

Progress and Problems:

*Government Scientists Report on Scientific
Integrity at Four Agencies*

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Appendix A: Detailed Methodology

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Surveys were conducted of scientists working at four federal agencies: the CDC, the FDA, the FWS, and NOAA in January and February of 2015. These four agencies were chosen because of their significant level of scientific work and past evidence of scientific integrity concerns (Bailin et al. 2015; Goldman et al. 2015; Grifo et al. 2008). Many other federal agencies should receive the same level of assessment, but time and capacity constraints limited the scope of this study. The EPA was originally included in this analysis, but EPA officials informed us that the agency would concurrently conduct its own scientific integrity survey.

Survey Participant Identification

Prospective survey participant lists were collected from publicly available employee directories for the CDC, FDA, and NOAA. The FWS staff list was obtained via a Freedom of Information Act request. From these staff lists, employees were identified as scientific positions or nonscientific positions based on job title. For the purpose of this survey, scientists were considered anyone whose job involves a significant level of science, including but not limited to research, operations, modeling, inspection and oversight, and science policy. Full-time federal employees and contractors were included in the survey but fellows, students, and interns were not. To ensure the correct participants were captured in survey results, the survey instrument asked respondents about their role and degree of scientific work in their jobs, as a required question. Those responding that they did not do scientific work were excluded from the rest of the survey. In total, 37,593 scientists were invited to participate in the survey, after removing invalid and blocked email addresses.

Survey Instrument

The survey instrument evaluated scientists' perspectives on the state of scientific integrity at their agencies, their ability to communicate with colleagues and the public, and overall agency effectiveness (see Appendix F). The survey totaled 40-questions for the CDC, FDA, and NOAA. For the FWS, an additional question asked respondents to identify their FWS division since this information was not in the FWS staff list obtained. To the greatest extent possible, survey questions mimicked those used on past UCS surveys of the FDA, FDA, and NOAA to allow for comparison of results (UCS 2005a; UCS 2005b; UCS 2006; UCS SIP 2008b; UCS 2012).

Survey Administration

SurveyMonkey was used to distribute the survey and Innovate! was contracted to administer the survey. Agency leadership at all four agencies was informed about the survey prior to its distribution. Potential participants received email invitations introducing UCS, the survey, and its purpose (See Appendix E). Recipients could follow up online or by phone to talk with UCS researchers on any questions they had regarding the survey. Unique identifiers were included in each survey link for data quality purposes but were destroyed before survey results were made public in order to preserve anonymity for respondents. Personally identifying information revealed in participants open-ended responses have been redacted.

Potential participants who had not yet completed the survey were sent reminder emails every 1-2 weeks until the survey closed on February 23, 2015. A sample survey invitation and sample reminder email are available in Appendix E.

Survey Analysis

Survey results were analyzed by UCS staff. All multiple choice response data can be found in Appendix B. Percentages shown in this report represent the proportion of responses on each question. Because some questions were conditional and no question was required, the number of respondents answering individual questions varies. For questions that were the same or very similar to questions on past UCS surveys, results are compared in Appendix C. To determine the statistical significance of these overlapping questions, two-sample t-tests were performed and only results found to be significant at the 95-percent level ($p = 0.05$) are presented in the body of the report.