**Wilkinson and Polson, Response to Reviewer 3 and Editors comments.**

Reviewer 3:

1) Line 38. Remove the 'so-called". **Done. There was one in the abstract too, I removed it.**

2) Somewhere in lines 41-51 you should discuss the NatCarb database that was created by the US Department of Energy for the entire US. https://www.netl.doe.gov/coal/carbon-storage/strategic-programsupport/natcarb-atlas **ADDED lines 43-45**

3) Somewhere in the introduction you should reference some of the early work on storage capacity by Stefan Bachu, for example:
Bachu, S. Sequestration ofCO2 in geological media: criteria and approach for site selection in response to climate change. Energy Convers. Manage. 2000, 41, 953–970. **DONE line 49**

4) Line 59, another 'so-called' **REMOVED**

5) Consider adding references to the following papers that describe probabilistic approaches to estimating storage capacity for multiple regional sinks, perhaps even a short paragraph on the topic:
2011 Keating, G, R.S. Middleton, P.H. Stauffer, H.S. Viswanathan, B.C. Letellier, P Pasqualini, R. Pawar, A.W. Wolfsberg, Meso-scale carbon sequestration site screening and CCS infrastructure analysis, Environ. Sci. Technol., (JAN 1 2011) Vol.45, iss.1, p.215-222 **Great reference, added line 51**

2012A Middleton, R.S., G. Keating, P.H. Stauffer, A. Jordan, H. Viswanathan, Q. Kang, B. Carey, M. Mulkey, J. Sullivan, S.P. Chu, and R. Esposito, The *cross*-scale science of CO2 capture and storage: From the pore scale to the regional scale. Energy and Environmental Science, 5,7328 | doi:10.1039/C2EE03227A. **Also added. Line 51**

2012B Middleton, R.S., Keating, G.N., Stauffer, P.H., Viswanathan, H.S., Pawar, R.J., Effects of geologic reservoir uncertainty on CO2 transport and storage infrastructure. Int. J. Greenhouse Gas Control, doi:10.1016/j.ijggc.2012.02.005. **ADDED**

2016 Pawar, R.J., G. Bromhal, S.P. Chu, R.M. Dilmore, C. Oldenburg, P.H. Stauffer, Y. Zhang, G. Guthrie, The National Risk Assessment Partnership's Integrated Assessment Model for Carbon Storage: A Tool to Support Decision Making Amidst Uncertainty, Int. J. Greenhouse Gas Control, 52, 175–189. **ADDED line 66**

6) Line 82. Instead of saying 'too small' perhaps it would be more precise to say "may be rejected as having too low a storage capacity . . . " **DONE**

7) Consider referencing studies that show how regional estimates often overestimate storage capacity when refined to include site specific data

2012 Deng, H., P.H. Stauffer, Z. Dai, Zunsheng Jaio, R.S. Surdam, Simulation of Industrial-Scale CO2 Storage: Multi-Scale Heterogeneity and its Impacts on Storage Capacity, Injectivity and Leakage, Int. J. Greenhouse Gas Control, Volume 10, September 2012, Pages 397–418. **DONE line 346, 366.**

2014 Dai, Z., P. H. Stauffer, J.W. Carey, R.S. Middleton, Z. Lu, J.F. Jacobs, K. Hnottavange-Telleen, L.H. Spangler, Pre-site characterization risk assessment for commercial-scale carbon sequestration, Environ. Sci. Technol, DOI: 10.1021/es405468. **ADDED line 64**

2019 Onishi, T., M.C. Nguyen, J.W. Carey, B. Will, W. Zaluski, D.W. Bowen, B.C. Devault, A. Duguid, Quanlin Zhou, S.H. Fairweather, L.H. Spangler, and P.H. Stauffer, Potential CO2 and brine leakage through wellbore pathways for geological CO2 sequestration using the National Risk Assessment Partnership Tools: Application to the Big Sky Regional Partnership, Int. J. Greenhouse Gas Control, https://doi.org/10.1016/j.ijggc.2018.12. 00

**This reference is too off-topic, it does not concern storage capacity as far as I can see. I have not included it.**

**Editors comments:**

My only concern (also raised by the reviewers) is that the literature review presented is slightly weak. Please address this issue as well as the comments by Referee #3.

The extra references added from Reviewer 3’s efforts should address the lit review side of things.