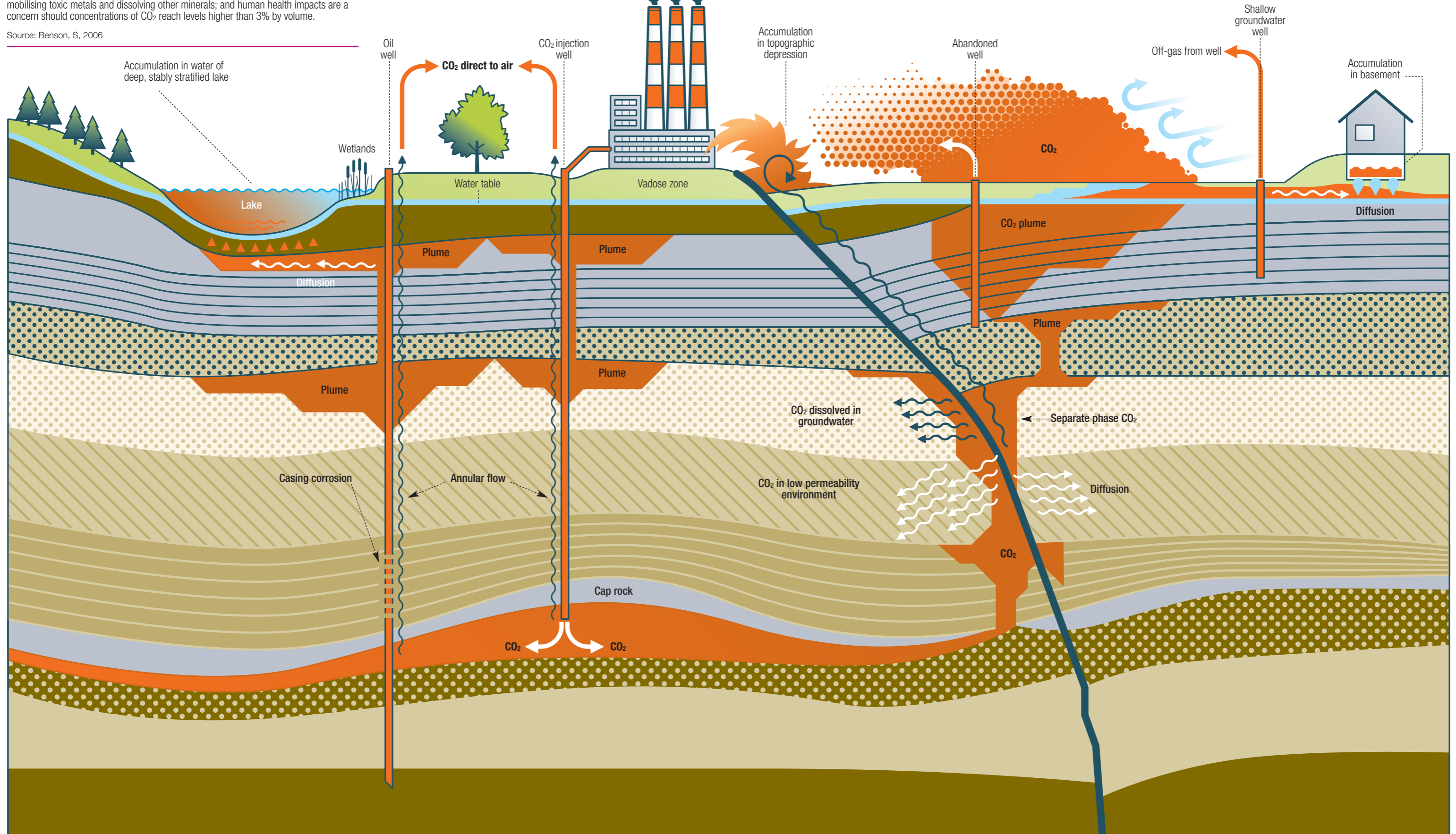


## Leakage pathways and potential impacts of CO<sub>2</sub> escape

A number of leakage pathways could result in the migration of CO<sub>2</sub> into the surrounding environment. They include leakage through or along injection wells, abandoned wells, undetected faults or those created by injecting CO<sub>2</sub> at too high a pressure, corrosion of cap rocks and cement plugs used to seal injection wells and diffusion into shallower geologic formations. Potential consequences of leakage are equally broad. Releases of CO<sub>2</sub> back into the atmosphere would undermine any climate benefit of geological storage; CO<sub>2</sub> rising into the subsurface could negatively impact soil ecosystems, harming both flora and fauna; CO<sub>2</sub> contamination of surface waters might negatively impact aquatic ecosystems; leakage into groundwater aquifers could degrade their quality by mobilising toxic metals and dissolving other minerals; and human health impacts are a concern should concentrations of CO<sub>2</sub> reach levels higher than 3% by volume.

Source: Benson, S, 2006



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**False Hope**  
Why carbon capture  
and storage won't  
save the climate

Section  
Four