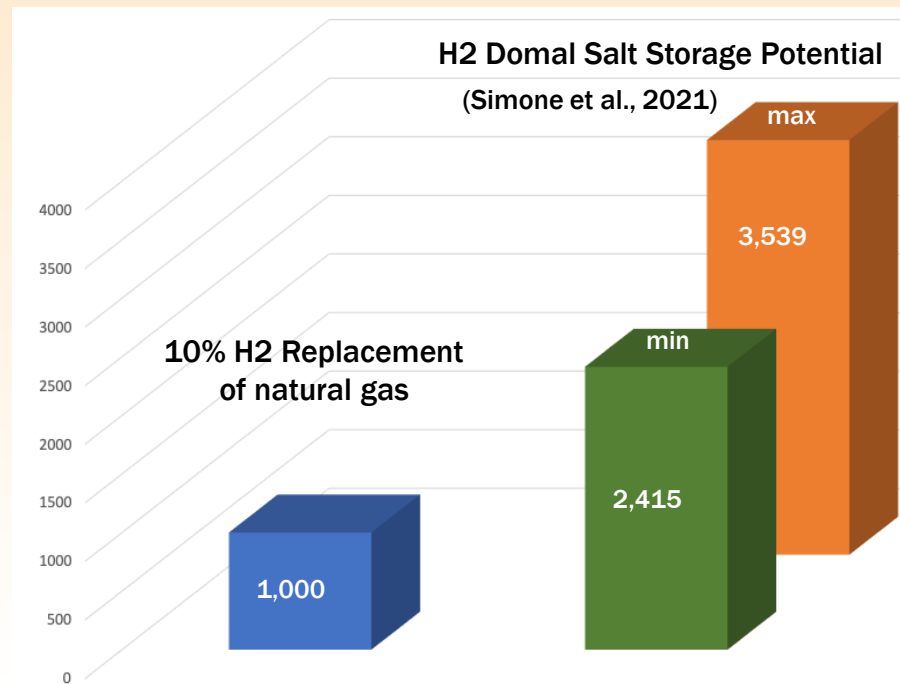


Need to upscale H₂ storage capacity ...

“If hydrogen gas were to replace 10 percent of natural gas, then 1,000 Bcf (1 trillion cubic feet) of gas storage would be required. Current H₂ storage capacity is roughly 5 – 8 Bcf.

Based on this, H₂ storage referenced to the current H₂ storage capacity would need to be increased 200x for 10 percent replacement of H₂ in the natural gas network.” (Shuster et al. 2021)



Large scale Hydrogen storage options in the subsurface

- Salt Formations (proven concept but need to upscale)
- Porous media (very active area of research – it will take some time from research to implementation)

H2 “Ecosystem”

Colocation of both surface and subsurface resources and infrastructure

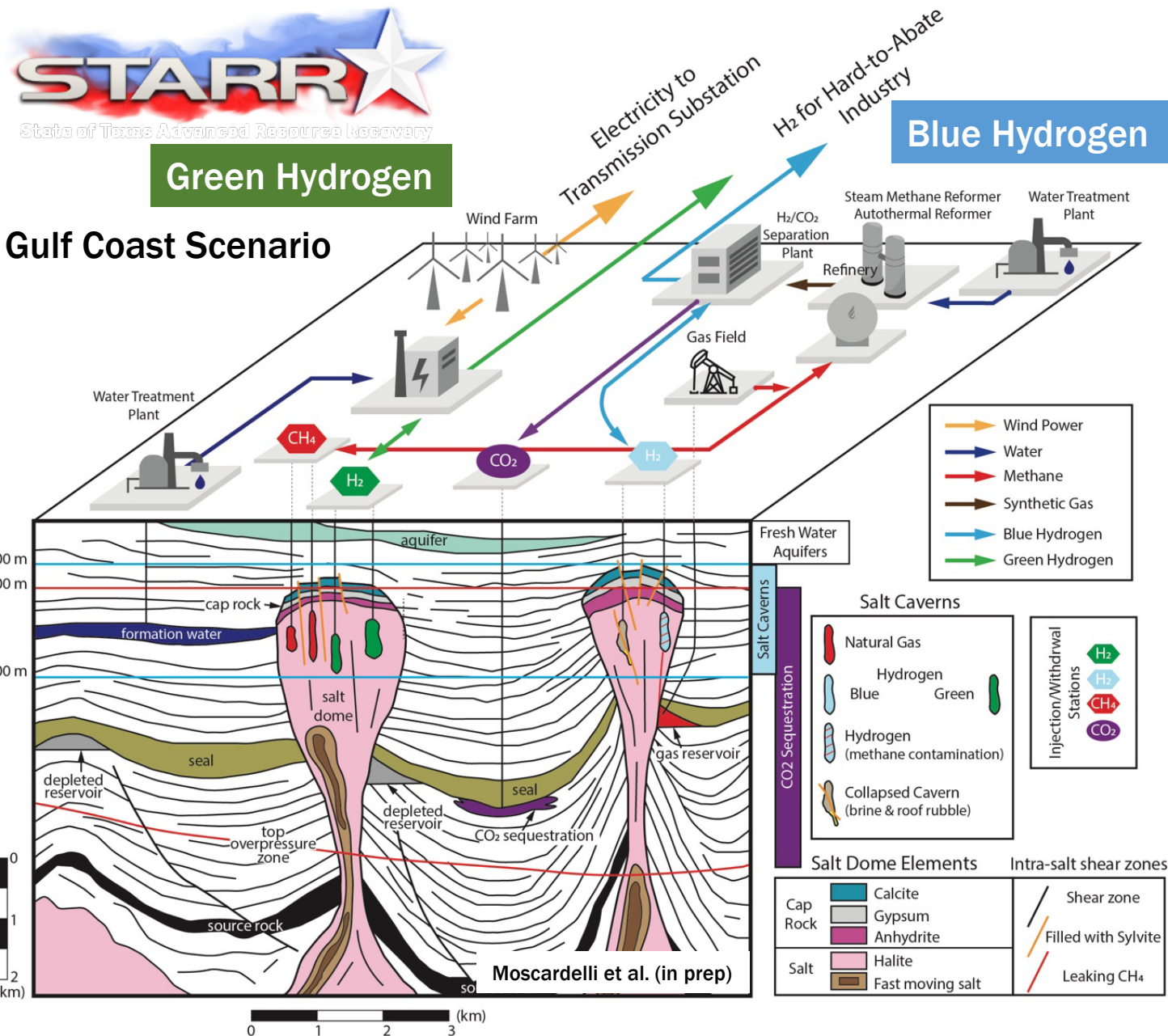
H2 storage in salt domes (doable)

