2019 OFFICE OF PERSONNEL MANAGEMENT
Federal Employee Viewpoint Survey

Technical Report

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Office of Personnel Management
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Chapter 1: Survey Introduction

Overview

This report provides a description of the survey instrument, sample design, administration, analysis, and reporting procedures for the 2019 Office of Personnel Management (OPM) Federal Employee Viewpoint Survey (FEVS). The U.S. OPM has conducted the OPM FEVS since 2002[1]. The survey was conducted biennially between 2002 and 2010, and annually thereafter. Westat has supported the survey since 2004.

The OPM FEVS is a climate survey designed to capture Federal employees' perceptions of organizational policies, practices, and procedures, and subsequent patterns of interactions and behaviors that support organizational performance. As a construct, climate is a surface manifestation of organizational culture[2]. Climate assessments like the OPM FEVS are, consequently, important to organizational improvement largely because of the key role culture plays in directing organizational performance.

The OPM FEVS is designed to provide agencies with employee feedback on dimensions critical to organizational performance: conditions for engagement, perceptions of leadership organizational effectiveness, outcomes related to climate (e.g., job satisfaction) and more.

The 101-item survey covers the following eleven dimensions and topic areas:

- Personal Work Experiences,
- Work Unit,
- Agency,
- Supervisor,
- Leadership,
- Satisfaction,

[1] Prior to 2010, the survey was called the Federal Human Capital Survey (FHCS).

[2] Schneider, B. (1990). The climate for service: an application of the climate construct. In B. Schneider (Ed.), Organizational climate and culture (pp. 383–412). San Francisco, CA: Jossey-Bass.

- Performance,
- Partial Government Shutdown,
- Work-Life Programs,
- Employment Demographics, and
- Personal Demographics.

The sample design for the OPM FEVS ensures that the resulting estimates of perceptions are statistically reliable not only at the overall Federal workforce (i.e., governmentwide) level but also at the level of pre-identified work units and senior leader status (i.e., whether a member of the Senior Executive Service (SES) or equivalent).

Uses of Survey Results

Federal leaders use OPM FEVS results to identify organizational development and improvement strategies, evaluate development actions, and highlight important agency successes. OPM FEVS findings allow agencies and subagencies to assess trends, where applicable, by comparing results from previous years with 2019. Agencies are able to compare their results with the governmentwide trends, to identify current strengths and challenges, and to focus on short-term and long-term action targets that will help agencies reach their strategic human resource management goals. The recommended approach for assessing and driving change in agencies is to utilize OPM FEVS results in conjunction with other resources, such as results from other internal agency surveys, administrative data, focus groups, exit interviews and so on.

Chapter 2: Sample Design and Selection

Sample Design

The FEVS sample design reflects OPM's commitment to providing Federal agency leaders with representative information about their employees' perceptions of workplace management practices, policies, and procedures. The survey population for the 2019 OPM FEVS included permanently employed, non-political, non-seasonal, full- and part-time Federal employees who were employed as of October 2018. For the first time in 2019, employees in phased retirement were eligible for the survey. The 2019 OPM FEVS was a census administration that included all eligible employees from 36 departments and large agencies as well as 47 small and independent agencies. The other years the OPM FEVS was a census was in 2012 and 2018.

The total sample size for the 2019 OPM FEVS was 1,543,992 employees compared to 1,537,139 in 2018 and 1,139,882 in 2017. The sample sizes in 2019 and 2018 were larger than previous years' samples because the OPM FEVS was as a census in all agencies. Overall sample sizes were smaller in 2018 and 2019 than for the 2012 census year because the Department of Veterans Affairs did not participate in the survey in either 2018 or 2019. The 2019 sample size was more than sufficient to ensure a 95 percent chance that the true population value would be between plus or minus 1 percent of any estimated percentage for the total Federal workforce[3].

Sampling Frame and Stratification Variables

The sampling frame is a comprehensive list of all persons in the Federal employee population eligible for selection in the survey. For the 2019 OPM FEVS, the sampling frame consisted of all 1,543,992 permanently employed, non-political, non-seasonal, full- and part-time Federal employees in pay status as of October 2018 in the agencies participating in the survey. Apart from a few exceptions[4],

[3] That is, reflecting any imprecision in estimates attributable to nonresponse etc., given the Census approach for 2019.

