

APPENDIX E3.2

**RESPONSE TO NATIONAL AGRICULTURAL STATISTICS SERVICE (NASS)
COMMENTS**

Response to NASS comments of November 3, 2017 on Part B of the Supporting Statement for the NSWP-III Information Collection Request

2. Consider using a minimum cluster size of 100.

- o In 1990 the NORC National Frame used a minimum cluster size of 50. However, other NORC surveys that were also conducted in the 1990s often used a minimum cluster size of 100.**
- o A sample of 20 for each of the five WIC certification categories will result in a cluster size of 100.**

Response to Suggestion 2:

For a given total study budget, increasing the cluster size would require reducing the number of PSUs selected. Reducing the number of PSUs below the 30 selected would have a number of negative consequences: (1) there would not be sufficient number of degrees of freedom for variance estimation, especially in smaller domains; (2) the geographic representativeness of the sample would deteriorate; (3) design effects due to intracluster correlations would go up. In addition, to increase the cluster size, we would need to increase the minimum size of LWAs selected at the second stage (i.e., the minimum number of WIC participants served by an LWA). Doing so would either make the sample less representative, as it would exclude smaller LWAs from the sampling frame, or require the inclusion of more LWAs, which would increase the LWA burden.

3. Using the finite population correction (FPC) which will result in a smaller standard error of the mean and proportion.

- o FPC is square root of $(N - n/N - 1)$, where N is the number of elements in the population and n is the number of elements in the sample.**
 - However, if less than 5% of population is sampled, then FPC factor has little or no practical effect on the value of the standard error of the mean or proportion.**

Response to Suggestion 3:

While the finite population correction is only applicable to a simple random sample without replacement, we have incorporated unequal probability analogues of the FPC in the sampling design (which is much more complex than a simple random sample without replacement) and sample size calculations. However, since sampling fractions are sufficiently large only in the first two stages, we are planning to utilize the unequal probability analogues of FPC only for the first stage variance estimation.

4. If the FPC is used, the design effect formula presented at the bottom of page 24 of the NSWP-III draft OMB package part B document will be:

- o Design effect (first stage) = $1 + \hat{\lambda}$.**

Response to Suggestion 4:

Regarding the cluster size to use in the projected design effect on page 24 of Part B of the OMB package, we note that the design effect is for pooled estimates across all eligibility strata, and that, therefore, it is more appropriate to use 50 than to use 10 as suggested by the reviewer. Of course, design effects for estimates that are specific to just one eligibility stratum will be much smaller.