



## WESTCARB Annual Business Meeting

### California Geologic CO<sub>2</sub> Storage Characterization




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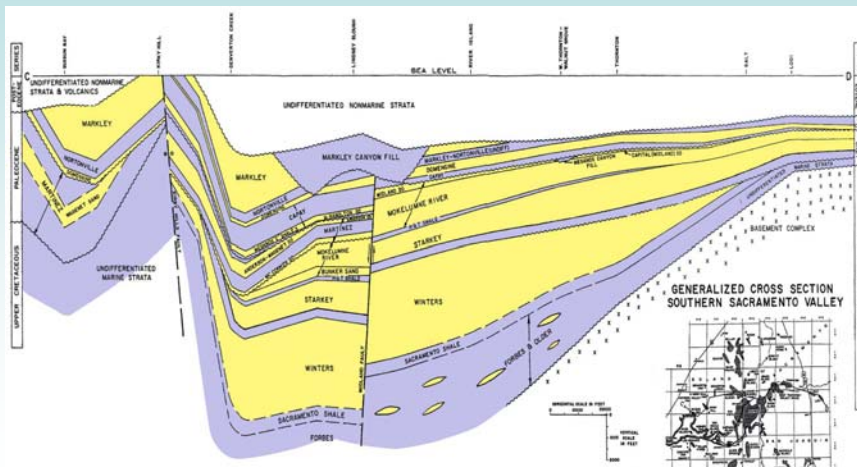


## CGS / WESTCARB - Phase II

- As part of the WESTCARB Phase II study, CGS is preparing isopach maps for specific formations and related overlying shales in the Sacramento Basin. These formations include:
  - The Mokelumne River Formation
  - The Starkey Formation
  - The Winters Formation



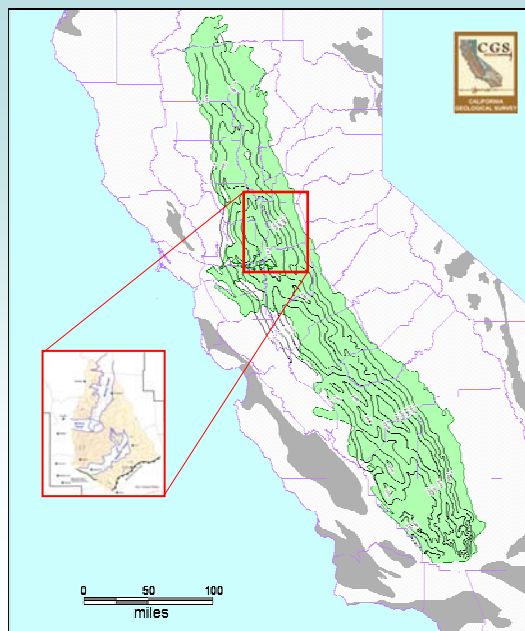
## Generalized Cross-Section of the Southern Sacramento Basin



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## Mokelumne River Formation Southern Sacramento Basin