[4] At the time of sample selection, EHRI-SDM did not maintain information on the following employee types eligible to participate in the survey, and so a separate data submission was arranged: (1) Department of State Foreign Service; (2) Health and Human Services Commissioned Corps; (3) Employees of the Postal Regulatory Commission, and (4) DoD-DFAS Foreign Nationals.

this list originated from the personnel database managed by OPM as part of the Statistical Data Mart of the Enterprise Human Resources Integration (EHRI-SDM) (http://www.fedscope.opm.gov/datadefn/aehri_sdm.asp). OPM contacted participating agencies for supplemental organization code information. This information provides the hierarchical work unit(s) designation for each employee and provides more detailed information than available from the EHRI-SDM. The total survey population size was 1,543,992 employees but after cleaning procedures, including removing people who were no longer an employee of the agency, the final population size was 1,443,152 Federal employees.

Chapter 3: Survey Instrument

Survey Content

The OPM FEVS instrument is designed to assess the climate of Federal agencies. Past queries from the public have asked for descriptions of the full list of theoretical constructs in the survey. Climate *is a multi-dimensional construct*, consequently, the survey is primarily comprised of dimensions rather than constructs (exceptions include, for example, Global Satisfaction). Climate is exhibited through workplace tangibles such as behaviors and practices, which employees can perceive and describe in response to survey items developed to describe aspects of climate. Like other organizational climate instruments, the OPM FEVS captures employee perspectives regarding workplace conditions. Research suggests that climate perceptions are associated with effectiveness related outcomes, such as turnover intentions, job satisfaction, and organizational performance[5]. Accordingly, additional constructs, such as Global Satisfaction, are assessed in the survey to provide dependent variables or outcome measures.

The 2019 survey instrument was somewhat revised from the version administered in 2018. Two sections were added, Performance and Partial Government Shutdown, as well as some revised demographic items (see Appendix A for a list of the items that were changed in the 2019 OPM FEVS). The demographics section became two sections, employment and personal demographics.

The 2019 OPM FEVS was conducted via the Web and was 508 compliant[6]. The 101-item survey included 16 demographic questions and 85 items that were grouped into eleven topic headings intend to organize the instruments and facilitate respondent comprehension. If the response to question 74, "How was your everyday work impacted during (if you worked) or after the partial government shutdown?" was "It had no impact", then question 74A was skipped. Below is a summary of the questions within topics. See Appendix B for a complete list of survey items.

- **Personal Work Experience:** Items 1–19 addressed employees' personal work experiences and opinions.

[5] Patterson, M. G., West, M. A., Shackleton, V. J., Dawson, J. F., Lawthom, R., Maitlis, S., Robinson, D. L, & Wallace, A. M. (2005). Validating the organizational climate measure: links to managerial practices, productivity and innovation. *Journal of Organizational Behavior*, *26*(4), 379-408.

[6] 508 compliant refers to Section 508, an amendment of the U.S. Workforce Rehabilitation Act, mandating that all documents used by the Federal government are accessible to people with disabilities.

- **Work Unit:** Items 20–29 addressed employees' opinions regarding cooperation, recruitment, quality, and performance management in their work unit.
- **Agency:** Items 30–41 covered agency policies and practices related to job performance, performance appraisals, workplace diversity and fairness, as well as perceptions of employees' personal empowerment, safety and preparedness. This section also addresses employees' views of their agency.
- **Supervisor:** Items 42–52 addressed employees' perceptions of their supervisor. For instance, this section asked whether supervisors support work life balance, provide opportunities to demonstrate leadership skills, and promote a workplace culture that supports staff development.
- **Leadership:** Items 53–62 asked about the effectiveness of the agency's senior leaders and mangers overall, and in motivating employees, maintaining high ethical standards, communicating organizational policies, and generating respect.
- **Satisfaction:** Items 63-71 addressed employee satisfaction with various aspects of their jobs, including pay, job training, opportunities for advancement, recognition for work well done, and the policies and practices of senior leaders.
- **Performance:** Item 72 asks about performance within the work unit.
- **Partial Government Shutdown:** Items 73-76 including 74a addresses the impact and communications during the partial government shutdown.
- **Work/Life:** Items 77–84 asked employees about schedule programs like teleworking and alternate work schedules and if they participate and are satisfied with work/life programs like health, assistance, and family care programs.
- **Employment Demographics:** Items 85–92 covered employee information, such as location of employment (headquarters vs. field), supervisory status, pay category/grade, military service status, Federal employment tenure, agency tenure, and separation intentions from government such as retirement.
- **Demographics:** Items 93–100 covered personal information, such as ethnicity, race, age group, education, disability status, gender, sexual orientation, and transgender identity.

