

**PUBLIC COMMENT FOR ARROYO SECO CANYON PROJECT AREAS 2 & 3
QUESTIONS/REQUIREMENTS RELATING TO ADEQUACY OF THE DEIR**

**Prepared by Hugh Bowles
hsbowles@yahoo.com / 626 482 9116**

1. Notification and public meetings.

The November 21, 2019 meeting was not an official “on the record” meeting. It was held in a “meet and greet” format. There was no presentation by PWP staff of the scope of the project.

There was no opportunity to ask staff about the project in a group setting — we could only have private conversations that were “off record”.

Formal comments/questions had to be submitted in writing on cards. This ensured no questions would be formally answered at that meeting.

There was no presentation to the public of the slides the DEIR uses as evidence of the meeting.

One question was asked of a PWP staff member: “How much water diverted into spreading basins actually percolates into the aquifer?”

The answer: “We assume it does.”

No notices about the project have been posted at the project site.

It is unclear if PWP completed direct mailings to homes in the project area. There is a pending public records request on this item. As of this submission, no mailing list has been provided.

The communication outside of those who have requested information under CEQA appears incomplete. This is a violation of CEQA notification requirements.

2. DEIR Executive Summary.

CEQA requires the Executive Summary to outline areas of controversy with the project.

A key concern raised under the MND in 2015 is the poor percolation rate of the spreading basins.

In 1995, PWP hired Converse Consultants West to conduct a hydrology study. Looking at percolation rates throughout the basin, Converse found the spreading basins absorb less than 40 gallons per day per square foot; this is compared to over 3000 gallons per day per square foot in the stream zone.

Even though the spreading basins sit on the same alluvial deposits as the stream, Converse concluded that siltation combined with compaction from maintenance equipment has left the basins “by orders of magnitude” less porous than the adjacent stream.

In 2015, Greg Jones, chair of the Board of Zoning Appeals asked PWP: “If the spreading basins are inefficient and everyone knows they are inefficient, do we need them?”

The PWP response was: “Efficiency is not about how quickly water percolates into the aquifer. It is about separating the City’s flows from natural flows. It is the law.”

Response to public comment on the MND on this issue was: “In regard to the spreading basins we have to use them regardless of their efficiency.”

The inability of the spreading basins to quickly percolate water into the underground strikes at the project claim to “improve aquifer re-charge”. This has been an issue for many years.

The issue of the efficiency of the spreading basins is ignored in the DEIR and is not mentioned in the Executive Summary.

The DEIR and the Executive Summary cannot ignore this subject.

The alternate proposal to leave low flows in the stream stems from this issue. All the science points toward leaving natural flows in the stream as being the path to creating a healthy sustainable aquifer. The science suggests that using the stream zone is better a creating a “safe yield” from the aquifer than diversion into spreading basins.

PWP provide no science to show the project will reduce reliance on purchased water as it claims.

The question challenging the Initial Study claim there will be “no impact” to the aquifer remains unanswered.

Requirement: PWP need to provide evidence that increased diversion into spreading basins improve the re-charge of the aquifer.

3. Biological Impacts.

3.1. Downstream habitats

The DEIR claims there will be “No Impact” on downstream habitats. This was the key issue in the Writ of Mandate settling the lawsuit with the Spirit of the Sage Council in 2017.

DEIR section 4.2.28 concludes: “Downstream reduced flows are not expected to result in any measurable effects on downstream habitats”.

The DEIR also states: “Additionally, changes in current and future conditions associated with the Devil’s Gate sediment removal further reduce the potential project effects.” The riparian habitats in this area are now gone, therefore no impact.

At flows of less than 25 cubic feet per second (cfs) the new weir gate will be raised. All low flows will be diverted into the expanded spreading basins.

The weir gate will be up during the dry season. The natural stream will be dry during this time.

The DEIR “assumes” that subsurface flows during this period will allow downstream habitats to survive. This claim relies on an “assumption” only.

The DEIR basis this assumption on the Psomas study (2018).

