# Monk Hill Basin and the Arroyo Seco Canyon Project

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Pasadena Resident

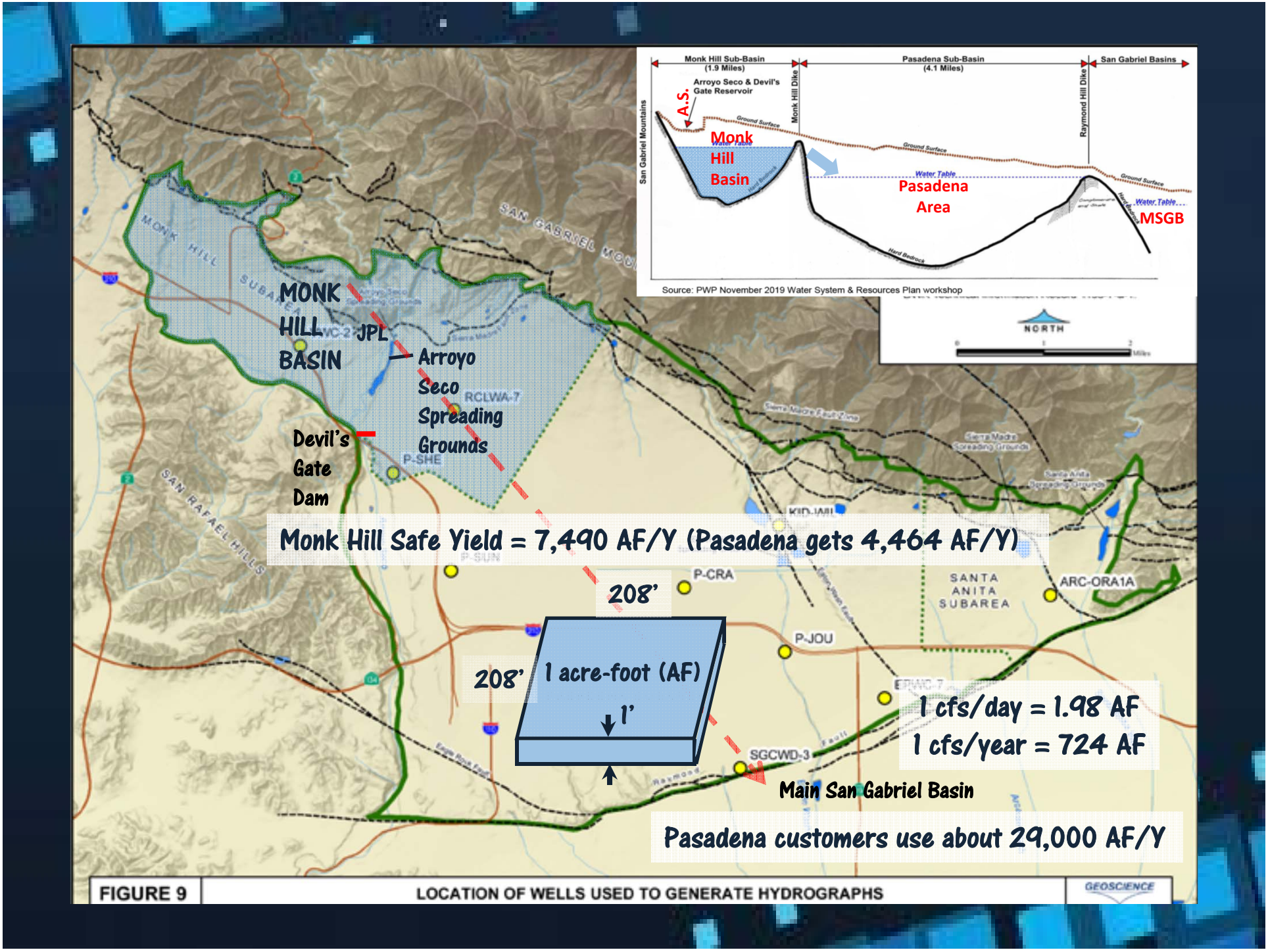
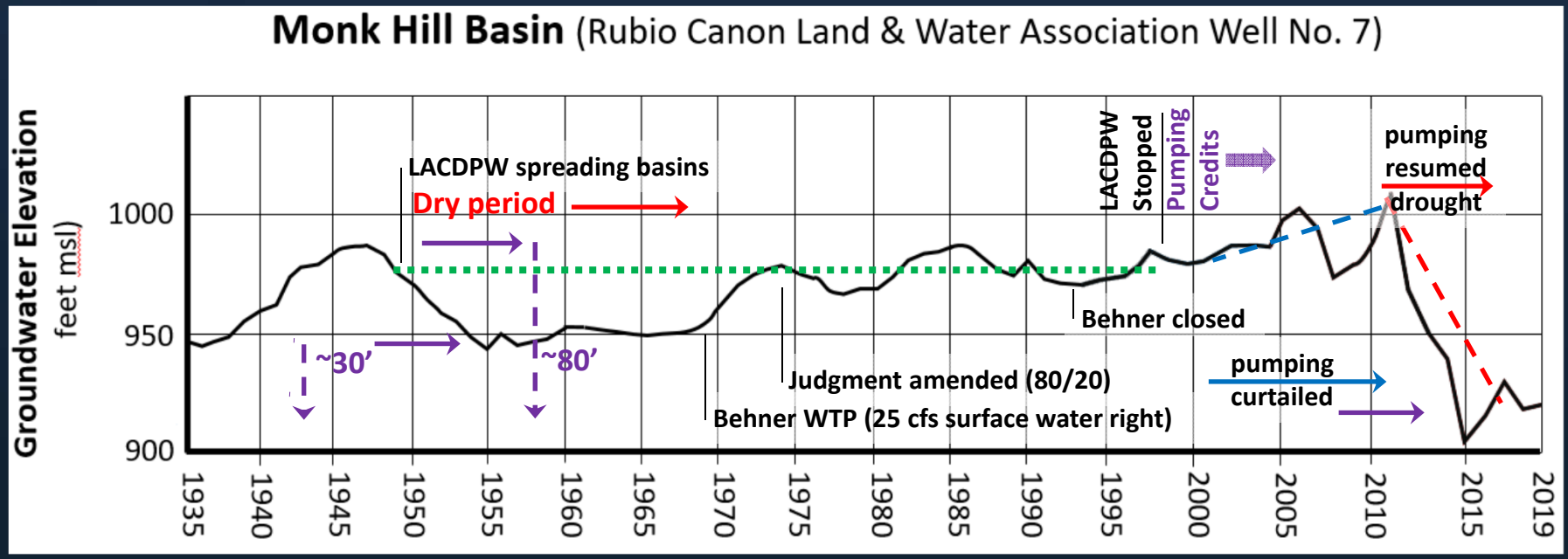