In addition to the 101 survey items standard on the OPM FEVS, agencies are provided an opportunity to add up to eight extra items tailored specifically to issues of interest to the agency. A total of 61 agencies opted to add agency-specific items for a total of 405 questions.

Chapter 4: Data Collection

In this chapter, we describe the data collection procedures OPM used to administer the Web-based surveys including details on the disposition codes used during data collection and for the calculation of response rates. This chapter concludes with a description of the procedures used during the data collection period to address questions received from Federal employees.

Web-Based Data Collection Procedures

The 2019 OPM FEVS was a Web-based, self-administered survey. OPM sent emails to employees with an invitation to participate in the survey. The invitation email included instructions for accessing the survey (see Appendix C for the invitation). To improve response rates, OPM sent weekly reminder emails to non-respondents, including a final reminder sent in the morning of the final day of the data collection period indicating the survey would close at the end of the day (see Appendix C for examples of the reminder emails). OPM also provided agencies with sample communication materials to promote the survey and encourage participation.

Estimates indicated the time for survey completion was no more than 30 minutes for the core items. The actual total survey completion times varied from agency to agency depending upon the number and complexity of any included agency-specific items. Employees were informed that official work time could be used to complete the survey.

Data Collection Period

The data collection period for the 2019 OPM FEVS was May 13, 2018 to July 5, 2019. To spread the workload more evenly over that period, OPM arranged for surveys to be released in two waves to groups of agencies, beginning either Monday, May 13th or Monday, May 20th (see Table 1). The data collection period for each agency spanned six workweeks. Table 1 shows the launch and close dates by agency.

Table 1. 2019 OPM FEVS Survey Launch and Close Out Dates, by Agency

Agency	Launch Date	Close Date
Court Services & Offender Supervision Agency	May 15	June 26
Department of Agriculture	May 15	June 26
Department of Commerce	May 20	July 1
Department of Defense		
Department of the Air Force	May 15	June 26
Department of the Army	May 14	June 25
U.S. Army Corps of Engineers	May 21	July 2
Department of the Navy	May 13	June 24
U.S. Marine Corps	May 23	July 5
DoD 4th Estate	May 23	July 3
Department of Education	May 22	July 3
Department of Energy	May 16	June 27
Department of Health and Human Services	May 20	July 1
Department of Homeland Security	May 23	July 5
Department of Housing and Urban Development	May 23	July 5
Department of Justice	May 14	June 25
Department of Labor	May 16	June 27
Department of State	May 22	July 3
Department of the Interior	May 13	June 24
Department of the Treasury	May 14	June 25
Department of Transportation	May 13	June 24
Environmental Protection Agency	May 16	June 27
Equal Employment Opportunity Commission	May 15	June 26
Federal Communications Commission	May 21	July 2
Federal Energy Regulatory Commission	May 16	June 27
Federal Trade Commission	May 15	June 26
General Services Administration	May 14	June 25
National Aeronautics and Space Administration	May 23	July 5
National Archives and Records Administration	May 23	July 5
National Credit Union Administration	May 14	June 25
National Labor Relations Board	May 15	June 26
National Science Foundation	May 21	July 2
Nuclear Regulatory Commission	May 16	June 27
Office of Management and Budget	May 21	July 2
Office of Personnel Management	May 23	July 5
Pension Benefit Guaranty Corporation	May 15	June 26
Railroad Retirement Board	May 16	June 27
Securities and Exchange Commission	May 22	July 3
Small Business Administration	May 16	June 27
Social Security Administration	May 21	July 2
U.S. Agency for Global Media	May 21	July 2
U.S. Agency for International Development	May 16	June 27
Small/Independent Agencies	May 23	July 5

Survey Disposition Codes

Determining survey disposition codes is a two-step process with an interim code and a final code assigned. Each case in the sample frame receives interim disposition codes to indicate the result of specific survey contact attempts (e.g., pending, out of office, no email address) during the survey period. At the end of the survey period, each case receives one final disposition code.

