Supporting Statement Understanding Knowledge and Beliefs about Translocation of Wild Pigs Study OMB Control Number 0579-XXXX

Part A

A. Justification

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

This is a new information collection request.

Under the Act of March 2, 1931 (7 U.S.C. 8351), the Secretary of Agriculture is authorized to conduct a program of wildlife services with respect to injurious animal species and take any action the Secretary considers necessary in conducting the program. Additionally, the Secretary of Agriculture is authorized to conduct activities to control nuisance mammals and birds (except for urban rodent control) and those mammals and bird species that are reservoirs for zoonotic disease. This authority has been delegated to the Animal and Plant Health Inspection Service (APHIS) Wildlife Services (WS). Two responsibilities of the Deputy Administrator of WS are to assist Federal, State, local, and foreign agencies and individuals regarding wildlife damage and control and conduct research to develop wildlife damage management methods (7 CFR 371.6).

Wild pigs are an invasive species in the United States (US) and are present in at least 35 states (Lewis et al., 2019). The control of wild pig populations has become a state and national priority due to their propensity to damage agricultural commodities and infrastructure, transmit disease, affect ecological processes, and compete with native wildlife for resources. However, each state varies in its policy and management approaches to control wild pig populations based on numerous considerations, including its resource appropriations and stakeholder interests (Smith et al., 2023). Most states have issued restrictions on transporting and releasing wild pigs, an activity that may be undertaken to establish new populations for sport hunting purposes and has contributed to the expansion of wild pig populations over the last several decades. However, resources for enforcement in many states may be limited, and it is unclear whether members of the public and hunters are aware of these restrictions. It is therefore uncertain whether state law restrictions on wild pig translocation are having the intended effect.

This submission is a request for approval to initiate the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study, an information collection by APHIS. APHIS would like to conduct an online survey of members of the public and hunters in five southeastern states (Mississippi, Missouri, North Carolina, Oklahoma, and Tennessee) that would measure knowledge and beliefs about the transportation and release of wild pigs. Each of the southeastern states was selected based on three criteria:

The state must have an established wild pig population;

- The state laws must either restrict or prohibit the transportation and release of wild pigs;
 and
- APHIS WS must have genetic data collected from the wild pig population within the state.

The information collected from these states is critical to identify potential conflicts and barriers to future management efforts of wild pig populations. We anticipate that, among other things, results of the study may inform state efforts to provide targeted information where needed about state law restrictions on the translocation of wild pigs. In addition, the results of this study may be used to compare knowledge and behavior to movement of wild pig populations based on collected genetic material.

APHIS has contracted Qualtrics Panel Services (Qualtrics) to attain 4,000 responses from 6,667 respondents in the five southeastern states, with the goal of obtaining 400 completed responses from members of the public and 400 completed responses from hunters from each state. Respondents will receive an email with a link to a multi-item questionnaire, a sentence including the OMB control number and expiration date, the amount of time estimated to complete the survey, and a description of the incentive offered to the respondent.

The goal of the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study is to measure awareness of the restrictions relating to the transportation and release of wild pigs, as well as understand why people may not comply with these restrictions. The data collection will support the following objectives:

- 1. Describe public and hunter awareness of activities related to the transport and release of wild pigs.
- 2. Describe public and hunter awareness of the laws and regulations about the transportation and release of wild pigs.
- 3. Describe public and hunter social norms related to wild pigs.
- 4. Describe public and hunter beliefs about people within their community transporting and releasing wild pigs.
- 5. Describe public and hunter views of potential consequences for transporting and releasing wild pigs.

When a respondent clicks on the questionnaire link, they will then be asked to consent to completing the Wild Pigs in Your State Questionnaire by clicking the "Next" button on the first screen. Participation in this study is voluntary; it is up to the individual respondents to decide whether it is desirable to participate.

The information collected through the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study will be analyzed and organized into descriptive/statistical reports. All data and metadata collected under this study and used in peer-reviewed publications will be made publicly accessible in a data repository per the <u>US Department of Agriculture (USDA) Departmental Regulation 1020-006</u>. Additionally, results will be shared internally within the APHIS WS as well as externally through open access or subscription-based journals.

APHIS requests this information collection request be approved for 3 years.

2. Indicate how, by whom, how frequently, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

Data collected, analyzed, and interpreted from the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study will be disseminated to a variety of constituents, including the APHIS WS and open access or subscription-based journals. Additionally, all data and metadata collected and used in peer-reviewed publications will be made publicly accessible in a data repository per the <u>USDA Departmental Regulation 1020-006</u>.