H2 storage in porous media (more research needed)

CO2 sequestration capacity (blue H2)

Natural gas supply (blue H2)

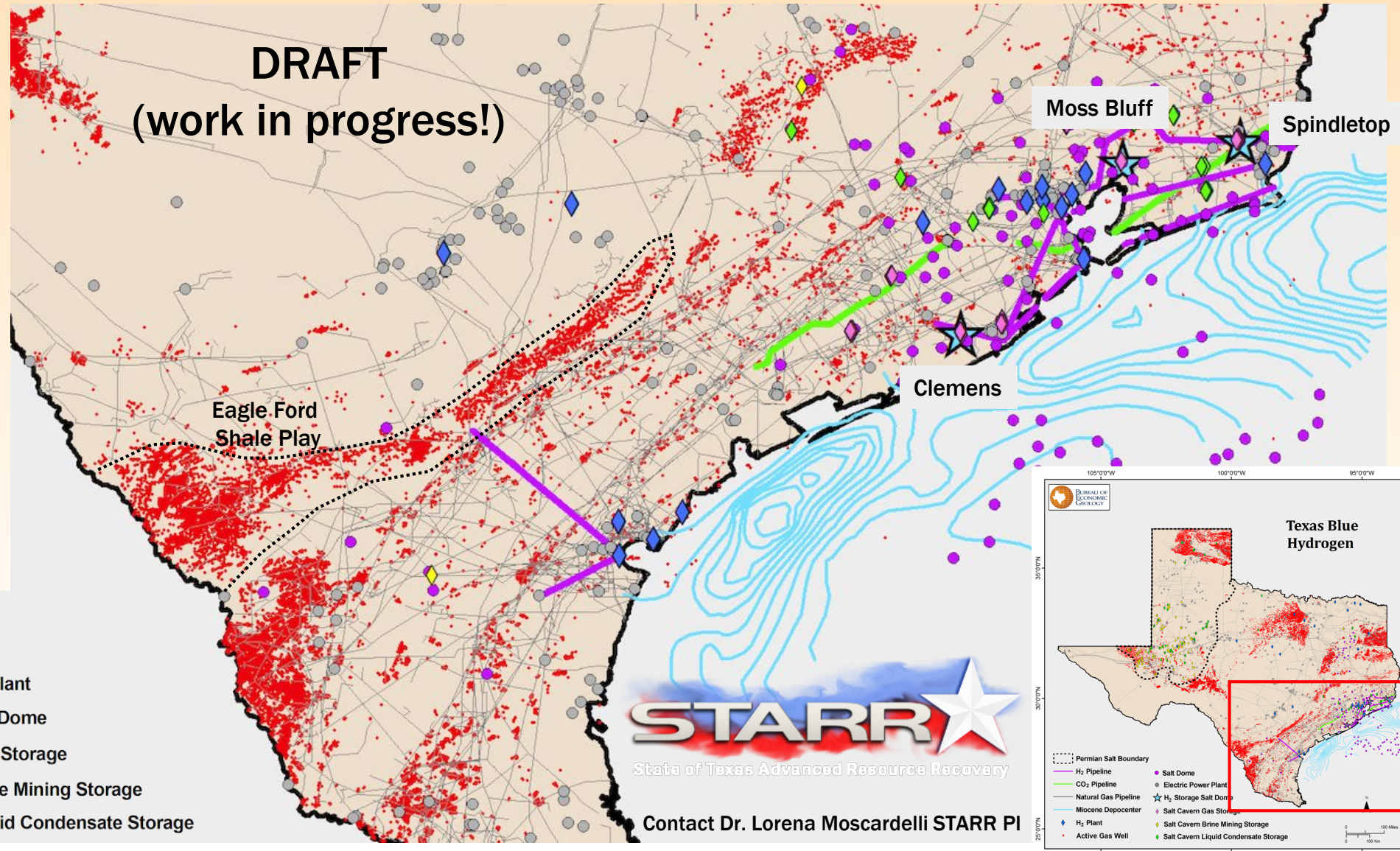
How much water do we need and where is it coming from?! (blue and green H2)



Salt “Real Estate” in Texas

colocation of key resources (above and below ground considerations)

Blue Hydrogen



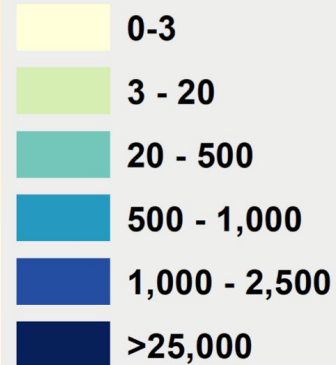
“Salt Real Estate and Texas”

colocation of key resources (above and below ground considerations)

H2 Potential from Wind



(thousand kg/sq.km/year)



DRAFT
(work in progress!)