Interim Disposition Codes

Throughout data collection each case received an interim disposition code when the case was not yet assessed as closed. Table 2 shows the interim disposition codes.

Table 2. 2019 OPM FEVS Interim Disposition Codes

Interim code	Description of Interim Disposition Code
00	Pending, non-response
CO	Complete
IE	Ineligible (e.g., deceased, retired, no longer with agency)
Undeliverable	
11	1st Undeliverable
12	2nd Undeliverable
13	3rd Undeliverable
14	4th Undeliverable
15	5th Undeliverable
16	6th Undeliverable
17	7th Undeliverable
18	8th or more Undeliverable
20	No longer at email address, no forwarding information
NE	No email address
Out-of-office	
41	1st Out-of-office
42	2nd Out-of-office
43	3rd Out-of-office
44	4th Out-of-office
45	5th Out-of-office
46	6th Out-of-office
47	7th Out-of-office

Interim code	Description of Interim Disposition Code
48	8^{th} or more Out-of-office
Other	
90	Request Reset URL
RF	Refusal
UA	Unavailable during the field period
NP	Not in Population
NS	Not Sampled

In previous years, the Help Center attempted to encourage first time refusals to complete the survey. Starting in 2018 and continuing for the 2019 survey, respondents who emailed to refuse participation were immediately coded as a refusal and unsubscribed from future communications. A disposition code for refusal conversions is no longer used as there is no attempt for refusal conversions.

During data collection, if the respondent's out-of-office email indicated that they were out of the office during the entire data collection period, the case received an interim disposition code of Unavailable (UA).

Converting Interim Codes to Final Disposition Codes

Each case used the following rules when converting interim disposition codes to a final disposition code.

Survey Completes and Incompletes. All respondents who viewed the surveys received an interim complete. However, to receive a final code as a final complete (CO), a respondent had to provide answers to at least 21 of the non-demographic items excluding the performance and partial government shutdown sections. That is, they needed to complete over 25% of the core survey. If the respondent answered between 1 and 20 items of the non-demographic items, the case was an Incomplete (IN). If the respondent did not respond to any of the 84 items, the case received a no response (NR) code.

Once the cases received codes as completes or incompletes, the final disposition process applied the following rules in hierarchical order:

- **Refusals**. Cases coded as a Refusal (code RF) remained unless they completed the survey. If a case coded as a Refusal completed the survey, the case received a complete (CO).

- **Ineligibles**. Cases coded as ineligible based on the following criteria; the person was discovered after sampling to be:
  - retired;
  - no longer with the agency;
  - unavailable during the data collection period (UA) (i.e., out on maternity leave, out of the country, on leave for any other reason during the entire data collection period);
  - determined to be active duty, activated military, a political appointee, or a contractor; or
  - deceased.

Undeliverable Emails. If a respondent had an undeliverable email bounce back, we counted the number of undeliverable messages received and this number provided the interim undeliverable code of 11 through 18 (i.e. 1 through 8 or more undeliverable messages). The following rule applied to determine the respondent's undeliverable (UD) status: if the total number of contacts with the respondent's agency equaled at least ½ the number of undeliverable bounce backs, then the case received a UD. If less than ½ the number of total contacts were undeliverable bounce backs, the case received a NR. In 2019, every person had 5 potential contacts (invitations and reminders), any case with at least 3 (5 contacts divided by 2 = 2.5 rounded up) interim undeliverable emails (interim codes 14 through 18) would be coded as UD, otherwise they would be designated NR.

Final Disposition Codes

Table 3 lists the final disposition codes with the number of cases per code for the 2019 OPM FEVS. The codes abide by the American Association of Public Opinion Research's (AAPOR) 2016 guidelines for Internet surveys of specifically named persons[7]. The calculation of survey response rates and survey analysis weights used final disposition codes. The final analysis dataset only includes cases with a final disposition code of complete (CO); no other disposition codes are in the dataset.