APHIS will use the data collected to:

- Identify if there is a difference in awareness related to restrictions for transporting and releasing wild pigs between members of the public and hunters within their state;
- Identify what key beliefs contribute to non-compliance related to restrictions for transporting and releasing wild pigs;
- Identify what sources of information and beliefs contribute to the amount of awareness related to restrictions for transporting and releasing wild pigs;
- Identify if there is a difference in tolerance of wild pigs between members of the public and hunters within their state and whether wild pig tolerance explains or influences beliefs about translocating wild pigs;
- Identify if respondents' perceived awareness of their state regulations for transporting and releasing wild pigs is the same as their actual awareness;
- Identify which sources of wild pig information are associated with greater awareness about wild pigs;
- Identify respondents' beliefs about appropriate penalties for transporting and releasing wild pigs, including what factors are associated with such beliefs;
- Identify how respondents' concerns about wild pigs impact their likelihood of reporting the transport and release of wild pigs to the authorities;
- Provide input into wild pig management policy and outreach; and
- Help inform policy by providing scientifically accurate data.

Wild Pigs in Your State Questionnaire; 7 U.S.C. 8351, 7 U.S.C. 8353, and 7 CFR 371.6; Individual or Household

Between Fall 2024 and Spring 2025, a cover letter similar to the provided example in the document "ICR Wild Pig in Your State Survey APHIS Appendix A Qualtrics Cover Letter Example" will be sent to respondents by a private company that works with Qualtrics. These respondents are individuals who have agreed to participate in online surveys in exchange for compensation through financial incentives (e.g., air mileage, gift cards, direct payments) (M. Sheehan, personal communication, November 7, 2023; Callegaro et al., 2014) and can be selected by using basic demographic, behavioral, and lifestyle profiles (Vaske et al., 2022). In the case of the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study, respondents will be selected based on their primary residence being in the state of Mississippi,

Missouri, North Carolina, Oklahoma, or Tennessee. Additionally, respondents will be divided into two subgroups based on whether the respondents identify as hunters or not.

The cover letter will provide the respondents with the OMB control number and expiration date, the amount of time estimated to complete the survey, and a description of the incentive offered to the respondent. If the respondent does not wish to participate in the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study, a link will be provided to decline the survey toward the bottom of the email.

When a respondent clicks on the questionnaire link, they will be taken to an informed consent statement (see the document titled "ICR Wild Pig in Your State Survey APHIS Appendix B Informed Consent Screen Shot"), which will provide the respondent with complete information regarding the requirements and data protections regarding their potential participation in the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study. If the respondent consents to the opportunity to participate, they will indicate their consent by clicking the "Next" button and start the electronic questionnaire (see the document titled "ICR Wild Pig in Your State Survey APHIS Appendix C Questionnaire").

After the data has been collected, Qualtrics will validate the data. The complete data set, which will not contain any personally identifiable information (PII), will be securely transferred to APHIS in Fort Collins, Colorado. APHIS will not know the identities of respondents who either decline or do not consent to participate in the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study, and no follow-up emails will be sent to respondents who decline to participate in the survey.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g. permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.

APHIS makes every effort to comply with the E-Government Act, 2002 (E-Gov) and to provide for alternative submission of information collections.

For the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study, Qualtrics will administer the cover letter via email to respondents along with the link to an online informed consent statement and questionnaire. APHIS is expecting a 60 percent response rate with a total of 4,000 responses. It is Qualtrics' goal to obtain 400 completed responses from members of the public and 400 completed responses from hunters from each state included in the study (Mississippi, Missouri, North Carolina, Oklahoma, and Tennessee). No follow-up emails will be sent to respondents who decline to participate in the survey.

APHIS anticipates 100% of the responses will be submitted electronically.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purpose(s) described in item 2 above.

Literature searches for existing data relevant to the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study have been performed. Available data were reviewed and compiled from all known sources. Sources reviewed were produced from a terms search of peer-reviewed publications and the Google Database Search. These data included extensive information on State regulations related to wild pigs, social norms, noncompliance in environmental law, and enforcement of regulations. There are no other studies that investigate the knowledge and beliefs about translocation and release of wild pigs within members of the public and/or hunters.

5. If the collection of information impacts small businesses or other small entities, describe the methods used to minimize burden.