FIGURE 9 LOCATION OF WELLS USED TO GENERATE HYDROGRAPHS GEOSCIENCE

# Monk Hill Basin



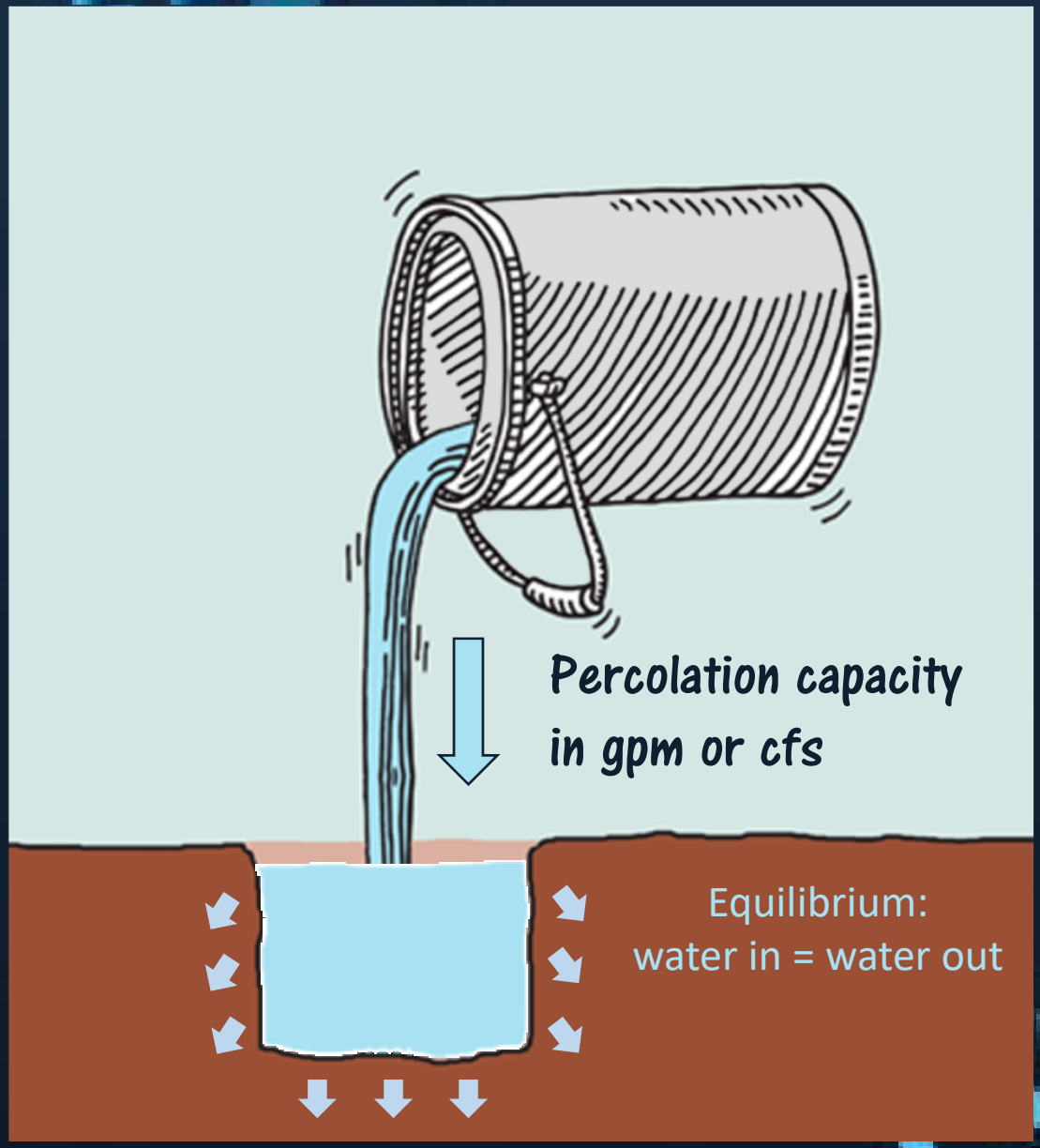
# Arroyo Seco diversion & spreading

In response to my DEIR comment that the ASCP will result in harm to the Monk Hill Basin, Pasadena Water & Power said:

