

Dewatering – impacts on wells and pumps

1. Local Agencies of the North Delta (LAND)

2015 comments on the BDCP/WaterFix

Complete document here:

<http://restorethedelta.org/wp-content/uploads/2015/11/LAND-WaterFix-Alt.-4A-Cmnt-Ltr-10.30.15.pdf>

p 10

RDEIR/S Section 4.3.3/ DEIR/S Chapter 7 – **Groundwater**

Changing groundwater elevations, either by lowering them with groundwater pumping for construction dewatering, or cutting off the seepage through cutoff walls at the intakes, or at shafts, etc. as the project proposes, will have both direct and indirect impacts on Delta homes, farms and drainage districts. The project can even impact surface water supply and drainage systems in ways that have significant effects in combination where the individual effect may appear insubstantial. For example, lowering a local water table by 5 feet may not affect a drinking water well that is isolated and used at a low rate. (See RDEIR, App. A, Figure 7-27 (showing groundwater levels diminished by dewatering).) Lowering the same water table at an area with multiple wells in a narrow belt, as it is common along the levees, can significantly increase the size of the cone of depression created by the aggregate of the wells and lead to intermittent water supplies and burning out pumps through excessive cycling. This is exacerbated where all of the wells are taking water from the same sandy lens, which is typical. The RDEIR/S fails to even describe the pump damage as an impact, even though replacing those pumps can be economically catastrophic to poor rural residents. The project places the burden of demonstrating that the pumping impacts on their drinking water wells and pump damage was caused by the project on those least able to make that claim. This is a classic environmental justice issue by which a project fails to analyze its impacts at the local, project level, and fails to mitigate for a readily foreseeable project impact. The only analysis provided is exclusive to drinking water quality impacts. (RDEIR/S, App. A, p. 28-13.)

p 13

Finally, the mitigation is based on several factors, including the modeled radius of impact, which has an additional defect: it appears that Mitigation Measure GW-1 is not intended to apply to the wells that are impacted beyond the arbitrarily selected distance of 2,600 feet. (RDEIR, App. A, Section 7.3.3.2 Alternative 1A – Dual Conveyance with Pipeline/Tunnel and 3 Intakes 1–5 (15,000 cfs; Operational Scenario A, p. 7-3, lines 37- 38 and p. 7-4, lines 9-13).) So it appears that wells that are impacted outside of that radius do not receive the mitigation, despite the RDEIR/S's failure to analyze the current groundwater conditions or geology at a project-site specific scale. (RDEIR/S, App. A, Section 7.3.3.2 Alternative 1A – Dual

Conveyance with Pipeline/Tunnel and 3 Intakes 1- 5 (15,000 cfs; Operational Scenario A, p. 7-4, lines 19-21.)

2. County of Sacramento

2014 Comments on BDCP

Complete document here:

<http://northdeltacares.org/wp-content/uploads/2016/06/Sacramento-County-BDCP-Comments-June-2014.compressed.pdf>

pp 66-67

Water Supply Impacts to Delta Communities

The BDCP is likely to substantially deplete municipal and agricultural water supplies within the Delta construction area, from construction area dewatering as well as construction induced liquefaction and settlement (such as from pile driving, tunnel boring and operation of other heavy equipment), which could adversely affect groundwater levels, and operation and integrity of wells. The DEIR/EIS glosses over these serious effects by characterizing them as “temporary,” even though construction will take place for 10 years [now 14 years] or more. (see discussion of Impact GW-1, DEIR/EIS, pp. 7-46 – 7-48.)

The DEIR/EIS makes no effort to estimate the quantity of water that the BDCP would make unavailable for existing uses. As mitigation, the DEIR/EIS proposes to offset domestic losses attributable to dewatering (but not losses or adverse effects attributable to diminished groundwater quality, or from losses caused by construction-induced liquefaction and settlement). Measures proposed to achieve this objective include installing sheet piles to depths below groundwater elevations, deepening or modifying wells used for domestic purposes to maintain water supplies at preconstruction levels, or securing potable water supplies from offsite sources. (Mitigation Measure GW-1, DEIR/EIS, pp. 7-47 – 7-48.). No analysis or evidence is provided to quantify the extent of the potential impact (including the amount of water supply that could be lost due to construction) or to demonstrate that such mitigation measures are capable of avoiding significant effects to groundwater levels, wells, and water supply. Further, it is not clear whether the DEIR/EIS evaluated the secondary impacts associated with well deepening, including increased energy use and air quality impacts from the additional pumping that will be required to obtain water from deeper wells. Moreover, these mitigation measures are inadequate because they require Delta water users to agree to physical alterations of their property (which are not likely to be given to facilitate construction of the intake and tunnel facilities) and/or to accept a substitute water supply, of unknown quantity and quality. This type of mitigation has been held to be illegal under CEQA. (Gray v. County of Madera (2008) 167 Cal.App.4th 1099.) Even if provision of a substitute supply were legal, particularly