Molinar, Tess

From: Hugh Bowles <hsbowles@yahoo.com>
Sent: Tuesday, January 5, 2021 6:27 PM
To: Molinar, Tess
Cc: Ventura, Elisa; Lori Paul; Marietta Kruells; Ann Scheid; bourel; etisage@riseup.net; leeona@sagecouncil.com; Tim Brick; Tim Wendler; Darren Dowell; Laura Garrett; Rosa Laveaga; Cindy Clark-schnuelle; Ttornek; Hampton, Tyron; mmcaustin@cityofpasadena.net; Kennedy, John; Masuda, Gene; Gordo, Victor; Madison, Steve; Wilson, Andy; Shackelford mpyd.org; Shackleford; alonso@mpyd.org; hearst@usc.edu; DPW-reservoircleanouts; reservoircleanouts@dpw.lacounty.org; snemer@bos.lacounty.gov; billchristian43@gmail.com; bourel@earthlink.net; jonathan_d_snyder@fws.gov; Ed.pert@wildlife.ca.gov; ed.pert@wildlife.ca.gov; director@wildlife.ca.gov; dolores.duarte@wildlife.ca.gov; christine_medak@fws.gov; leeona@earthlink.net; Maloyan, Ara; Don Bremner; Boman, Brad; Takara, Gary; Dorothy; M. Gaede; Blair Hanson; Katie Harris; Thomas D. Seifert; Philibosian, Dianne L; james@arroyoseco.org; Portia Besocke; Laura Solomon; Christle Balvin; Jonathan; Gray, Melissa; Jones, Carl; Khalfani, Talib; tony@watermaster.org; kelly@watermaster.org; cthomas@obainc.org; Dion, Mitch; david.lin@wildlife.ca.gov; regulatory.spl@usace.army.mil; Tim Martinez; Mark Mastromatteo; Sharon Sand
Subject: Public Comment: Response to PWP FEIR for Arroyo Seco Canyon Project for Hearing Officer Meeting 06/01/2021 Item D
Attachments: ARROYO SECO CANYON PROJECT response to PWP response DEIR.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Please include the attached file and this e-mail as comments for the SPECIAL MEETING HEARING OFFICER AGENDA Wednesday, January 6, 2021 Agenda Item: D. MOD TO CUP #6222: 3420 AND 3500 N. ARROYO BLVD. – COUNCIL DISTRICT #1.

The attached file (pdf) contains a response to the PWP response to public comment on the DEIR. The comment focuses on the siltation of the spreading basins; this renders them ineffective for aquifer re-charge. The requirement under CEQA to consider an "environmentally superior alternative" must include a comparison of the re-charge capacity of the stream compared to the spreading basins. This should consider flows left in the stream BEFORE FLOWS REACH THE DAM.

Nothing PWP have stated in relation to limitations of "The Law" (the Raymond Basin Judgment) preclude the spreading of water in a natural stream channel BEFORE WATER REACHES THE DAM.

On a separate topic, I was stunned by the belligerent response by PWP to comment made by the CA Dept of Fish and Wildlife (CADFW). CADFW requested a more robust assessment of fish populations in the Arroyo. The DEIR declared there are no fish, therefore no need to

provide for fish passage within the project. This assessment was made based on a one day surface study of fish populations in the month of October, the driest period of the year.

Several commenters on the DEIR mentioned that there are fish in the Arroyo. The FEIR documents include an attachment: "Los Angeles River Restoration and Steelhead Recovery" done by the National Marine Fisheries Service.

This study has a section: "Native Fish in the Angeles National Forest 2020".

For the Arroyo it records Arroyo Chub as "rare" (but not extirpated) and the Coastal Rainbow Trout as "uncommon", again, not extirpated.

The study states that "fish were found in almost every stream".

In answer to the CADFW the PWP response dismisses the request for a more detailed sub surface search for fish. PWP declare that their surface level approach "was adequate".

CADFW are trustees, on behalf of the public, of the fish and wildlife populations in the State. Who are PWP to dismiss their request for a more detailed study of fish populations in the Arroyo?

The "Los Angeles River Restoration and Steelhead Recovery" study includes a letter from Mr. Mitch Dion, head of PWP. In this letter Mr. Dion makes supportive comment on PWP working to improve the potential of the Arroyo as a fishery.

How can a letter from Mr. Dion, the head of PWP, be so at odds with the dam and concrete engineers in his own department who appear to want to reduce the Arroyo to a storm drain?

The project must provide provision for fish passage at the outset allowing for minimal flows to remain in the stream to allow fish to pass up and downstream of the diversion structure.

It is inappropriate for a single hearing officer to certify the validity of the FEIR for a project that will change the nature of the Arroyo Seco for generations. The DEIR should be approved by a full meeting of the Pasadena City Council.