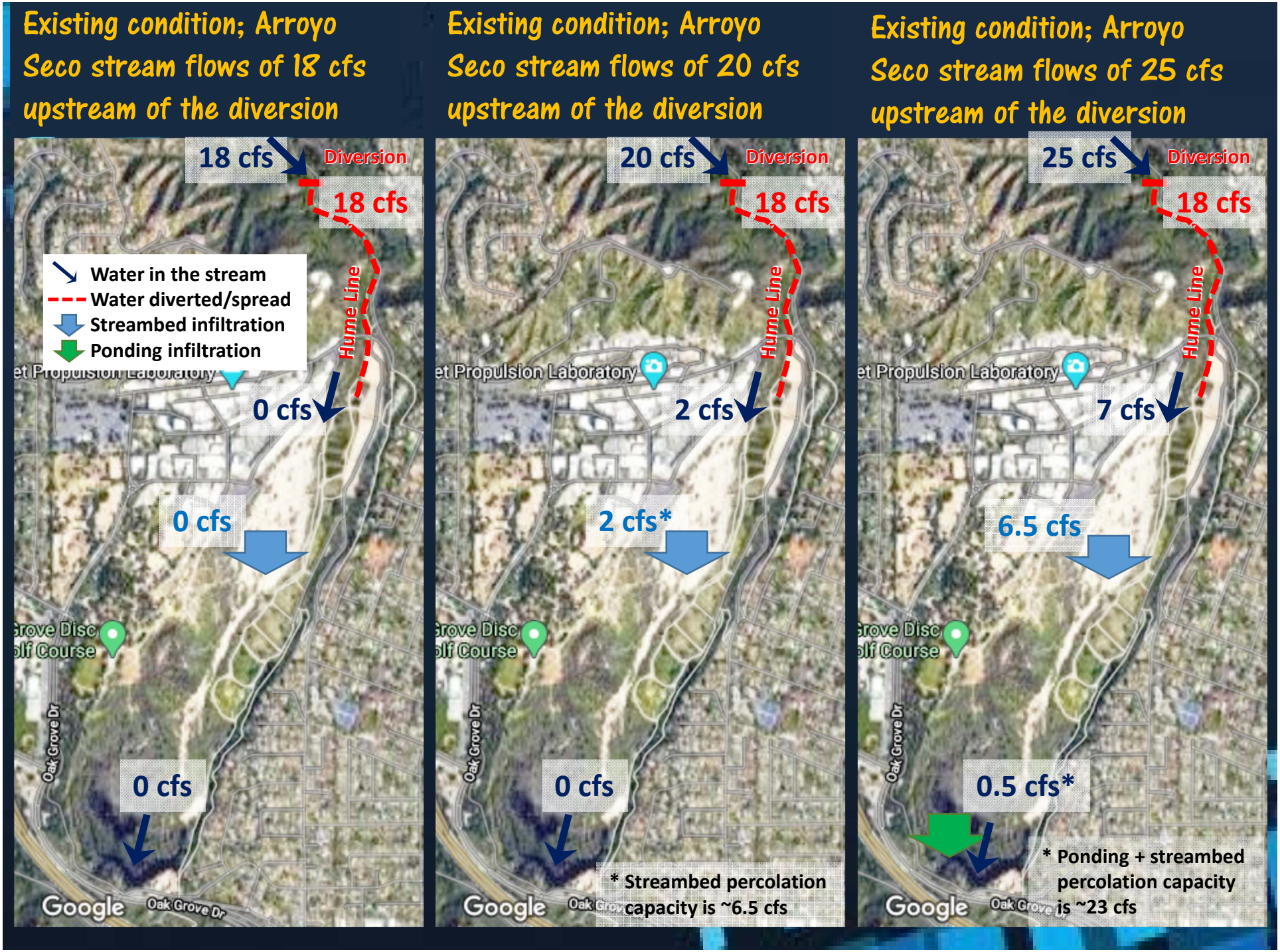
"...water spread into the basins augments recharge of the aquifer with stream flows that would otherwise be released through the dam and lost from the basin."

Paraphrased: The entire increment of water captured by the ASCP would not have percolated behind Devil's Gate Dam

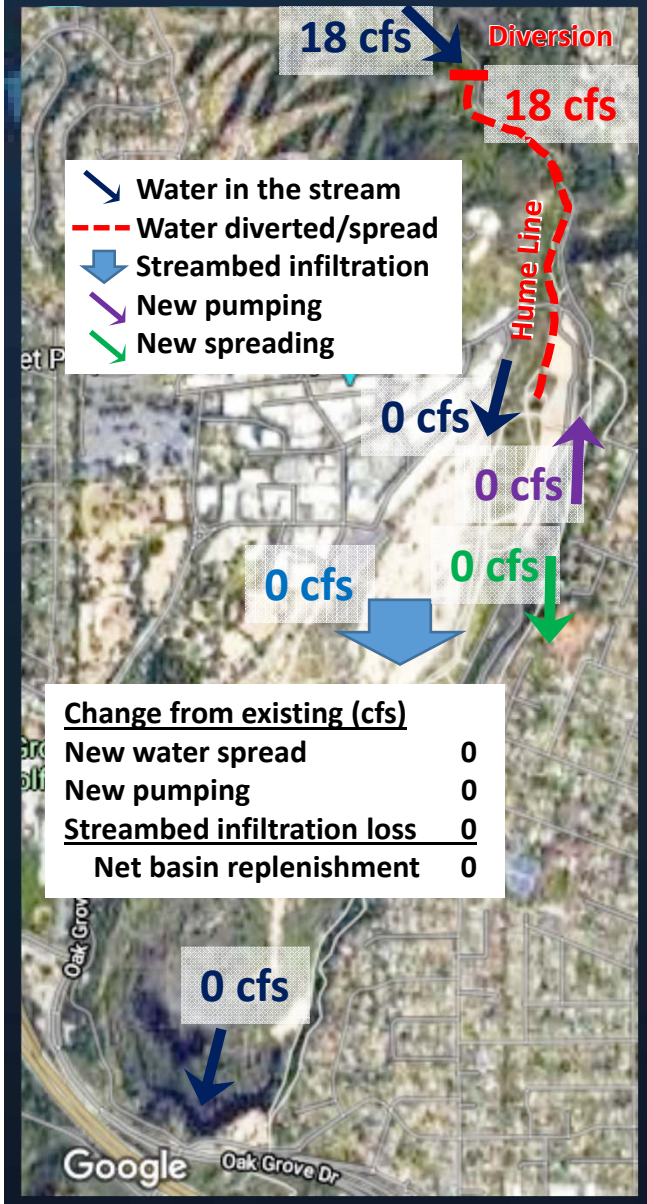
# How do we measure percolation/ infiltration?




