Reviewer's report

Title: Do federal and state audits increase compliance with a grant program to improve municipal infrastructure (AUDIT study): study protocol for a randomized controlled trial

Version: 1 Date: 1 April 2014

Reviewer: Victoria Fan

Reviewer's report:

This is an excellent and clearly written protocol for an important research question. The authors are very clear and transparent about the protocol, for which they should be lauded. My main concern about this paper is the lack of power calculations. Even though the authors have a sample size that was essentially chosen ex ante due to budgetary and operational/political constraints, it would nevertheless be valuable to do a power calculation to see what kind of effects might plausibly be detected with this sample size. My other concern is regarding the outcome measures, which appear from my casual reading of it, to be largely based on perceptions (I may have missed the instances where a more objective measure is included), so I would suggest the authors consider some more objective outcome measures, if possible. Finally, I would be curious to know if the authors considered doing a matched-pair cluster randomized control trial (MPCR) (as done by Gary King et al), and the advantages of this study design approach relative to the MPCR. Minor areas: there are some typos through the protocol, "an increases in "audit intensity"" on p. 3 should be an "an increase" ; "areer concerns" should be "career concerns" on p. 2, etc.

Level of interest: An exceptional article

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

'I declare that I have no competing interests'