Please add these comments to the Administrative Record for the PWP Arroyo Seco Canyon Project Areas 2 & 3 and the Los Angeles County Devil's Gate Cleanout project.

For members of the public receiving this e-mail, a short supportive letter on the comments in this e-mail and the attached document sent to the addressee will be entered in the record. For those who can attend the meeting on Wednesday, the submission of a less than 200 word public comment for this agenda item will help impress upon the City that the FEIR should not be approved by a single hearing officer.

This e-mail can be forwarded to other interested parties.

Regards,

Hugh Bowles
626 482 9116

ARROYO SECO CANYON PROJECT
RESPONSE TO PWP PUBLIC COMMENT RESPONSE IN FEIR
Prepared by Hugh Bowles (01/05/2021)

This document relates to the PWP response to public comment on the findings in the Converse Consultants West study – "Hydrogeologic Investigation, Devil's Gate Water Collection Tunnel", paid for by PWP in 1995.

The Converse study included an assessment of the hydraulic conductivity of different areas of the Hahamonga basin. While comparison between the different areas was not the main objective of the study, the study notes that the spreading basins had a "hydraulic conductivity" rate "by orders of magnitude" worse that all the other areas in the Hahamongna basin. Converse concluded the poor hydraulic conductivity in the spreading basins was caused by "siltation", and "compaction" from maintenance equipment.

Hydraulic conductivity is described as:

"Hydraulic conductivity, symbolically represented as K, is a property of vascular plants, soils and rocks, that describes the ease with which a fluid (usually water) can move through pore spaces or fractures. It depends on the intrinsic permeability of the material, the degree of saturation, and on the density and viscosity of the fluid. Saturated hydraulic conductivity, K_{sat}, describes water movement through saturated media. By definition, hydraulic conductivity is the ratio of velocity to hydraulic gradient indicating permeability of porous media." (Wikipedia 2021)

Below is the PWP answer to comment on the Converse Study and the issue of hydraulic conductivity:

> **"9.1-6** The 1995 Converse investigation did not evaluate percolation rates for different surface areas in the basin. A comparison was made between 3,467 gpd/ft$_2$ representing the highest value for hydraulic conductivity in deep alluvium and 40 gpd/ft$_2$ from test pits in the spreading basins. Converse noted an "orders of magnitude" difference in the values. The comment mistakenly applies this description to a comparison between spreading basin and streambed percolation rates."

Hugh Bowles response to PWPs claim:

The 3,467 gallons per day /sqft (gpd/sqft) is not confined to deep alluvium as PWP want to believe.

Converse used well data to measure hydraulic conductivity stating "full penetration of the aquifer was assumed"; they admit that is not always the case.

Converse describe the spreading basins as sitting on "Unit 1" alluvial materials. Unit 1 alluvial structures are described as "**exposed** along the east side of the Arroyo Seco… Unit 1 consists of unconsolidated coarse sand, gravel and boulders. The unit is not cemented… **The upper few feet** of Unit 1 deposits within the arroyo may have higher silt and clay content than Unit 1 material at greater depth". **Unit 1 structures sit on top of Unit 3 structures** described as "moderately consolidated to unconsolidated sand and gravel with abundant boulders".

Unit 1 materials are “exposed” and are up to 70 ft deep, they reach to the surface, they are not confined to the “deep alluviums” PWP claim.

The 3,467 gpd/sqft measurement is not for deeper alluvial structures. Converse measured the hydraulic conductivity of the deeper structures described as Unit 3 and Unit 4. Again, Unit 1 consists of “exposed” alluviums sitting on Unit 3 structures.

Converse state that the measurements they achieved “compare well with published data for unconsolidated material consisting of fine to coarse gravel… (Driscoll, 1986).

In relation to the spreading grounds Converse write:

“Hydraulic conductivity estimates made from the Arroyo Seco Spreading Grounds and from shallow percolation test pits yield K orders of magnitude lower than the estimates made from well data. The values are generally lower than 40 gpd/sqft. The spreading ground estimates were made in Unit 1 type material. As just described, Unit 1 should have a higher hydraulic conductivity than Unit 4. The reasons for the low spreading ground estimates may be siltation in the spreading ponds combined with artificial compaction of surficial soils due to equipment etc. The spreading ground estimates were not considered in our analysis.” (page 11 of the Converse Study).

As the stream zone also sits on Unit 1 materials it is correct to assume that the stream zone hydraulic conductivity is the 3,467 gpd/sqft range and the spreading basins are “by orders of magnitude” worse.

This low hydraulic conductivity explains why low spring, summer and fall flows diverted into the spreading basins sit and stagnate in the spreading ponds. Equivalent flow rates of 5-3 cfs, if left in the stream would be absorbed well before **ANY WATER REACHES THE DAM**.