...as a rate of flow in "gallons per minute" (gpm) or "cubic feet per second" (cfs)

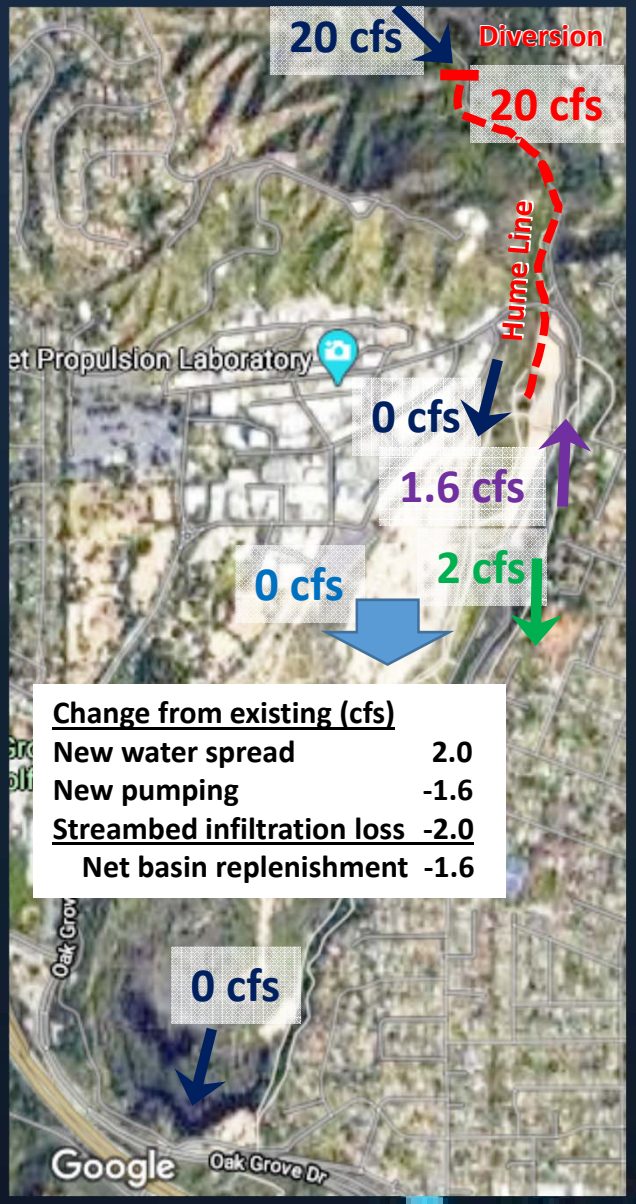

Existing condition; Arroyo Seco stream flows of 18 cfs upstream of the diversion
18 cfs
Diversion
18 cfs
Water in the stream
Water diverted/spread
Streambed infiltration
Ponding infiltration
Hume Line
0 cfs
0 cfs
0 cfs
Oak Grove Dr
Google
Existing condition; Arroyo Seco stream flows of 20 cfs upstream of the diversion
20 cfs
Diversion
18 cfs
Hume Line
2 cfs
2 cfs*
0 cfs
Oak Grove Dr
Google
* Streambed percolation capacity is ~6.5 cfs
Existing condition; Arroyo Seco stream flows of 25 cfs upstream of the diversion
25 cfs
Diversion
18 cfs
Hume Line
7 cfs
6.5 cfs
0.5 cfs*
Oak Grove Dr
Google
* Ponding + streambed percolation capacity is ~23 cfs