[7] The American Association for Public Opinion Research. (2016). *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys. (*9th ed.) AAPOR. Last retrieved December 12, 2019: https://www.aapor.org/AAPOR_Main/media/publications/Standard-Definitions20169theditionfinal.pdf

Table 3. 2019 OPM FEVS Final Disposition Codes and Case Count per Disposition Code

Final Disposition codes	Description	Number of cases
CO	**Complete** - respondent answered at least 21 of the 84 non-demographic items	615,395
IN	**Incomplete** – respondent answered at least 1 but less than 21 of the 84 non-demographic items	6,739
RF	Refusal	156
NR	No response	820,862
IE	Ineligible (e.g., deceased or no longer with agency)	63,279
NE	No email address	20,619
UA	Unavailable during the fielding period	345
UD	Undeliverable email	16,597
	Total	***1,543,992***

Response Rates

Westat calculated response rates in two ways: 1) using the formula reported in previous administrations of the OPM FEVS and 2) using AAPOR's Response Rate 3 formula, an industry-standard method that allows a better comparison to other surveys as shown in Appendix E. The two formulas lead to different results due to differences in the allocations of final disposition codes among the four main groupings of survey cases:

- Eligible respondents (ER = surveyed and responded),
- Eligible non-respondents (ENR = known eligible cases that did not return completed surveys),
- Unknown eligibility (UNK), and
- Ineligible cases (IE).

Table 4 shows the distributions of final disposition codes among these four groupings. The governmentwide and agency response rates, calculated using the OPM FEVS formula, are in Table 5.

Table 4. Case Assignment Allocation to Response Rate Groups

Response Rate (RR) Group	OPM FEVS Allocation	OPM FEVS Counts
Eligible Respondents (ER)	CO	615,395
Eligible Non-respondents (ENR)	NR, RF, IN	827,757
Unknown Eligibility (UNK)	---	
Ineligible (IE)	IE, UD, NE, UA	100,840
	Total	***1,543,992***

Using the counts in Table 4 the response rates in final reporting follows:

OPM FEVS formula:

Number of eligible employees returning completed surveys / Number of eligible employees:

RR = ER / (ER + ENR) * 100

RR = 615,395/ (615,395 + 827,757) * 100

RR = (615,395/1,443,152) * 100

RR = 42.6 percent (up from 40.6 percent in 2018)

Table 5. 2019 OPM FEVS Agency Response Rate by Employee Population Size Categories

Agency	Number of Completed Surveys†	Response Rate %
Governmentwide	**615,395**	**42.6**
Very Large Agencies (> 75,000 employees)	**434,808**	**39.2**
Department of Agriculture	36,529	50.7
Department of Defense	199,723	33.1
United States Department of the Air Force	31,348	23.0
United States Department of the Army*	85,639	44.0
United States Army Corps of Engineers	20,826	68.5
United States Department of the Navy**	51,318	27.9
United States Marine Corps	4,932	31.9
OSD, Joint Staff, Defense Agencies, and Field Activities	31,418	35.5
Department of Health and Human Services	51,703	71.9
Department of Homeland Security	76,883	42.3
Department of Justice	28,199	26.8
Department of the Treasury	41,771	54.7
Large Agencies (10,000 – 74,999 employees)	**147,472**	**52.4**
Department of Commerce	19,847	54.2
Department of Energy	8,565	71.8
Department of Labor	7,949	58.6
Department of State	9,713	43.8
Department of the Interior	26,815	58.0
Department of Transportation	20,414	39.8
Environmental Protection Agency	8,352	63.3
General Services Administration	7,095	68.8
National Aeronautics and Space Administration	10,789	64.3
Social Security Administration	27,933	47.1
Medium Agencies (1,000 – 9,999 employees)	**26,844**	**63.6**
Court Services and Offender Supervision Agency	528	48.7
Department of Education	2,167	64.1
Department of Housing and Urban Development	3,763	54.0
Equal Employment Opportunity Commission	1,235	63.4
Federal Communications Commission	535	39.3
Federal Energy Regulatory Commission	1,162	86.1
Federal Trade Commission	625	63.8

