WATER FOR SANTA CRUZ COUNTY

Comments on the Draft EIR
for the Pure Water Soquel project
August 13, 2018

Our comment on the Draft EIR relates to section 7.5.4, "Participation in City of Santa Cruz's In-Lieu and/or Aquifer Storage and Recovery Project(s) as an Alternative Supply Source". This section conflates in-lieu use with Aquifer Storage and Recovery (ASR). While ASR *can be* a part of in-lieu use, it is an optional element, yet section 7.5.4 only considers the two together, saddling in-lieu use with the possible disadvantages of ASR. Water transfers for in-lieu "conjunctive use" should be considered separately from and without reference to ASR.

> *In an in lieu project, groundwater users would agree to forebear pumping groundwater during some periods and instead use surface water which they would not otherwise use, and the conjunctive use program would then utilize groundwater during drier years, over and above historical extractions, and export it or a like amount of surface water from the basin*[1].

This is also known as 'passive conjunctive use'. Note that ASR is not mentioned. Water transfers can and do occur without the necessity of actively injecting water into the aquifer. If ASR is added to the conjunctive use plan, it is then referred to as 'active conjunctive use'. We note that the phrase 'conjunctive use' appears only twice in the entire EIR, once in the bibliography and once referring to a flood protection plan in Santa Cruz. Given the emphasis by the California Department of Water Resources encouraging such projects[2] and its ability to completely ameliorate SqCWD's current critical overdraft, this is a serious omission and must be thoroughly addressed.

Scenario for Water Transfers:

Very simply, WFSCC knows that the water transfers using North Coast stream water, which are expected to begin this winter, if expanded and buffered by storage of San Lorenzo River water in Loch Lomond, are more than adequate to meet the needs of the Soquel Creek Water District (SqCWD) for the foreseeable future *without any change in water rights*[3]. This possibility has not been investigated in this EIR, making the EIR seriously deficient.

Current Water Transfer Capacity:
The capacity of the Graham Hill Water Treatment Plant (GHWTP) to SqCWD intertie is 1.4 million gallons per day (mgd). Without any capital investment or infrastructure changes, if that intertie were full and used every day, over half of SqCWD's needs would be met (1.4 million gallons x 360 days = 504 million gallons per year [mgy]), even more than the optimal maximum output of Pure Water Soquel (PWS)(450mgy).

Expanding Water Transfer Capacity:

---

[1] California Water Resources Control Board, Water Transfer Program Information, no date. p. 5 Available at waterforsantacruz.com/soquel-creek-water-district "Water Transfer Program Information"

[2] Bartkiewicz et al., "A Summary of the California Law of Surface Water and Groundwater Rights", 2006. p 6-7 Available at waterforsantacruz.com/soquel-creek-water-district "Summary of California Law"

[3] waterforsantacruz.com/soquel-creek-water-district "Santa Cruz 15-Year Water Supply Options"

Any expansion of currently agreed-to water transfers, transfers that are within the bounds of the current SCWD water rights, would require amending the CEQA Cooperative Water Transfer and Purchase Agreement between SqCWD and SCWD[4].

[4] waterforsantacruz.com/soquel-creek-water-district "Water Transfer Agreement

3 issues are involved in expanding water transfers:

Pipe capacity
Storage buffer for storage in high flow times and release in low flow times
Water rights

From simpler to more complex, these possibilities are:

1) *Expanded intertie but <u>no</u> storage buffer, <u>no</u> increase in water rights:*

In the "Critically Dry Year" of 2018, pumping directly from SLR —>GHWTP—>SqCWD *only* on days where flow was much greater than the minimum necessary for fish and possible SCWD needs (over 50cfs), there were 63 days with river flows adequate for transfers[5], making 88 mg of transfer with the current intertie. *With only an expanded intertie*, if the maximum amount available under current water rights (7.2mgd) were transferred <u>only</u> on those same days, 454 mg (7.2mgd x 63 days = 454mg) could have been transferred, meeting around 50% of SqCWD's needs for the entire year *with minimal capital investment.* Under conjunctive use the expanded intertie would also prove its worth in sequentially dry years when, as happened several years ago, water needs to be transferred in the other direction, from the Purisima aquifer to the Santa Cruz Water District (SCWD). The current transfer capacity of 1.4mgd is clearly insufficient to meet any significant need that the SCWD might have, a total need that is currently around 7.5mgd, even higher in the summer months when the transfers would be most needed.