Information collection requests will not involve small businesses or other small entities.

6. Describe the consequence to federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

Responses to the activities in this one time information collection request are voluntary.

Though the control of wild pig populations has become a state and national priority, each state varies in their policy and management approaches to control wild pig populations based on numerous considerations (Smith et al., 2023). Most states have issued restrictions on transporting and releasing wild pigs. However, resources for enforcement in many states may be limited, and it is unclear whether members of the public and hunters are aware of and/or complying with these restrictions. One of the goals of the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study is to identify why the public and hunters may not comply with these restrictions using three key beliefs of the respondents: control beliefs, behavioral beliefs, and normative beliefs.

Control beliefs are people's perceptions of what eases or hinders a behavior (i.e., knowledge, skills, time, money) and are particularly important in determining a person's compliance (Arias, 2015). One of the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study's primary focuses is to measure the respondents' knowledge about current regulations related to wild pig transportation and release. However, this study also looks at behavioral beliefs and normative beliefs that may influence respondents' conduct. Behavioral beliefs are people's assessment about the benefits and costs of a specific behavior. If a person finds the outcome of a certain behavior to be positive, their attitude toward the behavior will also be positive, and vice versa (Arias, 2015). For example, if there is an incentive to transporting and releasing wild pigs, the person involved in this activity may continue to do so. Normative beliefs are the social pressures controlling a behavior, including a person's moral obligations as well as a person's

perceptions of what members of their community may approve or disapprove of (Arias, 2015). In the case of wild pigs, this may include the perceived effects on a person's reputation if members of their community discover the person is releasing live wild pigs.

This information on respondents' knowledge and beliefs is critical to identify potential conflicts and barriers to future management efforts of wild pig populations. For instance, a governing institution that wants to foster a particular behavior can provide knowledge on why and how to do it, as well as, whenever possible, offer services and/or facilities to ease behavior performance (Arias, 2015). The information produced by this study will provide states with critical data to inform targeted outreach and possibly policy reform aimed at curtailing translocation of wild pigs.

- 7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with the general information collection guidelines in 5 CFR 1320.5
 - requiring respondents to report information to the agency more often than quarterly;

This is a one-time questionnaire.

· requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;

This is a one-time questionnaire.

- requiring respondents to submit more than an original and two copies of any document;
- · requiring respondents to retain records, other than health, medical, contract, grant-in-aid, or tax records for more than 3 years;
- · in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;

APHIS has contracted Qualtrics to attain 4,000 responses for our survey sample, a sampling strategy that is becoming more common and accepted in the social science research field (Niemiec et al., 2020). As the respondents consist of individuals who have indicated a willingness to take online surveys, they may differ slightly from members of the public more broadly, though Keeter & McGeeney (2015) suggest that the differences are likely small. To minimize any bias and ensure that our results have a high degree of validity, respondents will be recruited independently of their interest in and knowledge of the survey topic (Niemiec et al., 2020). In addition, if the demographic characteristics of our respondents differ from those of the study population, we will weigh the data appropriately (Wang et al., 2015).

requiring the use of a statistical data classification that has not been reviewed and approved by OMB;

- that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or
- requiring respondents to submit proprietary trade secret, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.

No other special circumstances exist that would require this collection to be conducted in a manner inconsistent with the general information collection guidelines in 5 CFR 1320.5.

8. Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting form, and on the data elements to be recorded, disclosed, or reported. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, soliciting comments on the information collection prior to submission to OMB.

The following people were consulted during the planning and coordination of the study regarding the Wild Pigs in Your State Questionnaire:

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These five experts provided suggestions for certain word changes and additional questions we may wish to include in the Wild Pigs in Your State Questionnaire. The APHIS WS National Wildlife Research Center (NWRC) Human Dimensions Unit applied the suggestions that best fit the goals and objectives of the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study.

The USDA National Agricultural Statistics Service (NASS) was not consulted about the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study because the study is not collecting any census-type data (the primary focus is perceptions, knowledge, and attitudes) or PII.

APHIS published in the Federal Register on February 26, 2024 (see 89 FRN 14042) a 60-day public comment notice for this information collection request. We received 1 comment from the American Farm Bureau Federation, which expressed support for the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study and suggested that "any survey includes a measure of hunter and general public understanding of the negative impacts of feral hog presence to farming and ranching operations." The Human Dimensions Unit applied the suggestion by adding a new statement to the Wild Pigs in Your State Questionnaire, which asks the respondent to indicate on a Likert scale how much they disagree or agree with the following statement: "Wild pigs cause harm to farming and ranching operations in my state."

