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RE: COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE ARROYO SECO WATER REUSE PROJECT

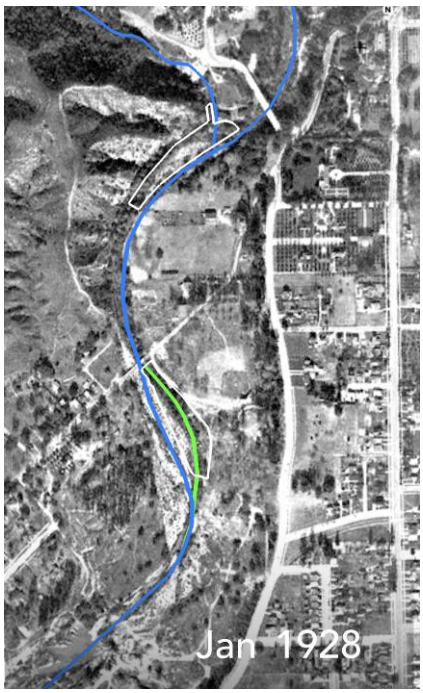
I am submitting these comments on the Draft Environmental Impact Report (DEIR) for the Arroyo Seco Water Reuse Project as someone who lives in both Pasadena and Northeast Los Angeles. I am concerned that the DEIR does not adequately or objectively address numerous longterm environmental impacts of the project. The project will irrevocably impact the historical character of an important reach of the Arroyo Seco, and complicate the hydrologic connection between former floodplain and river in San Pascual/Arroyo Park. Most profoundly, the project will alter our connection to local land. It does not align with decades worth of community-driven planning for the restoration of the Arroyo Seco, which would have called for a low-tech and truly Nature-based approach to habitat and hydrological restoration (all of which could be designed to optimize water quality improvements). The term “Nature-based Solutions” has been used without consideration of the local context, in order to promote a project which ultimately perpetuates an unsustainable model of landscape management. Nor does the project seem robust in the face of the extreme hydrologic conditions that can be expected given the ongoing climate change crisis. This letter ends with specific recommendations for Nature-based approaches that would build on the important and powerful ecosystem services floodplain lands are uniquely poised to provide in an era of climate change.

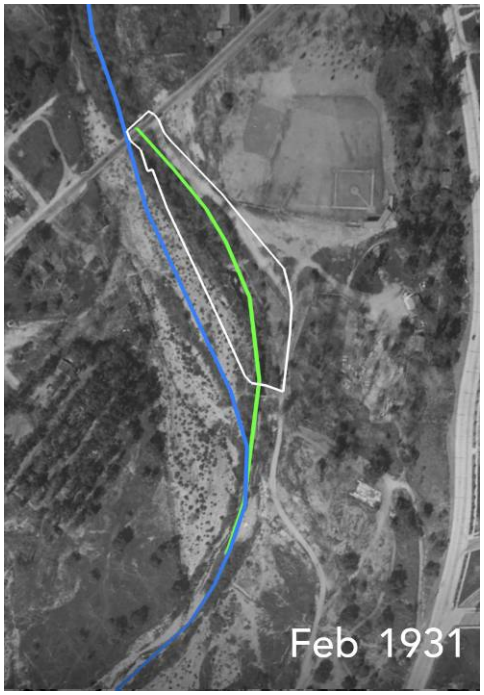
The following comments focus primarily on the project’s San Pascual site, but also extend, generally, to the San Rafael site:

1. The project furthers the surrounding community’s disconnection from local land.

Due the channelization of our rivers and burial of most neighborhood tributaries, our neighborhoods have lost our direct connection to, and access to local water. The San Pascual/Arroyo Park site has unique potential to remedy this at least somewhat, because the small flow of water that runs through the proposed project site is **one of the rare places one can come into physical contact with local water**. Yes, there are currently issues to solve on site with improving sightlines for safety, and removing invasive species. But I am not aware of any other publicly accessible place within two miles, where one can dip one’s toes in local water, without feeling like one is taking physical risks by approaching the fast moving and potentially deadly low flow channel. Where else one can walk right up to shallow and slow-flowing local water to peer at tadpoles and small fish? Communities surrounding the park, the densest of which are on the Los Angeles side, deserve a restoration of hydrology and habitat that leverages the site’s unique floodplain location to strengthen our connection with our local water, focussing on creating safe access by all. Unfortunately, the project will result in a finicky “look, but not touch” landscape, perpetuating cultural erasure and “dispossession by design.”