Psomas were hired by PWP following the Writ of Mandate settling the Sage Council lawsuit in 2017. The Writ of Mandate requires an assessment of impacts on downstream habitats from increased diversion.

However, the scope of the Psomas study was not to assess impacts outlined in the Writ of Mandate. The study is called the “Upper Arroyo Seco Habitat Enhancement Plan”. The goal: “to support the City of Pasadena’s goal of improving habitat functions and values in City-owned open space within the upper watershed of the Arroyo Seco”.

In the report section “Relevant Plans, Policies, and Regulations” no mention is made of the Arroyo Seco Canyon Project or the Writ of Mandate. There is no assessment of the impacts of increased diversion on the downstream habitats the Writ of Mandate requires.

Psomas were asked to outline a “restoration plan” only.

Yet, the DEIR draws its own conclusions from the Psomas work stating:

“Low flows that make it downstream past the JPL bridge are only visible on the surface for short distances before penetrating the sediment to become subsurface flow and quickly dropping vertically. Consequently, low flow in the lower study is not expected to be influenced by groundwater to any measurable degree due to the distance between the surface flows and the groundwater table.”

The subsurface flows referenced are below the JPL bridge. These flows rely on surface flows down to the JPL bridge. With the weir gate lifted there will be no surface flows between the weir and the JPL bridge.

After the high flows in 2009/10 due to the Station Fire, around 30 white alder trees re-established below the JPL bridge. In the summer of 2014 low flows never made it to the JPL bridge. The assumption is this was due to drought and stream diversion. The white alders perished as a result. They were clearly dependent on the surface flows down to the JPL bridge and below.

White alders today, below the JPL bridge, only survive where surface flows are present.

Requirement: PWP must provide evidence supporting the “assumption” that there will be subsurface flows between the weir and the JPL bridge that will support the riparian habitats.

The Writ of Mandate in the Sage Council settlement references the Initial Study for the MND citing: “Due to the abundance of native vegetation, undeveloped lands, and riparian resources, the area is generally rich in native wildlife species diversity and abundance... Exiting the canyon and crossing approximately 0.75 mile of mostly un-vegetated sandy wash, plant and wildlife diversity is expected to drop off substantially as the area is suitable for fewer species and lower numbers of individuals.” (AR 183)

The Writ states: “The City concedes that the project will have significant environmental impact because the proposed dam/intake facility will divert significantly more water than at present and, thus, will decrease the water availability downstream, particularly during the summer and fall months, causing impacts to biological resources. (AR 183-184).

Preservation of fish and wildlife, in all of its variety, is a CEQA goal — Public resources section 21001(c).

The Writ states: “The opinion of the U.S. Fish and Wildlife Service is that realistic pathways for fish and wildlife movement should be designed and included in the projects. (S140). The Project may create a physical divide of the Arroyo Seco at Area 2, with the upper reaches retaining their historic environmental habitat fosters by a natural water flow and the lower areas having an impacted habitat because of the greater diversion caused by the Project.”

Question: What consultations have occurred with USFWS on the subject outlined above — provision for fish passage? How will the project provide “realistic pathways for fish and wildlife movement”?

Question: If the City conceded to the court that the project “will have significant environmental impact... causing impacts to biological resources”. Why did PWP reject all proposals that would create a sustainable and integrated watershed to protect those resources? How did PWP go from conceding there would be “significant” impacts to declaring in the DEIR that there will be “no impacts”.

The Writ (page 43) states:

“The Initial Study indicates the effect of the reduced water flow below Area 2 will continue until the Arroyo reaches “the riparian woodland of the [Devil’s Gate] reservoir [where] the species richness and population size is expected to increase substantially.” [AR 183]. The Initial Study states that the stream bed leaves the Canyon near the JPL site, thereafter flowing “across alluvial deposits with limited vegetation until reaching a large (0.25 mile by 0.40) mile riparian woodland that occupies the occasionally flooded alluvial deposits behind Devil’s Gate Dam.” Id. The court concludes from this description that the section of the stream bed where vegetation and species are potentially affected by the reduced flows after the diversion point is limited to a linear distance of about one-half mile...”