A “Citizens’ Alternative” was submitted as an “environmentally superior option” to increased diversion. The alternative uses observation to illustrate the point that all low flows in the stream are absorbed. This avoids drinking water stagnating in spreading ponds.

PWP refuse to consider this option, instead writing about issues with water reaching the dam.

We all know and have learned how water behind the dam is beyond the control of PWP; PWP cannot claim pumping credit for water percolated behind the dam. However, PWP, under the Law, could claim pumping credit for water percolated “in the natural stream channel” **BEFORE IT REACHES THE DAM**. A suggestion has been to measure the hydraulic conductivity of the stream to the point where flows are absorbed to the south end of Johnson Field.

The Law does not preclude options to create “spreading grounds” outside of the impervious impound basins PWP insist on using.

PWP admit the spreading basins are silted up (bold added):

> “Section 4.5, Hydrology and Water Quality, provides an evaluation of percolation rates from testing conducted for the Project in 2013, beginning on page 4.5-8. The testing was performed for preliminary engineering purposes and to recommend a percolation value for the design of the Project’s basins. According to Converse Consultants (see Appendix A-2 of the Draft EIR), test results for the upper five feet of soils within Area 3 show high to very high percolation rates Typical permeability rates of gravelly sands range from **2.8 to 280 ft/day**; however, **the percentage of fine**

> **sediments accumulated in soil will reduce the permeability down to 0.2 to 3 ft/day**. This places the estimated current percolation rate of the spreading basins of 2.7 ft/day within an expected range, even though this rate is lower than tested. Converse explains some reasons for the high percolation test results as follows: 1) the percolation test holes did not have fine sediments, 2) clean water was used for percolation tests, and 3) soils surrounding the test holes may have been disturbed and loosened during drilling. In summary, **the soil borings taken within the existing spreading basins demonstrate good percolation capacity of the on-site soils without considering fine sediment clogging**. **Converse recommended using a low percolation rate for the design of the Project's new basins and to further take fine sediment clogging into consideration in the maintenance plan.**

Converse remains consistent. They conclude that the percolation rates the project should use should be below the absolute minimum expected for these alluviums. Why? The spreading basins are full of silt.

More PWP response to comment:

> 9.1-7 The commenter's statement regarding percolation is inaccurate. The "99%" stated in the comment is based on a comparison of 40 gpd/ft2 to 3,467 gpd/ft2; however, these rates do not represent spreading basin vs. streambed percolation capacity. Streambed percolation was not tested for a comparison.

Hugh Bowles Question: Why not as an environmentally superior alternative?

> Further, the proposed Project's Geotechnical Feasibility Study (Appendix A-2 of the Draft EIR), states that "soils encountered in the JPL parking lot and existing sediment basins are "stream deposits" from the Arroyo Seco Canyon, consisting of primarily gravelly sands with cobbles and boulders, which are excellent permeable
> materials."

Hugh Bowles Comment: The percolation rates in the JPL parking lot were found by Converse to be lower than most of the spreading basins. Only spreading basin #8 had an acceptable percolation rate based on the comparison model used by Converse.

> Additionally, the commenter appears to equate efficiency of the spreading basins with how quickly water percolates into the ground; however, this definition is off-target. The objective of the spreading basins is to augment groundwater recharge, therefore, a true measure of efficiency is the volume of water that percolates into the aquifer.

Hugh Bowles comment: In our dry Mediterranean climate storing water above ground is unnatural. Nature provides for underground aquifers to minimize impacts from heat gain and evaporation. What is "off target" is to fail to consider using the superior hydraulic capacity of the natural stream for flows BEFORE THEY REACH THE DAM.

> The Draft EIR and Topical Response HYD-1 explain in detail why the Project's spreading basins provide additional groundwater recharge by percolating flows that, if they remained in stream, would collect behind Devil's Gate Dam and be released to the ocean.

Hugh Bowles comment: This is a false statement. All my comment relating to leaving flows in the stream are for flows absorbed by the stream BEFORE THEY REACH THE DAM. This would occur during 95% of the year when flows are 5 cfs or less. All late spring, summer, and early fall flows could be left in the stream.

They would NEVER REACH THE DAM. Doing this would be "environmentally superior", would preserve the inevitable destruction of the last riparian habitats in the basin, and would use the high percolation rates in the stream to benefit the aquifer.

There has been no statement from the Raymond Basin Management Board to indicate that PWP can claim no pumping credit for flows left in the stream and absorbed BEFORE THEY REACH THE DAM.

DECISION MAKERS MUST DEMAND A COMPARISON OF PERCOLATION RATES IN THE STREAM COMPARED TO SPREADING BASINS.