This is of particular concern given the current situation of climate change and biodiversity crisis. As newer urban generations generally have few chances to observe and experience natural processes, how can we as a society make decisions that are informed by respect for nature's power? (The educational component of the project ("informational signs") adds insult to injury- what will such signs say? Will they tout the benefits of hidden pumps and pipes while at the same time we are cautioned to keep a safe distance from drop structures, and aquatic life gets trapped in the project's mechanical components?) As decisionmakers, you have the power to provide opportunities for kids of all ages to grow up observing tadpoles and small fish, free to dip their toes in safe local water, and learn about the life cycle of small creatures that live in rivers and natural wetlands, without having to drive to far off locations. The City of Pasadena, which prides itself on the scenic and cultural heritage of the Arroyo Seco, must do better-- because our communities deserve better.





Aerial photos from 1928 and 1931 show that the 'diversion' that runs through the project site is a relict meander bend of the pre-channelization base flow channel. Here, the blue line shows the current (straightened) concrete channel. The green line is placed approximately where one would expect the continuation of the Arroyo's meander pattern to occur, based on the iconic shape of waterways, which take on a specific ratio between stream width and wavelength described by hydrologist and geomorphologist Luna Leopold. This iconic shape has been shown to be remarkably consistent in rivers worldwide, regardless of how big or small. The green line (the expected meander curve) coincides more closely with the 'diversion' rather than the path of the current concrete channel.

2. Historical aerial photos show the site has a unique story that should be honored and celebrated as part of our shared natural heritage. Aerial photos from the years before channelization[1] (1928-1934) reveal that the base flow of the mainstem of the Arroyo Seco in the years immediately before channelization was in the location that is currently called a 'diversion'.

The 'diversion' stands out as an area of lush vegetation growth in photos from both before and after channelization. As degraded as it has become, the 'diversion' is a relict from a pre-channelization landscape. Yet it has been altered in profound ways that led to its current degraded state. Project documents state that a small dam to regulate water supply was installed by historical water companies in the 1800s. With the channelization of the Arroyo, the meander bend's direct hydrologic connection to the main channel was largely severed-- the bend could

1 UC Santa Barbara Library's aerial photography collection.

no longer be flushed by periodic winter storms. Instead, water is retained year-round, due to diverted water from the low flow channel. Given such a profound alteration of hydrology, site conditions have favored the growth of exotic and invasive plants that thrive with year-round moisture. The association between altered hydrology and the proliferation of invasive plants (over natives) is well established in scientific literature.

If landscapes could qualify for historical monument status, this relict meander bend of the Arroyo Seco from before channelization would be a candidate! Rehabilitation of this fragment of our landscape history to enhance its hydrologic and biological functionality would be compatible with an innovative Nature-based Solutions approach to improving water quality. Such a rehabilitation would celebrate the natural heritage of the site, and would align with decades of foundational work by Arroyo Seco Foundation, Northeast Trees, and Stewards of the Arroyo Seco, and more recent efforts led by CDFW, Wildlife Conservation Board, Santa Monica Mountains Conservancy (SMMC), Council for Watershed Health (CWH), and numerous other local stakeholders to restore fish passage along the LA River and its tributaries. In contrast, the current project effectively erases the hydrologic and biological significance of the site.

I am not aware of any other publicly accessible place within two miles, where one can dip one's toes in local river water, without feeling like one is taking physical risks.

3) The DEIR's Biological Resources Assessment (BRA) is unreliable.

CDFW protocols for plant surveys are intended "to facilitate a consistent and systematic approach to botanical field surveys and assessments of special status plants and sensitive natural communities so that reliable information is produced and the potential for locating special status plants and sensitive natural communities is maximized." Unfortunately, the Biological Resources Assessment (BRA) was hastily assembled, and its results are not reliable.

On two site visits, the surveyor did not find any aquatic or amphibian life. On recent casual visits, I unwittingly observed a number of species that were overlooked by the surveyor: masses of tadpoles and small fish, *Rubus ursinus,* and *Typha* (cattails). Each time I visited the site, aquatic life was visible. Cattails are not listed in the plant compendium even though their presence is conspicuous on site. iNaturalist entries document a number of other species on site that are common locally but are not noted in the plant compendium. These include *Galium*, *Solanum*, and research-grade observations of various aquatic species.