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

APHIS will provide no direct payments or gifts to respondents. Respondents will be selected from a pool of individuals who have agreed to participate in online surveys in exchange for compensation through financial incentives (e.g., air mileage, gift cards, direct payments) (M. Sheehan, personal communication, November 7, 2023; Callegaro et al., 2014). The financial incentives will be provided by a private company that Qualtrics works with on survey studies. When respondents are invited to take a survey, they are informed what their compensation or incentive will be (based on the incentive program with which they registered).

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

Information collected for the Understanding Knowledge and Beliefs about Translocation of Wild Pigs survey by Qualtrics, on behalf of APHIS, will not be protected by the Confidential

Information Protection and Statistical Efficiency Act (CIPSEA). However, APHIS and Qualtrics will protect the confidentiality of the information collected through the means and processes below. APHIS will use the information acquired from the respondents for statistical purposes only.

Neither Qualtrics nor APHIS will collect any PII. All forms, data, and questionnaires will refer to the respondent by an alpha-numeric code. All completed survey data, which will contain no PII, will be stored securely by Qualtrics. Qualtrics will manage the responses from the respondents. APHIS will not have access to the respondent information, such as names or email addresses, or the sampling list for the Understanding Knowledge and Beliefs about Translocation of Wild Pigs survey. These lists are privately held, and APHIS will not have access to them, nor will APHIS have a legal right to obtain or distribute them. Data shared with APHIS will be de-identified.

The non-PII data collected will be transferred securely between a private company to Qualtrics, then securely transferred from Qualtrics to APHIS. Once data collection, entry, and validation are complete, the link between the respondent and alpha-numeric code will be destroyed (M. Sheehan, personal communication, November 7, 2023). Any analysis performed by APHIS will be performed on secure APHIS systems.

APHIS will release study results based on summary estimates and results from statistical analyses to protect the privacy and confidentiality of individual respondents. All data and metadata collected and used in peer-reviewed publications will be made available to the public per the <u>USDA Departmental Regulation 1020-006</u>. While every effort will be made to ensure respondent confidentiality, it is possible that information could be released as required by a Freedom of Information Act (FOIA) request. However, names, addresses, and personal information will not be linked with any survey information provided in response to such a request, because APHIS will not have any PII associated with the respondents.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

Institutional Review Board (IRB) Approval

The Understanding Knowledge and Beliefs about Translocation of Wild Pigs study has been developed in accordance with Federal, State, and local guidelines to ensure that the rights and privacy of respondents are protected and maintained. An IRB determination of "exempt" has been obtained from Sterling IRB (see the document titled "ICR Wild Pig in Your State Survey APHIS Appendix D Exemption from IRB Review Determination Letter"). Respondents will be provided a phone number and email for the principal investigator should they have any questions or concerns about the study or their rights as a respondent.

Sensitive Questions

In general, none of the questions asked in the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study are of a sensitive nature. However, questions will include some basic demographic information (e.g., year born), which respondents may prefer not to answer. To avoid fear of disclosure of potentially sensitive information, like age, respondents will be informed of the applicable privacy safeguards. In addition, respondents are not required to answer these questions to submit a completed questionnaire.

- 12. Provide estimates of the hour burden of the collection of information. Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated.
 - Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens in item 13 of OMB form 83-I.

See APHIS 71. APHIS estimates there will be a total of 1,401 hours of burden to complete the Understanding Knowledge and Beliefs about Translocation of Wild Pigs study. The respondents include members of the public and hunters whose primary residence is in the state of Mississippi, Missouri, North Carolina, Oklahoma, or Tennessee.

 Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using the correct wage rate categories.

The estimated annualized cost to respondents is \$63,006, computed by multiplying the estimated average hourly wage (\$31.48) by the total number of burden hours (1,401), and then multiplying the product (\$44,104) by 1.4286 to capture benefit costs. The wage for respondents was obtained from the U.S. DOL Bureau of Labor Statistics Occupational Employment and Wages (news release <u>USDL-24-0628</u> released April 2024). According to DOL BLS news release <u>USDL-24-0485</u> (released March 2024), employee benefits account for 30 percent of employee costs, and wages account for the remaining 70 percent. Total costs can be calculated as a function of wages using a multiplier of 1.4286.

