



March 23, 2023

State Mitigation Planning Unit
Governor's Office of Emergency Services (Cal OES)
Peter A Mccuen Blvd
Mather, California, 95655

RE: Public Comment on the draft 2023 State Hazard Mitigation Plan

Dear CalOES State Mitigation Planning Unit:

Thank you for your leadership in managing California's hazard risks. Our coalition appreciates the opportunity to provide public comment on the State Hazard Mitigation Plan. We have noticed that the CalOES draft 2023 SHMP has omitted any reference to groundwater rise risk in California. **We write now to urge CalOES to include groundwater rise risk as a sea level rise, earthquake, and flood hazard of concern in the SHMP. By doing this, the SHMP will prompt state and federal engagement on groundwater rise, create state and federal grant opportunities to mitigate potential groundwater rise impacts, and guide local jurisdictions in their efforts to include groundwater rise in their Local Hazard Mitigation Plans and other local planning documents.**

Groundwater rise is an important climate risk that is currently unaddressed in our state and local adaptation planning. As climate change progresses, sea level rise causes groundwater tables to rise. Groundwater rise is likely to impact [most coastal jurisdictions](#) (i.e. more than just the Bay Area) prior to the direct impacts of sea level rise like overland flooding. Groundwater rise can cause infiltration into water and sewer systems, mobilization of buried soil contaminants, destabilization of structural foundations, increased flood risk, and more. Low-lying areas along the San Francisco bayshore are already facing the impacts of high groundwater tables [with water levels between 0 to 6 feet of the surface during wet winter conditions](#).

A coalition of researchers, led by [Pathways Climate Institute](#), [San Francisco Estuary Institute \(SFEI\)](#), and Professor [Kristina Hill of UC Berkeley](#), released a noteworthy report in January 2023, [Shallow Groundwater Response to Sea-level Rise](#). This report explains the challenges and risks of groundwater rise, gives planning and adaptation guidance, and includes present-day groundwater table conditions, determined using monitoring well observations, for four counties: Alameda, Marin, San Francisco, San Mateo. The work of this coalition, among other work, has elevated groundwater rise concerns to local public officials and urban planners, as well as to community [advocates](#) such as those serving vulnerable neighborhoods of Oakland. This awareness must be extended to the 2023 SHMP.

By omitting groundwater rise from the SHMP, the draft document also ignores the future increase in liquefaction risk that groundwater rise will cause. Many of the Bay Area's bayshore communities are built on reclaimed marshlands and wetlands or artificial fill. Saturated sandy and loose sediment, common in these areas, are already more likely to liquefy during intense shaking from earthquakes. Add groundwater rise leaving soils saturated for longer periods of the year and liquefaction risk becomes more severe,

[according to research from USGS](#). The SHMP must acknowledge this risk in order to guide how the state will support local communities and guide hazard mitigation and adaptation planning.

To address groundwater rise risk, a new paradigm of coastal adaptation may be necessary—we must quickly determine if existing adaptation and mitigation strategies address impacts of rising groundwater or exacerbate risks. The leadership of CalOES and the inclusion of this important issue in the SHMP is necessary to advance efforts to mitigate this hazard proactively. We stand ready and willing to work with you to see this hazard reflected in the updated 2023 SHMP.

Sincerely,
Sarah Atkinson
Earthquake Resilience Policy Manager
SPUR
Phone: 510-589-1626 | www.spur.org
satkinson@spur.org

Warner Chabot
Executive Director
San Francisco Estuary Institute (SFEI)
Phone: 510-375-2141 | www.sfei.org
warnerc@sfei.org

Kris May
CEO and Principal
Pathways Climate Institute (Pathways)
Phone: 510-289-5705 | www.pathwaysclimate.com
kris.may@pathwaysclimate.com

Michael McCormick
Director
Bay Area Climate Adaptation Network (BayCAN)
Phone: 510-672-5487 | www.baycanadapt.org
michael@baycanadapt.org