As degraded as it has become, the 'diversion' is actually a relict meander bend from a pre-channelization landscape.

CDFW protocols require that “every plant taxon that occurs in the project area is identified to the taxonomic level necessary to determine rarity and listing status.” Several plant compendium entries (*Camissoniopsis sp, Cryptantha sp., Phacelia sp.*) were not identified to the species level, which would be important to distinguish rare from common species. The historical nature of the San Pascual meander bend deserves a survey that follows protocol, to give a reasonably accurate picture of the species on site.

4) When a neglected and degraded condition is used as a baseline for evaluation of project impacts on open space lands, further intensive development can falsely be determined to have no significant impact. This is an unfortunate structural weakness in the CEQA process that occurs regularly even when open space sites have unique physical attributes that would enable restoration to be accomplished with comparatively modest public investment. It is unfortunate that, CEQA does not provide a mechanism to protect lands that are uniquely situated to provide Nature-based flood control, water quality and supply benefits. It is also faulty to conclude that the lack of current use of the site by conservation status species means that continued intensive development has no significant impacts. Any patch of native habitat in the urban setting plays an outsized role in urban biodiversity precisely because we have such little functional habit in the urban setting. Moreover, the meander bend provides *potential* habitat and passage for numerous terrestrial and aquatic species, even if passage is currently limited by barriers on adjacent lands. LA River restoration continues to be a priority for the City of Los Angeles, and the Arroyo Seco plays a key role in biodiversity restoration in the LA River. The project does not currently align itself with those restoration efforts, which are supported by decades of foundational work by Arroyo Seco Foundation, Northeast Trees, and Stewards of the Arroyo Seco, and more recent efforts led by CDFW, Wildlife Conservation Board, Santa Monica Mountains Conservancy (SMMC), Council for Watershed Health (CWH), and numerous other local stakeholders to restore fish passage along the LA River and its tributaries. Lack of documented conservation status species on site should not be seen as carte blanche for further alteration which would reduce potential habitat for riparian, wetland, and aquatic species. The long-term recovery and recolonization of numerous conservation status species depends on the existence of potential habitat.

The shallow, slow moving water and protected nature of the site may be a very rare opportunity within the urban reaches of the Arroyo Seco to enhance habitat for Arroyo Chub, which has otherwise only persisted in headwaters of our urban rivers.

5) The project does not contribute to habitat restoration for species of conservation interest, such as Arroyo Chub, for whom restoration opportunity sites are particularly rare outside headwaters locations. The mechanical elements of the project do not align with CDFW recommendations to manage streams in the species’ native range to favor the species’ survival and reproduction.

The Arroyo Chub is a species of conservation interest whose restoration is featured in numerous planning documents specifically in regard to the reach of the Arroyo Seco in which the project site is situated,

reflecting broad-based interest for rehabilitating this species locally. Just a few of these studies include:

- City of Pasadena's Parks Department lists "Reintroduction of Arroyo chub to Central Arroyo" as a project
- Northeast Tree's Arroyo Seco Watershed Management and Restoration Plan (2006)
- Arroyo Seco Watershed Assessment (2011) prepared by CDM-Smith for the Arroyo Seco Foundation

Given the conservation attention this species has received in the past, and ongoing efforts throughout the LA River watershed to promote fish passage, it's foreseeable that reintroduction efforts will continue in the future. The long-term recovery and recolonization of this species depends on the existence of potential habitat. The shallow, slow moving water and protected nature of the site may provide a very rare opportunity within the urban reaches of the Arroyo Seco to enhance and manage habitat for this species, which otherwise has only persisted in the headwaters of our urban rivers. Unfortunately, the project's hydrodynamic separator and other mechanical infrastructure seem hazardous to wildlife and contradict CDFW's recommendation that "within its native range, streams should be managed in a manner that favors native fish survival and reproduction, including active removal of non-native species."

Willow and cattails at the southern end of the project site. Least Bell's vireo ? Note that the cattails that dominate the southern end of the project site were not listed in the plant compendium.