## Proposed project; Arroyo Seco stream flows of 18 cfs upstream of the diversion



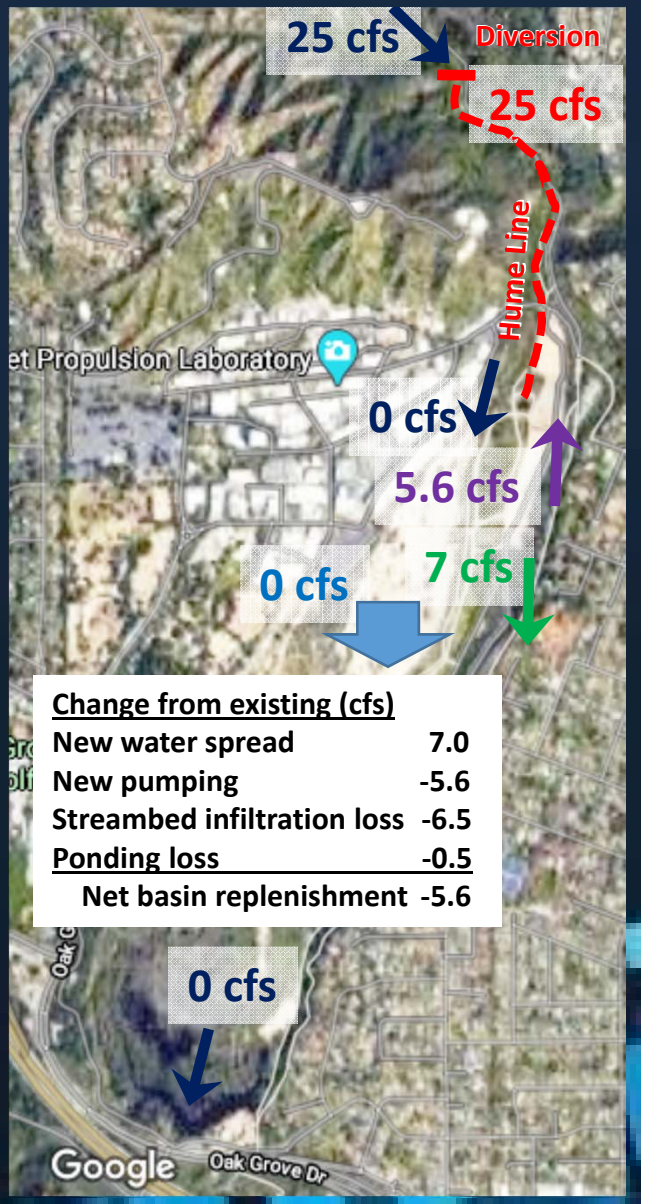

| Change from existing (cfs) | |
|---|---|
| New water spread | 0 |
| New pumping | 0 |
| Streambed infiltration loss | 0 |
| Net basin replenishment | 0 |

## Proposed project; Arroyo Seco stream flows of 20 cfs upstream of the diversion




| Change from existing (cfs) | |
|---|---|
| New water spread | 2.0 |
| New pumping | -1.6 |
| Streambed infiltration loss | -2.0 |
| Net basin replenishment | -1.6 |