Agency	Number of Completed Surveys†	Response Rate %
National Archives and Records Administration	1,697	65.0
National Credit Union Administration	891	84.1
National Labor Relations Board	768	61.1
National Science Foundation	865	71.2
Nuclear Regulatory Commission	2,174	75.9
Office of Personnel Management	3,049	58.2
Securities and Exchange Commission	3,222	75.5
Small Business Administration	1,388	69.2
U.S. Agency for Global Media	765	57.9
U.S. Agency for International Development	2,010	60.4
Small Agencies (100 – 999 employees)	**5,801**	**67.6**
Commodity Futures Trading Commission	411	65.1
Consumer Product Safety Commission	357	76.6
Corporation for National and Community Service	268	69.6
Export-Import Bank of the United States	278	80.8
Farm Credit Administration	213	73.2
Federal Election Commission	153	55.2
Federal Housing Finance Agency	500	87.7
Federal Labor Relations Authority	53	62.4
Federal Maritime Commission	69	64.5
Federal Mediation and Conciliation Service	163	79.1
Federal Retirement Thrift Investment Board	190	72.5
International Boundary and Water Commission	70	33.2
Merit Systems Protection Board	127	65.8
National Endowment for the Arts	60	60.0
National Endowment for the Humanities	56	51.9
National Gallery of Art	452	61.8
National Indian Gaming Commission	62	59.0
National Transportation Safety Board	259	70.0
Office of Management and Budget	335	80.1
Office of the U.S. Trade Representative	101	50.8
Overseas Private Investment Corporation	140	66.0
Pension Benefit Guaranty Corporation	585	68.5
Railroad Retirement Board	346	42.8

Agency	Number of Completed Surveys†	Response Rate %
Selective Service System	73	76.0
Surface Transportation Board	74	70.5
U.S. International Trade Commission	317	93.8
U.S. Office of Special Counsel	89	79.5
Very Small Agencies (< 100 employees)	**470**	**62.9**
AbilityOne Commission†	<10	--
African Development Foundation	12	54.5
American Battle Monuments Commission	31	44.3
Commission on Civil Rights	18	60.0
Defense Nuclear Facilities Safety Board	58	70.7
Farm Credit System Insurance Corporation†	<10	--
Federal Mine Safety and Health Review Commission	11	25.6
Institute of Museum and Library Services	45	78.9
Inter-American Foundation	27	84.4
John F. Kennedy Center for the Performing Arts	26	63.4
Marine Mammal Commission	11	100
National Capital Planning Commission	23	74.2
National Mediation Board	13	46.4
Occupational Safety and Health Review Commission	17	42.5
Office of Navajo and Hopi Indian Relocation	14	51.9
Postal Regulatory Commission	44	75.9
U.S. Access Board	13	59.1
U.S. Chemical Safety and Hazard Investigation Board	21	84.0
U.S. Office of Government Ethics	47	79.7
U.S. Trade and Development Agency	26	74.3

*United States Department of the Army numbers include United States Army Corps of Engineers
**United States Department of the Navy numbers include United States Marine Corps
†Surveys completed and response rates are not shown for agencies with less than 10 respondents

Help Center

A Help Center was set up during the data collection of the OPM FEVS to assist Federal employees with questions about the surveys. Providing a Help Center ensures prompt, accurate, professional, and consistent handling of all inquiries. A Help Center also supports higher response rates during data collection by allowing respondents to obtain answers to questions, voice concerns, ensure the legitimacy of the survey, and remedy any technical issues with the survey. The Help Center served as a central point for coordinating and managing reported problems and issues. Employees could email their questions and concerns to Help Center staff. Thirty email accounts were set up, one for each of the 28 large departments/agencies, one for the small/independent agencies, and one for the large independent agencies. Westat's Help Center staff included three trained team staff members, one Help Center Supervisor, and two assistant Help Center Supervisors; with all operations overseen by the Data Collection Task Manager. Various members of the OPM FEVS staff handled email inquiries from employees.