CDFW's comment letter states "Per CEQA Guidelines section 15065 (a), a project may have a significant effect on biological resources if the project substantially reduces the habitat of a fish or wildlife species; threatens to eliminate a plant community; or has the potential to restrict the range of endangered, rare, or threatened species." The project area is considered Arroyo Chub's historic range, and some of the project's mechanical infrastructure threatens to restrict the potential range of this important species.

It is also of concern that the loss of mature tree cover during the years-long establishment period for the project's newly planted landscape would not be conducive to maintaining cool water temperatures for native aquatic life, also restricting the potential range of this species for nearly a human generation.

6) The long establishment period of newly planted habitat will temporarily remove potential habitat for Least Bell's vireo (LBVI), another species whose long-term recovery and recolonization depends on the existence of potential habitat.

The Biological Resources Assessment states of Least Bell's vireo (and other special status wildlife species that have been reported in the vicinity of the survey area): "None of these species are expected to occur in the survey area due to a lack of potentially suitable habitat." Yet, the site is in the historical range of LBVI, and a local LBVI expert believes the site's habitat is suitable for LBVI.

In recent decades, the endangered Least Bell's vireo (LBVI) has made a remarkable comeback along urban reaches of the LA River. A notable example of this is at Rio de Los Angeles Park (4.3 miles from the project site as the crow flies). Though Least Bell's vireo has not been documented on the project site, it was historically present. Current habitat at the project site is more complex and established than that at Rio de Los Angeles Park, with substantially better water access and well developed structure. An expert states, about the project site: "There are areas with dense foliage and not too dense with a good variety of trees and shrubs and plants, such as oak trees of different ages that provide excellent protection, shelter, food and forage for Least Bell's vireo at any stage of their lives. There's water… I believe (the lack of documentation of Least Bell's vireo at the project site) is due to low population numbers (along urban reaches of the river) rather than a lack of riparian habitat."

Not only does regular use of the very urban Rio de Los Angeles Park by LBVI suggest the species' future repopulation at the project site, but the project site is contiguous with other Arroyo-adjacent sites whose habitat may one day support LBVI. The project site has potential to play an important role in repopulation of LBVI to urban reaches of the Arroyo Seco.

The drastic reduction in complexity of vegetation structure during the years-long establishment phase of the project is likely to remove the sites' potential use by Least Bell's vireo during that time. As CDFW states: "Per CEQA Guidelines section 15065 (a), a project may have a significant effect on biological resources if the project substantially reduces the habitat of a fish or wildlife species; threatens to eliminate a plant community; or has the potential to restrict the range of endangered, rare, or threatened species."

The Biological Resources Assessment has not adequately addressed impacts to the long-term recovery and recolonization of this protected species that may persist until the newly planted habitat is established.

7) Compaction of soils required under all project equipment and hardscape will reduce the total extent of permeable soils in the wetland. For structural reasons, the Geotechnical Evaluation recommends that soil under all proposed structures (drop structure, pump station, hydro-dynamic separators, filtration unit, harvesting unit, valves, etc.), will be removed and re-compacted to provide a pad of at least 2 feet deep. This compacted pad must extend a minimum of 5 feet beyond the foundations of each of the buried structures. Even soil under the sidewalks and new *permeable* paving parking lot is to be compacted, extending 1 foot beyond the hardscape footprint. The Geotechnical Evaluation also states that compaction of the subgrade could reduce the infiltration rate of the new wetland. The reduction of permeability required by the compacted pads under all installed equipment seems to be work in opposition to, rather than with nature. Moreover, the very use of heavy equipment for grading on site also runs the risk of unintentional but irrevocable compaction of soft saturated wetland soils.

The Geotechnical Report also mentions in passing that the current wetland area will be drained and allowed to dry during the construction process, suggesting that the construction process itself would have unpredictable impacts on biological processes currently occurring on site and in the soil.

8) Though project objectives include "Reestablish inoperable wetlands", the project does not convincingly accomplish that objective. The health and sustainability of wetlands depend on a direct hydrologic connection between river, land, and groundwater. Restoring and reestablishing the San Pascual wetland would mean strengthening those connections, slowing water to support the site's existing wetland hydrology and habitat, and celebrating the wetland ecosystem's dynamic and changing water levels. Instead, the project complicates the hydrologic connection while conveying precious low flow water off-site.