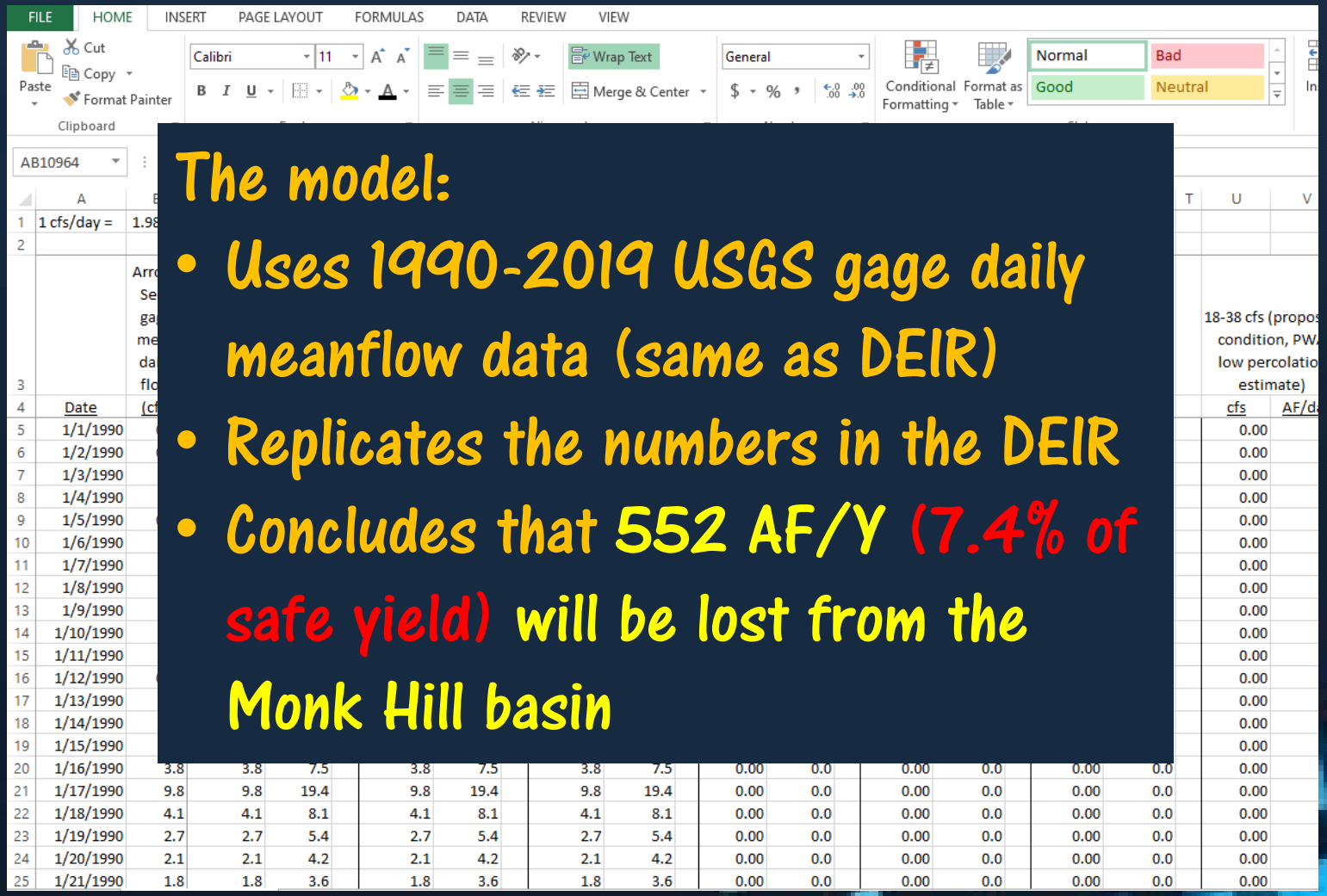
## Proposed project; Arroyo Seco stream flows of 25 cfs upstream of the diversion




| Change from existing (cfs) | |
|---|---|
| New water spread | 7.0 |
| New pumping | -5.6 |
| Streambed infiltration loss | -6.5 |
| Ponding loss | -0.5 |
| Net basin replenishment | -5.6 |

* 80% of diverted surface flow

# How does this translate to groundwater impacts?



## The model:

- Uses 1990-2019 USGS gage daily meanflow data (same as DEIR)
- Replicates the numbers in the DEIR
- Concludes that 552 AF/Y (7.4% of safe yield) will be lost from the Monk Hill basin

## What's does this mean?

At the same time that the Monk Hill Basin groundwater levels are declining, Pasadena is proposing to "mine" the basin further

# Other Projects in the WSRP that have the potential to harm Monk Hill groundwater levels

- Local Non-Potable Water Project
- Devil's Gate Pump-back Project
- Arroyo Seco to Eaton Canyon Raw Water Pipeline
- Natural Infrastructure

# What's Next?

- Conditional Use Permit Hearing (December 2020?)
- MSC (?)
- Issuance of FEIR (January 2021?)
- City Council FEIR certification (January 2021?)
- There is $2.5 million in the 2022 capital budget

To get a copy of this presentation, go to

https://www.arroyoseco.org/watercrisis.htm

Questions?