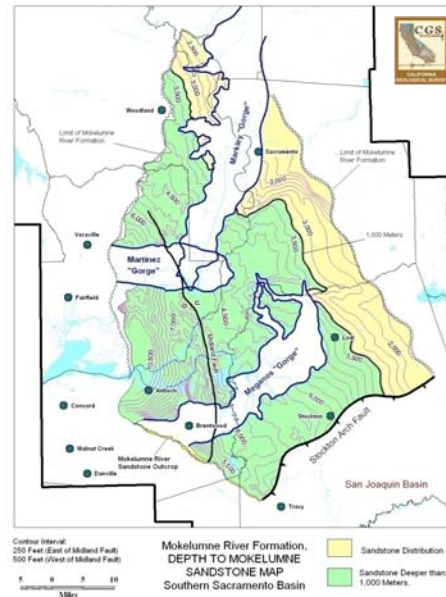


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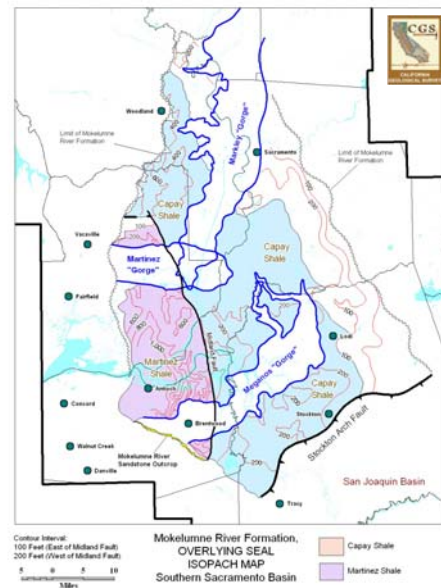
## Mokelumne River Formation Greater than 1,000 Meters Deep



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## Mokelumne River Formation Seal Isopach Map ( $\geq 100$ ft.)



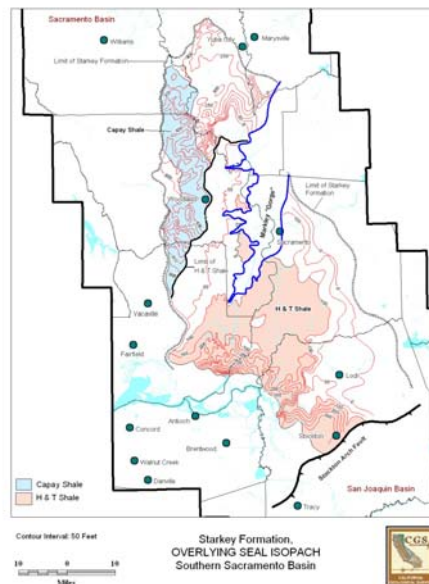
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	Total Area	% of Total Area
Gross sandstone area (net)	1,908 mi <sup>2</sup>	100%
Less area of gorges (net)	1,529 mi <sup>2</sup>	80.1%
Deeper than 1,000 meters (net)	1,076 mi <sup>2</sup>	56.4%
With 100+ feet of seal (net)	1,042 mi <sup>2</sup>	54.6%

[illegible]

## Starkey Formation Net Seal Isopach Map ( $\geq 100\text{ft.}$ )



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## Starkey Formation Summary

	Total Area	% of Total Area
Gross sandstone area (net)	2,321 mi <sup>2</sup>	100%
Less area of gorges (net)	2,214 mi <sup>2</sup>	95.4%
Deeper than 1,000 meters (net)	1,416 mi <sup>2</sup>	61.0%
With 100+ feet of seal (net)	920 mi <sup>2</sup>	39.6%

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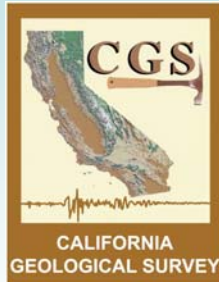
## Winters Formation Summary

	Total Area	% of Total Area
Gross sandstone area (net)	1,771 mi <sup>2</sup>	100%
Less area of gorges (net)	N/A	100%
Deeper than 1,000 meters (net)	1,681 mi <sup>2</sup>	94.9%
With 100+ feet of seal (net)	1,526 mi <sup>2</sup>	86.2%

## Summary and Conclusions

- In Phase II, CGS is taking a closer look at three specific formations in the southern Sacramento Basin and applying filters of regional geology, depth  $\geq 1,000$  m, and seal thickness  $\geq 100$  ft.
- This resulted in reductions of about 14% to 60% in the area of potential CO<sub>2</sub> reservoirs in the three formations.
- These results will allow better estimates of potential sequestration capacity to be made and will aid in identifying potential sequestration targets.
- Additional more detailed studies will be required prior to site selection for sequestration projects.

## Department of Conservation California Geological Survey



<http://www.conservation.ca.gov/CGS/>