9) The project ignores a long history of community-supported visioning for greenbelt restoration along the Arroyo Seco that has been forwarded through the numerous plans produced by Stewards of the Arroyo Seco, Northeast Trees, Arroyo Seco Foundation, and others.

10) The City and consultants mischaracterize the intent of Nature-based Solutions, and its applicability in the local context. Project proponents justify the replacement of existing wetland with engineered constructed wetlands by saying that the EPA considers constructed wetlands to be a Nature-based Solution. Unfortunately, the project is not an ideal example of 'Nature-based Solutions' when its larger context is considered.

Nature-based Solutions harness the power of natural systems to self regulate, as a basis for solving design problems. Nature-based Solutions passively harness the power of land, soil, and ecological processes to slow, clean and filter water, while also supporting wildlife, replenishing groundwater, supporting ecosystems that sequester carbon, cooling adjacent urban landscapes, and supporting our mental and physical and social health. The International Union for Conservation of Nature (IUCN) has established a global standard for Nature-based Solutions, which includes both ecological as well as social criteria. Just a few example criteria include: Integrated systems perspective, Enhanced biodiversity, Ecosystem integrity and connectivity, and Inclusive governance and equity. Using the IUCN standard as a model, Los Angeles County's Nature-based Solutions Task Force set the following Definition and Standard for Nature-based Solutions across Los Angeles County (italics added for emphasis):

> *NbS Definition: Nature-based Solutions address societal challenges through sustainable actions that **protect and restore living ecosystems and their functions** to ensure human well-being and benefit biodiversity by meeting the established NbS standard and associated criteria.*

The project fails to address "site context, ecological opportunity, and system integration" as described by the LA County standard for Nature-based Solutions

> *Water-specific Definition: Nature-based Solutions address water quality, water supply and stormwater challenges through sustainable actions that **protect and restore living ecosystems and their functions** to ensure human well-being and benefit biodiversity by meeting the established NbS standard and associated criteria.*
>
> *Standard: Nature-based Solutions must implement place-appropriate and evidence-backed living processes and infrastructure, such as soil and vegetation, to **improve long-term ecosystem function, habitat connectivity, and community health and well-being.***

The Task Force recommends that "Projects should be designed and evaluated holistically based on how well they function as integrated Nature-based Solutions, **not just on individual features**." Evaluation of any projects' alignment with the standard goes beyond a checklist of items and instead considers how a project functions within its "site context, ecological opportunity, and system integration." Real world projects will fall along a spectrum showing various degrees of alignment or non- alignment with the standard.

The foundation of Nature-based Solutions, in the above standards, is to "**protect and restore living ecosystems and their functions**." Constructed wetlands may be legitimate Nature-based Solutions in space-limited dense urban areas such as in downtown LA, or in a developed/industrial context where there is scarcely a trace of original soil or original hydrological connection remaining. But the San Pascual wetland site is not an urban, developed, or industrial site. The site is one of the few remaining open space floodplain lands of substantial size adjacent to the Arroyo Seco. It is public land. All these qualities mean it has potential to play a critically important role in watershed improvement. It is important to protect the site's natural assets (permeable soils and hydrological and ecological connection to the river and other floodplain lands). If rehabilitated, the site has potential to support riparian, floodplain, and/or wetland conditions with relatively few external inputs or mechanical elements. The Arroyo Seco Water Reuse Project ignores this floodplain land's natural processes in order to treat it as a tabula rasa. Replacing lands that could be enhanced with habitat with minimal effort with an entirely planted new landscape which will require energy input and maintenance in perpetuity seems to be disregarding natural processes on site, rather than harnessing natural processes on site. All components of the project have a design capacity that is fixed and thus limited, unable to adapt, as natural processes do, to changing conditions. Installation of the project's mechanical elements will entail temporarily drying wetland soils, and compacting soil underneath each element-- these actions may reduce the permeable surface area of the site. In all these ways, the project fails to address "site context, ecological opportunity, and system integration" as described by the LA County standard for Nature-based Solutions.