13. Provide estimates of the total annual cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden in items 12 and 14). The cost estimates should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life); and (b) a total operation and maintenance and purchase of services component.

There are no capital/start-up costs or ongoing operations and maintenance costs for respondents or record keepers associated with this information collection.

14. Provide estimates of annualized cost to the Federal government. Provide a description of the method used to estimate cost and any other expense that would not have been incurred without this collection of information.

See APHIS 79. The estimated cost to the Federal Government is \$252,530.

15. Explain the reasons for any program changes or adjustments reported in items 13 or 14 of the OMB Form 83-I.

This is a new information collection request containing an estimated 6,667 respondents, 6,667 responses, and 1,401 hours of burden. After the 60-day Federal Register public comment period closed, the Human Dimensions Unit internally retested for estimated questionnaire response time and determined the original estimate was too high. The burden per response was reduced from 30 minutes to 15 minutes.

16. For collections of information whose results are planned to be published, outline plans for tabulation and publication.

Information from this survey will be summarized immediately following the collection, editing, and validation of the data. Data will be stored as CVS and/or Excel files, and statistical calculations will be performed, e.g., descriptive statistics, significance testing, correlations, and regression analysis. SPSS Statistics or R software will be used to analyze the data.

These analyses will be published in one or more articles in peer-reviewed journals. Additionally, all data collected in this study and used in peer-revised publications will be made available to the public per the <u>USDA Departmental Regulation 1020-006</u>.

Table 1: Project Timetable

Activity	Time Scheduled
Email invitation sent to respondents	1-30 days after OMB approval
Online data collection	1-30 days after OMB approval
Completed survey	30-45 days after OMB approval
Validation	45-55 days after OMB approval
Data analysis	55-150 days after OMB approval
Peer-review manuscripts	150-730 days after OMB approval

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

The OMB approval expiration date will be displayed on the cover letter email and electronic questionnaire.

18. Explain each exception to the certification statement identified in the "Certification for Paperwork Reduction Act."

APHIS is able to certify compliance with all provisions in the Paperwork Reduction Act.

References:

Arias, A. (2015). Understanding and managing compliance in the nature conservation context. Journal of Environmental Management, 153, 134-143. https://doi.org/10.1016/j.jenvman.2015.02.013

Callegaro, M., Baker, R., Bethlehem, J., Goritz, A.S., Kronsnik, J.A., & Lavrakas, P.J. (2014). Online panel research: History, concepts, applications, and a look at the future. In Callegaro, M., Baker, R., Bethlehem, J., Göritz, A.S., Krosnick, J.A., & Lavrakas, P.J. (Eds.), Online panel research. John Wiley & Sons.

Keeter, S., & McGeeney, K. (2015). Coverage error in internet surveys: who web-only surveys miss and how that affects results. Washington, D.C.: Pew Research Center.

Lewis, J.S., Corn, J.L., Mayer, J.J., Jordan, T.R., Farnsworth, M.L., Burdett, C.L., VerCauteren, K.C., Sweeney, S.J., and Miller, R.S. (2019). Historical, current, and potential population size estimates of invasive wild pigs (Sus scrofa) in the United States. Biological Invasions, 21, 2373-2384. https://doi.org/10.1007/s10530-019-01983-1

Niemiec, R., Berl, R.E.W., Gonzalez, M., Teel, T., Camara, C., Collins, M., Salerno, J., Crooks, K., Schultz, C., Breck, S., & Hoag, D. (2020). Public perspectives and media reporting of wolf reintroduction in Colorado. PeerJ, 8, Article e9074. https://doi.org/10.7717/peerj.9074

Smith, A.L., Strickland, B.K., Leopold, B.D., Cummins, J.L., Mayer, J.J., & Street, G.M. (2023). Culture and regulatory factors influence distribution and trajectory of invasive species in the United States: A wild pig case study. Journal of Environment Management, 338, Article 117742. https://doi.org/10.1016/j.jenvman.2023.117742

Vaske, J.J., Don Carlos, A.W., Manfredo, M.J., & Teel, T.L. (2022). Evaluating alternative survey methodologies in human dimensions of wildlife research. Human Dimensions of Wildlife, 28(4), 320-334. https://doi.org/10.1080/10871209.2022.2057622

Wang, W., Rothschild, D., Goel, S., & Gelman, A. (2015). Forecasting elections with non-representative polls. International Journal of Forecasting, 31(3), 980-991. https://doi.org/10.1016/j.ijforecast.2014.06.001