Question: At the time of the suit in 2015, it was well known that LACFCD planned to remove the all the “riparian woodland” and “species richness” referenced above. Using the presence of this woodland allowed PWP/The City to limit the scope of the assessment of impacts under the Writ of Mandate. Why was no mention made to the court of the imminent removal the riparian woodland referenced?

Question: With the riparian woodland destroyed by LA County Flood Control District (LACFCD), why did the DEIR not assess the loss of this protected woodland? The 0.4 miles of the stream zone downstream of Area 2 will be the last remaining riparian woodland in the Hahamongna basin.

PWP used the presence of the riparian woodland at the dam to limit its exposure in the lawsuit. PWP then uses the destruction of that woodland to support its claims of “no impact”. The habitat has gone; therefore no impact.

Question: Why did PWP not tell the court that the riparian woodland at Devil’s Gate dam was scheduled for destruction?

The DEIR applies the same — “nothing there, no impact” — principle to the spreading basins. USDA, in 1964, stated that spreading basins were more effective if vegetated; there are studies showing how vegetation in settlement ponds can improve water quality. The vegetation helps mitigate the siltation issues discovered in the 1995 Converse study.

Water flowing through the spreading basins falls under CA DFW regulations.

However, the project uses the yearly maintenance of the basins as the rationale for declaring no impact. Vegetation is not allowed to grow in the spreading basins — the banks are mown at least once a year, too. Therefore, no vegetation, no impact.

The riparian habitat behind the dam and .5 of a mile upstream is gone — willow, cottonwood, mulefat. No vegetation is allowed to grow in the spreading basins. The fate of the last stand of riparian habitat south of the diversion is based on an assumption about subsurface flows.

Question: What direction were Psomas given to assess the impacts on downstream habitats from increased diversion? Where are those specific findings?

Question: What efforts were made to consider the cumulative impacts of the LACFCD Devil's Gate Cleanout and the increased stream diversion on riparian woodland in the watershed area below Area 2?

Requirement: The DEIR must consider the cumulative impacts on the potential complete loss of all riparian habitats in the Hahamongna basin.

3.2. Wildlife impact.

The DEIR declares there will be no impact on wildlife as a result of the increased diversion.

The project excuses itself from the provision of fish passage until steelhead return to the Arroyo.

The DEIR states there are no fish present in the upper reaches of the Arroyo Seco. Section 4.2.32: "There are no fish present in the Arroyo Seco Canyon in the current conditions..."

The DEIR states that as there are no fish there will be no impact when the weir gates are lifted and all flows diverted.

The DEIR states that if fish are present and washed over the weir they will have a chance to swim back upstream above the weir while flows remain above 25 cfs. When flows drop below 25 cfs the weir gate will rise and the stream will be diverted into spreading basins. Then, fish below the weir will be unable to move upstream. They will either perish, as all flows will be diverted, or, they may be rescued by a planned "fish capture" program.

The baseline position in the DEIR is there are no fish, therefore no impact.

The DEIR states that if fish return, provisions will be made for fish passage. However, the DEIR does not provide specifics on how sufficient flows will occur in the downstream to allow fish to pass above the weir and still allow PWP to meet its diversion goals.

At the Hahamongna Watershed Park Advisory Commission Meeting on July 28, PWP stated that Outward Bound Adventures (OBA) are assisting with the habitat restoration.

A member of OBA staff confirmed this week that, within the last 7 months, fish were present in the upper reaches of the Arroyo Seco.

There are anecdotal reports that people still fish the upper reaches of the Arroyo Seco.

The DEIR claim there are no fish in the Arroyo Seco appears false.

Anadromous steelhead will not return to the Arroyo Seco any time soon; however, trout and other species can live in the stream.

As a dam operator under governance of the CA F&W codes, PWP must provide for fish passage under current conditions. This provision should include a plan on how PWP plans to meet its “surface water rights” if flows are left in the stream to aid fish passage.