2) *Expanded intertie, storage buffer, change in place of use but <u>no</u> increased water rights*

The Santa Cruz Water Department reservoir at Loch Lomond (LL) is used as water storage. This storage could be used as a buffer, filled and partially emptied depending on requirements. In addition to direct transfers to SqCWD, with a change in place of use, under conjunctive use water could also be pumped directly from the San Lorenzo River (SLR) to LL and then withdrawn from LL to pump daily to SqCWD (via the GHWTP). Loch Lomond could then be replenished by SLR harvest whenever feasible and SqCWD would not have to be at the mercy of unreliable, unpredictable flows. The current water right is 7.2mgd, year round. Under the current SCWD water right, with an intertie expanded to handle it a transfer of 900mg is possible, almost meeting SqCWD's total needs. This eliminates any need for PWS.

3) *Expanded intertie, storage buffer, place of use change <u>and</u> increased water rights*

With expanded interties (SLR—>LL and GHWTP —> SqCWD), use of Loch Lomond as a storage buffer, a negotiated change in water rights on the SLR with accompanying change in place of use—both of which are *encouraged* under current California Department of Water Resources guidelines (see footnote 2)— the supply of water for use by SqCWD is almost limitless. It is so substantial that the failure of the EIR to address this possibility is a dire flaw.

In support of this contention, consider the following: Under the proposed "Buffered Transfers" scenario (#2 above), analysis of SLR flow data from the past 51 years shows that *all* of SqCWD's water needs could have been met for 78% of the years examined (40 of those 51 years)[6]. There were only 3 years in the past 51, 1 in the past 40, and none in the past 20 years when the amount that could be harvested to refill Loch Lomond was less than the maximum amount of 450mgy PWS would produce. Thus over the past 51 years conjunctive use would have outperformed PWS 94% of the time. Because it is a non-technological solution, it would supply water with much higher

[5] waterforsantacruz.com/soquel-creek-water-district "SLR Daily Flows 2018"
[6] waterforsantacruz.com/soquel-creek-water-district "Days over 50cfs"

reliability. The water would also have guaranteed purity and be available at a fraction of the cost of PWS. With expanded water rights (#3 above) SqCWD's needs could be easily met almost every year[7]

.

Community Concerns:

"Timeliness"

Water transfers can and will be started this winter. Expanding the interties could be done very expeditiously, certainly much faster and much less expensively than building a PWS treatment plant.

"Water Quality"

The pipe loop test showed no incompatibility between SLR water and SqCWD's pipes. The water from the river was said to be of better quality than the currently pumped water. And because it is rainwater and not wastewater it is not subject to the many 'known unknowns' of treated wastewater.

"Reliability"

While we are starting to see some changes in rainfall patterns, for the past 81 years this method of supply would have been completely reliable. This also holds true for the past 10 years(see footnote #4). There is no complicated plant to malfunction and no new staff with the requisite skills to operate this highly complex plant will need to be hired, an issue already identified by the consultants as a concern.

EIR District Goals

According to Section 7.5.4 of the draft EIR, water transfers:

"Would not reduce Project impacts"

This is not accurate. Unless the interties are expanded (recommended!), there are no impacts from this project and therefore PWS Project Impacts would not be reduced but rather completely eliminated.

"Would not meet goals of"

Timeliness

This is not accurate. See above. What could be more timely than right now?

Affordability

This is not accurate. The cost of this plan is minimal to modest, depending on the options chosen. Even with an expanded intertie, updates to the GHWTP (which will also have to occur with PWS), and an expanded pipe between the SLR diversion and Loch Lomond, the cost of this plan is less than $1/10^{th}$ the long-term cost of PWS.

---

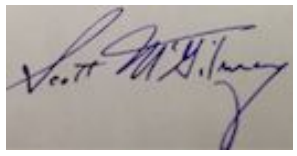
[7] waterforsantacruz.com/soquel-creek-water-district "3 Year Rolling Average"

Reliability during drought periods

This is *highly* debatable. Water transfers would have been *complete* solutions to SqCWD's needs for 84% of the past 51 years. Transfers would have provided as much water as PWS would supply (roughly half SqCWD's needs or 450mgy) for 48 of the past 51 years (see footnote #4). After 15 years the cumulative total available would be 50% more than with PWS (see footnote #3), allowing SqCWD to pump the Purisma aquifer even less than they would have to with PWS. In the years when water transfers were not adequate to completely refill LL, the wells in the Purisima aquifer could then be pumped by SqCWD. NOT pumping the wells for 90% of the previous 51 years would have allowed the aquifer to remain full from natural recharge, making any possibly necessary but very infrequent pumping a non-issue. Allowing significant water transfers to occur now will allow the aquifer to recharge itself naturally, avoiding the possible hazard of introducing 'known unknown' substances into a community water supply.

Conjunctive use of San Lorenzo River water is a complete, inexpensive, entirely feasible solution to the water needs of the SqCWD. In order for the EIR to be complete, this alternative needs to be included and comprehensively evaluated on its own merit, *not* as a partner to ASR, with which it has no necessary connection.

Respectfully submitted



Scott McGilvray
Chair, Water for Santa Cruz County
https://waterforsantacruz.com/