The Help Center opened with the launch of the first survey invitation on May 13, 2019 and closed on the last day of the fielding period, July 5, 2019. Hours of operation were 8:30 a.m. to 5 p.m. Eastern Time, Monday through Friday. The Help Center was located at the Westat campus in Rockville, Maryland.

Staff Training

The Help Center Supervisor conducted a 2-hour staff training session prior to the launch of the survey. The training session included an introduction to the project, a review of the 2019 OPM FEVS Contractor Answer Book prepared by OPM, a technical session on how to use the Web-based Help Center Application (see next section for details on this application), and procedures for handling emails from employees. After the technical session, all trainees used test accounts and cases that were set up in a training version Web-based application to apply what they had learned in a set of example resolution exercises. The training session closed with questions from Help Center staff.

The formal 2-hour training was followed-up with one-on-one training sessions between the Help Center supervisors and the Help Center staff. One-on-one sessions further assisted the Help Center staff understand eligibility requirements and how to code dispositions properly. During the survey administration period, the Help Center supervisors frequently reviewed the survey support inboxes, Help Center staff workload, and replies to respondents to ensure responses were not only timely but also appropriate.

Web-based Help Center Application

The Web-based Help Center Application or Survey Management System (SMS) is an application enabling Help Center staff and members of the OPM FEVS staff to respond to emails, facilitate quick handling of respondent inquiries, and optimize technical assistance response times. The SMS managed email inquiries from survey participants and provided other support functions such as tracking disposition codes for the surveys, updating contact information, capturing real-time survey submissions, and generating response rate reports. The SMS was linked to the OPM survey platform enabling Help Center staff to unsubscribe employees who explicitly refused to take the survey or who were designated as ineligible so that these individuals did not continue to receive reminder notifications. The SMS also automatically received response information in real-time from the survey platform to keep response rate reporting as accurate and up-to-date as possible. Cases for which the SMS could not provide real-time updates, were updated twice daily.

Response Rate Reporting Website

Beginning in 2014, OPM FEVS Points of Contact for agencies have access to a Response Rate Reporting Website to view their agency's real-time survey completion rate information during the data collection period[8]. The 2019 website provided the following information: launch date of the survey, number of days in field and remaining, sample size, number of completed surveys (based on an interim disposition code), and the response rate to date. It provided the final response rates for the previous survey administrations as well as the response rate to date in the same period of survey data collection for the previous year. Agency leaders could also drill down in their organization to view subagency response rates to identify where response rates were high as well as any subagencies that might be driving lower agency response rates.

Finally, the Response Rate Reporting website provided a dashboard feature. It allowed agencies to graphically see response rates over time and in comparison to governmentwide, the top 3 and bottom 3 subagencies, the subagencies leading and trailing the previous agency response rate to date, number of daily and weekly completes, and response rates with the option to show comparative data

[8] The completion rate differs from the response rate as it does not take into consideration ineligible respondents, and surveys submitted that do not meet completion criteria. It is the number of submitted surveys divided by the sample size.

for the previous two years where applicable. (See Figure 1). Agency managers and executives used this information to help monitor and promote participation in the OPM FEVS.

Figure 1. Sample Views in OPM FEVS Response Rate Website

Help Center Operational Procedures

This section details the Help Center operational procedures, as well as the volume and types of inquiries received.

Emails

Figure 2 illustrates the operational procedures for handling emails at the Help Center. When an email was received within the SMS, the Help Center Staff had the option to reply with an appropriate response from the OPM FEVS Contractor Answer Book or flag for OPM for assistance. The Help Center processed over 615,000 emails within the Help Center SMS across the 30 email accounts (see Table 6).

Of the 615,806 emails received by the Help Center, 311,726 were undeliverable notifications, 290,358 were automated out-of-office replies, and 13,722 were inquiries or comments from individuals. Of the 311,726 undeliverable notifications, 49,650 were from unique respondents. Of the 290,358 automated out-of-office replies, Westat staff worked through and programmatically processed 102,240 from unique respondents to gather information to help assign final disposition codes to cases during survey closeout. Information from these emails helped to code a small percentage of the cases as ineligible or unavailable during the data collection period. Help Center staff reviewed all inquiries and comments in the inbox and determined that 11,223 of the 13,722 emails required a response. The other 2,498 emails consisted of comments from users that did not require a response, such as letting the Help Center know that the respondent intended to complete the survey or thanking Help Center Staff for their assistance. Of the 11,223 emails that required a response, 301 (2.68 percent of the total) were flagged for OPM for additional assistance.