There is also an assumption in the DEIR that the only wildlife impacted by increased diversion would be fish. However, stream habitats provide vital nursery sites for bird species like mallard ducks and California quail. Both nest in the upper section of the alluvial fan just below the JPL bridge. Mallard less successfully recently with the loss of the white alders.

The stream zone provides a rich source of insect life for early hatchlings. The close riparian habitat provides protection from predators. Large coveys of very young quail and broods of mallard have been seen using the stream zone just below the JPL bridge.

It might seem intuitive that water in spreading basins or a lake behind the dam would benefit nesting wildfowl; that is not necessarily the case. Larger bodies of water expose young to predators and the shores attract human disturbance. Escape is to take the brood into open water. Young ducklings tire and die quickly in open water.

Broods do better when they have quiet, safe nursery sites like low flowing streams.

Requirement: The project must allow for fish passage through the weir even during flows of less than 25 cfs.

As fish are present in the stream the project must comply with the CA F&W codes governing dam operators and fish passage.

Requirement: The project must assess the impact on wildlife nursery sites from removing low flows from the stream zone during nesting and brood rearing season.

4. Consideration of Alternatives:

Detailed submissions were made for the 2015 MND and for the Initial Study for the DEIR in December 2019 around alternative ways of improving the health of the local aquifer and relying less on spreading basins.

The recommendation, based on science paid for by PWP and the City of Pasadena, is to start the process using the natural stream to enhance aquifer re-charge.

In 1995 PWP hired Converse Consultants West to conduct a hydrology study in the basin. This included analysis of percolation rates in different areas.

The spreading basins sit on the most porous structures — coarse gravel, rocks, and boulders. The same structure is found in the stream zone. Converse found the spreading basins percolate less than 40 gallons of water per day per square foot. The adjacent stream zone can percolate up to 3400 gallons per day per square foot.

Converse concluded the spreading basins are “by orders of magnitude” worse at replenishing the aquifer than the natural stream due to siltation and compaction from maintenance equipment.

The DEIR has a percolation study for the spreading basins only; also completed by Converse Consultants West. The DEIR uses a different measurement to what was used in 1995. The DEIR spreading basin percolation rate is measured in “feet per day”. Converse state that “typical permeability rates” of gravelly sands range from 2.8 to 280 feet per day.

Converse found The former JPL parking lot has the lowest percolation rates between 16 and 32 feet per day.

The highest percolation rate is in spreading basin 8 at 115 feet per day. This amount is double any of the other spreading basins.

Converse state that because they used “clean water” and the test holes “did not have fine sediments” the results were not reflective of true conditions in the basins. Their final conclusion is : “the percentage of fine sediments accumulated in soil will reduce permeability down to 0.2 to 3 ft per day.”

This conclusion appears to echo the findings in 1995 — the spreading basins have vastly lower permeability rates than what would normally be expected in that type of alluvial deposit.

In 2015 PWP were asked to provide scientific evidence that extracting more water from the stream into the spreading basins would “improve aquifer re-charge”. No science was provided. PWP wrote in response:

“In regard to the spreading basins we have to use them regardless of their efficiency”.

At the Board of Zoning Appeals chair Greg Jones asked: “If the spreading basins are inefficient and everyone knows they are inefficient do we need them?”

PWP responded: “Efficiency is not about how quickly water percolates into the aquifer. It’s the Law”.

The Law is the Raymond Basin Judgment.

The 1995 Converse Study (paid for by PWP) uses the term “by orders of magnitude twice”. First to highlight the inefficiency of the spreading basins, second to highlight the rise in the water table when water flows in the stream and an “intermittent lake” is allowed to form behind the dam.

In normal rainfall years when the dam is in operation, Converse noted the significant increase in water table height during a normal rainfall year. This is compared to the many years when the dam was inoperable; water table height then rose as would normally be expected for the amount of rainfall. The functioning of the stream and the short term storage of water behind the dam creates this “order of magnitude” rise in the water table above what one would normally expect.