The project's 'Nature-based' components function within a larger framework that perpetuates an unsustainable and extractive model of water use. Dry season flows that should be contributing to groundwater levels to support wetlands and riparian ecology on the project site and adjacent San Pascual Park is instead conveyed to the same polluting land use (golf course) called out in the originating polluting watershed (Annandale Golf Club). The project does not seek to harness nature's power, and could even be quite vulnerable to the powers of nature. Could it provide any benefits under flood conditions? How will it be affected by seismic activity (the Geotechnical Evaluation speculates that a fault may run through the site)? Given the current situation of

climate change, failing to be responsive to the opportunities and risks posed by local hydrologic patterns and increasingly frequent extreme weather events seems short-sighted.

In contrast, the strategy of allowing floodplains to remain undeveloped in order to detain seasonal floodwaters was the backbone of the Olmsted Bartholomew plan for Los Angeles, an early example of multi-benefit green infrastructure which is lauded by planners, but continues to be rejected by this development-hungry city. The philosophy of 'making friends with flood' and the Nature-based Solution of reconnecting floodplains are relevant and forward-thinking uses of open space land in this era of climate change. Stewards of the Arroyo Seco suggests simple steps to implement this approach locally: "Reconnecting floodplains allows streams to spread out during high flows, reducing flood risks downstream. Steps can include the removal of concrete and the establishment of storage and percolation zones."

Despite its inclusion of a constructed wetland, the project ultimately perpetuates unsustainable models of landscape management and maintenance by:

- Extracting dry season flows from a natural wetland to be used at a golf course (a land use associated with water pollution and other public health impacts)
- No convincing provision to address extreme storm events
- Not addressing upstream water quality issues where they begin in the upstream golf course and residential neighborhoods
- Reducing permeability of natural soils to install a project that has a limited design capacity (as opposed to mimicking a natural floodplain, which has large and flexible capacity)
- The downstream "end of pipe" result of the project will be the polluted water exiting the South Pasadena Golf Course going right back into the Arroyo Seco. On a recent visit to the South Pasadena Golf Course outfall, it was evident that the water was highly polluted. It had a strong odor, and algal growth suggested nutrient contamination.

11) The project fails to present meaningful alternatives, or incorporate stakeholder feedback. By failing to meaningfully incorporate restoration solutions from a long history of community-supported planning, or feedback from stakeholders of two adjacent local and regional public parks, the project falls short on social equity criteria for Nature-based Solutions, as defined by the International Union for Conservation of Nature (IUCN) or Los Angeles County's Nature-based Solutions Task Force above.

The downstream "end of pipe" result of the project will be the polluted water exiting the South Pasadena Golf Course going right back into the Arroyo Seco

Public engagement and incorporation of stakeholder feedback for a project in a public park should be a minimum requirement when a project takes place on public land, and is funded by public money. At a recent community engagement event on site, there was no mechanism provided to meaningfully gather or harness community feedback. No designers or staff directly

connected with project planning and design were present to answer participants' numerous technical questions about the project.

It is striking that of the five letters of community support that were included in the project's application for Safe Clean Water Program funding, two of five parties now vocally oppose the project.

12) A Program DEIR is warranted when a series of related actions can be characterized as one large project. It has been indicated that the Arroyo Seco Water Reuse Project is only the first of a series of projects that are likely to have closely related goals, approaches, and impacts. The projects will have a cumulative impact on all human and more-than-human communities along the Arroyo Seco, including Pasadena, South Pasadena, and Los Angeles. Waterways and the greenbelts they have potential to provide in the urban context are not confined to a specific municipality or neighborhood. These projects' cumulative impacts can be more clearly understood and transparently addressed through a Program EIR. A Program EIR would not replace individual review of each separate project and its site-specific impacts.

13) Though on a regulatory level, dry season flows may be considered 'nuisance flows' and are not adjudicated, this doesn't mean that dry season flows are not an integral part of the ecological, scenic, and natural resource value of river-adjacent land. With reduced dry season flow, the character of the concrete channel is changed. Those who walk, bike, and run in the concrete channel during the dry season use the channel because it is the best place available to them to conduct these activities in our densely built environment. For those who use the channel during dry season, low flows are still part of the scenic value of the river. If low flows are diverted from the channel, they should be fully devoted to supporting meaningful riparian and wetland habitat that may be freely and fully enjoyed by all local communities. Use of all dry season flows to support groundwater dependent riparian and wetland habitat would mitigate the reduction of the habitat value of river flows caused by the concrete channel.

