6/20/2022 3:07 PM
3	Beautiful nature areas	5/31/2022 7:57 PM
4	Lots of activities and food.	5/30/2022 11:53 AM
5	some type of park or patio to socialize	5/29/2022 9:59 PM
6	Maybe some cool patios or landscapes design that would be popular among all	5/29/2022 7:31 PM
7	Easier transportation and constant maintenance.	5/29/2022 7:02 PM
8	if it create wildlife passage between Griffith Park and the Verdugos/San Rafaels (then on to the San Gabriels	5/28/2022 2:27 PM
9	Tables and chairs to sit at and eat/talk with friends.	5/26/2022 1:39 PM
10	Play structures or art pieces as sculptures	5/22/2022 10:43 AM
11	dedicated bicycle lane from Griffith Park/LA River to Montrose. It would create a destination for cyclist from all over Los Angeles because it is a great launch pad to get to Angeles Crest/Tujunga/LA Canada/Pasadena/Burbank/Hollywood.	5/20/2022 6:07 AM
12	The Verdugo wash should not prioritize the visitation of humans who litter and pollute the environment, but should rather be the "IT PLACE" for animal crossings and biodiversity.	5/6/2022 9:26 PM
13	The City of Glendale can't take something from the people how are the original inhibitors of the area. The Verdugo Wash should not be the "IT PLACE" because it is home to people who have been hurt and abused by the first people to visit the Americas. The Verdugo Wash should not be the new "IT PLACE" because IT is already home to many people who deserve and want it more than the City of Glendale.	5/6/2022 10:07 AM
14	more greenery and made it more open	5/5/2022 9:09 AM
15	wildlife returning to their rightful habitat. There would be able to live freely without worrying about being endangered by humans.	5/4/2022 5:12 PM
16	more hockey rinks.	5/3/2022 9:55 AM
17	Nice trails to walk on.	5/2/2022 10:26 AM
18	Bridges and natural plants to make the space more green and accessible to pedestrians, More water, and less waste.	4/28/2022 2:03 PM
19	Lots of plants that were constantly taken care of. Keeping nature at its purest form would make The Verdugo Wash the 'it place'.	4/28/2022 9:20 AM
20	More beautiful native plants being planted surrounding it, making it more attractable and beautiful to the average eye.	4/27/2022 1:32 PM
21	More resources/funding to make it a more flourishing and exciting place to go.	4/22/2022 11:12 PM
22	Natural trails (whenever possible), the ability for wildlife to cross, and riparian areas.	4/21/2022 10:09 PM
23	More sanitary conditions, and a few nice coffee shops	4/21/2022 11:26 AM
24	The Verdugo Wash could be "IT PLACE" to visit if it included just an area where just nature could be in peace and where animals could roam free without concern.	4/21/2022 11:14 AM

25	Had recreated stream-like conditions and there were places to bike, walk, and take in natural scenery.	4/21/2022 11:06 AM
26	It would be the place to visit when technology is placed to brighten it up. What I envision of the Verdugo Wash right now is a very dark and wild place, but if technology can make it more comfortable, then more people would visit.	4/21/2022 11:05 AM
27	Something tying the project to the Native people that had the land before us.	4/21/2022 11:02 AM
28	Food vendors	4/21/2022 11:00 AM
29	Large amounts of natural wildlife, plants animals, etc. Dirt paths and greenery could help emphasize the park as a standout point in the city.	4/21/2022 10:58 AM
30	A nature park with things like tables and benches, it would be a very relaxing place to visit.	4/21/2022 10:55 AM
31	Look for any opportunities to recreate steam-like conditions in the VW with natural habitat as existed in the past before humans destroyed the land. Look for opportunities to enhance water sequestration in existing soft-bottom areas along or near the VW and to enhance riparian areas and native vegetation. Consider using parkland to capture stormwater, especially at Crescenta Valley Park and the Verdugo Hills Golf Course location!	4/21/2022 9:49 AM
32	Greenery	4/21/2022 9:32 AM
33	a safe environment created for a community, and prioritized public safety. In addition to this, if the Verdugo Wash included a lot of beautiful scenery so that it is a place people feel safe and happy in.	4/20/2022 8:53 PM
34	Clean access to nature and high quality tours	4/20/2022 8:11 PM
35	More murals.	4/20/2022 4:40 PM
36	Clean places to hang out, culture in the area (make it stand out), biking trails, skateboarding is allowed, and staying respectful to the area around it.	4/20/2022 2:44 PM
37	undeveloped, uninterrupted where all could find peace -- meditation/yoga classes could be hosted in nature, cyclists, hikers, stressed locals, students, etc.	4/19/2022 9:23 PM
38	Bike tours or displays of natural wildlife.	4/19/2022 2:22 PM
39	Tours and displays of wildlife in their own habitat.	4/19/2022 2:22 PM
40	highlighted Native American history and explored forgotten history.	4/19/2022 12:47 PM
41	An annual run	4/19/2022 12:46 PM
42	It is maintained enough for a bike ride/tourists but still maintains considerations for the ecological environment. Or maybe interesting terrain where it's almost like a guided trail.	4/19/2022 11:43 AM
43	A nice blend of nature and modern architecture, a place that could provide entertainment, relaxation, and accessibility to the city.	4/13/2022 8:23 PM
44	Good food along the route!	4/11/2022 4:59 PM
45	connections to existing mobility	1/19/2022 5:43 PM
46	Access to a SAFE and well regarded recreational and inspirational setting and a place to GET OUT of our cars!!	1/17/2022 12:11 PM
47	Do we want it to be swarmed by (human) visitors? This seems incompatible with expanding and connecting wildlife corridors.	12/13/2021 4:48 PM
48	Something for everyone, including different needs, cultures, ages	12/13/2021 2:19 PM
49	quality ways to walk and bike to it	11/18/2021 12:01 PM
50	remove a lot of concrete, improve access, make it beautiful (with trees & natural materials)	11/15/2021 12:50 PM
51	places to gather in the shade and watch people roller skate and congregate. Also: art!	11/14/2021 9:08 PM
52	Shaded walking and biking paths that incorporate artwork from the Indigenous people of this land	11/13/2021 2:29 PM