This finding was taken a step further in the Phillip Williams Study sponsored by the City of Pasadena as part of the Hahamongna Park Plan. Using the Converse findings, the Williams Study estimates that restoring natural flows to the stream and holding water for short periods behind the dam could improve aquifer re-charge in the basin by 160% in a normal rainfall year.

The current recommendations from the public to restore natural flows to the stream zone stems from this science PWP and the City of Pasadena paid for.

The studies suggest “safe yield” from the aquifer could be vastly improved if natural flows were restored to the stream.

There is huge opposition to the Williams Study within PWP. When I spoke with Phillip Williams in 2003 asking why the Study was rejected, Mr. Williams stood by the findings but mentioned the heated opposition. Mr. Aaron Meade, who conducted the study echoed those comments.

PWP in the DEIR point out that the Williams Study acknowledges the legal challenges with changing the approach to water conservation. Philip Williams and Associates were not charged with investigating options under the law.

The DEIR cites more detail within The Law claiming it prohibits the use of the natural stream for aquifer re-charge.

This is PWP and City attorney interpretation of the Law. There is no indication that any consultations have occurred with the Raymond Basin Management Board who administer the law.

> The Law states that pumping credit can be claimed in “any natural stream” leading to existing or new “spreading grounds”. The DEIR states this does not refer to the Arroyo Seco.

Question: What consultations has PWP had with the Raymond Basin Management Board (RBMB) around the possibility of claiming pumping credit for flows in the stream? These would be flows in the stream before reaching the dam.

Question: Lincoln Avenue Water Company confirmed in November 2019 that they receive pumping credit from RBMB based on streamflows with no diversion. Why is this model unavailable to PWP and the Arroyo Seco?

> The DEIR states that PWP are unsure if the proposal to create a seasonal berm in the stream near Johnson Field would be considered a “spreading basin” by RBMB.

The Raymond Basin Judgment uses the term “spreading ground”. The Judgment does not prescribe spreading “basins”, which USDA define as “impound basins” — one form of water spreading among other options.

Question: What consultations has PWP had with RBMB to discuss alternate options for creating “new spreading grounds” that can make use of the high percolation rates in the natural stream? What was the outcome of those consultations if they occurred? If the consultations did not occur why not?

The DEIR cites an additional section from The Law:

“(8) The right to divert for spreading and re-capture is an alternative, in whole, or in part, to the right to make direct use of such diversions and does not preclude the direct use of such water...”

The DEIR uses this section as part of their case that they have to use the existing spreading basins. However, this section appears to concern the choice to divert the stream vs. direct use (extraction from the stream directly) that would have occurred prior to the spreading basins being built. This section does not appear to require the use of spreading basins as they are now, or preclude the acquisition of new “spreading grounds” that could use the natural stream to improve the “safe yield” from the aquifer.

5. Images presented to the public.

The PWP Arroyo Seco Canyon Project and the LACFCD Devil’s Gate Clean out use “artist impressions” to create a sense of what the projects will look like when complete. These images create a comforting environmentally friendly impression.

The image used by PWP is of clear water flowing over the weir. These look like flows well below 25 cfs.

Question: When will this image presented to the public actually occur?



A more realistic image for 90% of the year will be the weir gate raised and a dry stream bed below. Why has an image of that not been provided?

The Devil’s Gate Cleanout project uses an image of a stream wending its way down to the dam through what looks like an alpine meadow. Under current conditions these flows would be around 10 cfs.

Question: When will this image ever be a reality if PWP are diverting all low flows?



Question: Is the project planning on using funds from Proposition 84?

In 1994 the City of Pasadena ceremoniously changed the name of the region from Devil's Gate to Hahamongna. This change reflected an intent to honor Native American values — respect for for the natural environment and the riches it can provide. Hahamongna means “flowing water, fruitful valley.”

Question: With the riparian habitats around the dam destroyed and no plan for replacement, and the diversion of all streamflow outside of storm events into spreading ponds, how can the City of Pasadena continue to call the area Hahamongna? There will be no flowing water, no fruitful valley.