14) Since the point of diversion and the point of use of dry season flows are on different parcels, the justification for a riparian claim needs further clarification. The project Fact Sheet explains that the South Pasadena Golf Course uses 100% of dry season flows due to a riparian claim: "The Division also concluded that the fact that the water is being diverted from a point of diversion on a parcel riparian to a stream and is being used on the same parcel is sufficient for the Division

to accept the diversion as a riparian claim for reporting purposes." This explanation is confusing because the golf course is quite a distance away from where the water is being diverted. The diversion of low flows from the Arroyo Seco appears to occur in parcels #5716-022-901 or #5493-038-900 in Los Angeles. The golf course is on parcel #5313-002-901, quite a distance from the point of diversion. (see adjacent diagram)

15) The DEIR's evaluation of Aesthetics seems biased when stating "implementation of the proposed Project would not result in a substantial adverse effect on a scenic vista and would, in fact, improve the overall visual quality." Vocal opposition by many community members is evidence that many stakeholders find this conclusion to be biased.

Conclusion

As a relict meander bend from the pre-channelization Arroyo Seco, the San Pascual project site is a connection to our region's past that should be honored and celebrated as part of our shared natural heritage. Unfortunately the project will irrevocably impact some of the important ecological services that this rare remaining floodplain open space would be poised to provide, if only the municipalities involved could coordinate a relatively simple habitat and hydrological rehabilitation!

Some of these impacts are physical (reduction of the extent of permeable soils on site) and others are social and cultural (the project turns the land into a "look, not touch" experience), and furthers our community's disconnection from local land. The project has not drawn from the decades of community-supported environmental planning, nor meaningfully gathered or incorporated feedback by stakeholders of two adjacent local and regional public parks.

The project does not propose a sustainable solution for fixing the cause of surface water pollution in the Arroyo Seco (Annandale golf course, and upstream residential neighborhoods). Moreover, the downstream "end of pipe" result of the project will be the polluted water exiting the South Pasadena Golf Course going right back into the Arroyo Seco. On a recent visit to the South Pasadena Golf Course outfall, it was evident that the water was highly polluted. It had a strong odor, and algal growth suggested nutrient contamination.

The project design is not aligned with current efforts to restore aquatic species in our regional waterways, which are supported by a host of local and regional public entities, as well as state entities.

I believe the project can be improved and become a community asset by better using the sites' natural floodplain assets to clean water. It can be done in a way where local people ("kids of all ages") can enjoy enhanced and safe access to the water's edge. Some recommendations for improvement of the project:

1) Require upstream private entities (Annandale Golf Club and Johnson Lake, and all residences) to formulate and implement plans to protect water quality of downstream water bodies, which are public resources. This will reduce the pollution load of water reaching the project sites. Discontinue use of fertilizers, herbicides, and pesticides on properties that drain directly into surface bodies of water.

2) Low tech passive stream restoration techniques like reducing the slope of stream banks at San Pascual Wetlands can slow and spread water to improve water quality and

ecological function. At the same time, this would provide for better access to the water's edge by curious community members (both human and more than human).

3) Remove invasive plants and improve structure of remaining native habitat on the project sites.

4) As a public entity, South Pasadena Golf Course should model landscape management practices that clean the water, instead of polluting it. Create native habitat at South Pasadena Golf Course, and use low tech passive stream restoration techniques such as minor grading improvements to slow and spread water on site, improving water quality as well as expanding wetlands and riparian habitat. This would have the additional benefit of improving microclimates for users of the golf course, and enhancing the local heritage value of the golf course. Discontinue use of fertilizers, herbicides, and pesticides on properties that drain directly into surface bodies of water.

5) Improve the above-ground hydrological inter-connectivity between San Pascual Park, Arroyo Seco Park and South Pasadena Golf Course. Not only would this greatly increase the potential surface area of passive water quality treatment wetlands (and increase the quality of native habitat), but it could also be designed to store flood water during extreme weather events.

6) Improve habitat for Arroyo Chub and Least Bell's vireo, and add elements to support steelhead trout passage, and use of the site by other native species. Eliminate any mechanical components that trap wildlife.

Thank you for your attention,

Sincerely,

Jane Tsong

written from the City of Los Angeles in the watershed of the North Branch of the Arroyo Seco>Los Angeles River watershed, and the City of Pasadena, on the cusp of the Alhambra Wash>Rio Hondo>Los Angeles River watersheds