53	safe, natural habitats, easy nonvehicular access, free of homeless camps	11/11/2021 7:53 AM
54	Clear separations for all users to avoid any potential conflicts. "Get it going on the right foot" so to speak. To do that, make separated and directional bike lanes, walking lanes and separated (across the water) equestrian areas.	11/10/2021 6:54 PM
55	Uninterrupted bikeways/walking paths linking the Crescenta Valley with Glendale, Griffith Park and the LA River Bikeway, for the ability to seamlessly commute by bike	11/10/2021 10:32 AM
56	Entrances all along the way for all community members to access a cooling, more natural environment, where kids can splash in the water on hot summer days and all can find relief in the shade of the sycamores that thrive in riparian ecosystems.	11/10/2021 10:12 AM
57	connections to other bike paths	11/10/2021 9:52 AM
58	Benches, solar lights, security cameras, cafe's, Beer & wine gardens, organic snack stands, water bowls for doggies, shade, wildlife passages, parking, bike paths, gazebos, green areas, recycling bins, clean water, bathrooms & wash stations, kayaks/canoes, concerts and music, room for everyone!	11/8/2021 12:58 PM
59	public art along the way	11/8/2021 7:07 AM
60	multiple access points for multiple user types	11/7/2021 4:38 PM
61	access	11/7/2021 3:08 PM
62	A continuous path for safe pedestrian and biking mobility throughout the city.	11/7/2021 4:47 AM
63	Safety and accessibility	11/4/2021 10:45 AM
64	Access	11/4/2021 7:35 AM
65	Easy access to wait and bike to it	11/4/2021 5:51 AM
66	Amenities that made people think of the wash as something better than just a park.	11/4/2021 12:02 AM
67	Unique scenery	11/3/2021 11:19 PM
68	Really well-defined, safe, welcoming, easy-to-navigate access points. Connections to other bike and pedestrian paths in and around Glendale, especially in the south/west side, such as the LA River Bike Path, Glendale Narrows, and Griffith Park (in the future).	11/2/2021 10:37 AM
69	a world-class active transportation facility.	10/29/2021 4:36 PM
70	less concrete, more native vegetation and trees, some public art and walking trails.	10/27/2021 1:57 PM
71	clean areas, wildlife	10/26/2021 9:23 PM
72	Kept it simple	10/26/2021 5:52 AM
73	safe and useful access points, access points near useful amenities (food, bike shops, etc) appealing places to congregate (safe, shade options, natural and native appeal), shade along the path to allow for increased summer use, a sense of "disconnecting" from city bustle while still engendering a sense of civic duty and pride	10/25/2021 5:39 PM
74	this is an opportunity to connect into the LA river and to the greater downtown area increasing our presence in a pedestrian friendly town	10/25/2021 1:48 PM
75	A 9 mile linear park providing places to enjoy the outdoors, recreate together and safely get around town via bicycle and on foot	10/25/2021 11:29 AM

!melk

+BuroHappold

CITY OF GLENDALE
CALIFORNIA