Figure 2. 2019 OPM FEVS Help Center Email Procedures

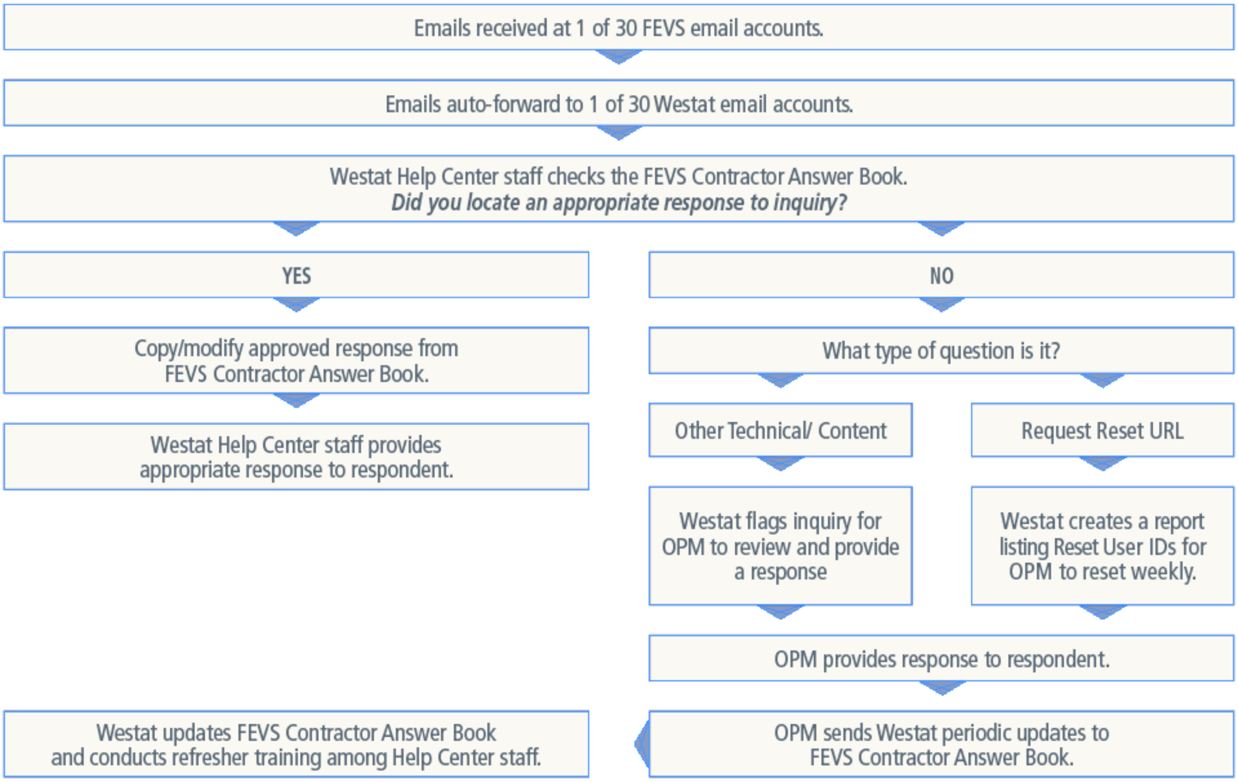


Table 6. Number of Emails Handled by Help Center and OPM, by Agency

Agency	Folder: Inbox	Folder: Out-of-Office	Folder: Undeliverable	Folder: Sent Items	Total*
Department of Agriculture	361	15,125	12,369	288	27,855
Department of Commerce	462	8,394	6,415	378	15,271
Department of Defense					
Department of the Air Force	212	5,425	12,836	154	18,473
Department of the Army	1,435	38,729	93,995	1,278	134,159
U.S. Army Corps of Engineers	874	64	2,268	772	3,206
Department of the Navy	601	55,049	19,080	511	74,730
U.S. Marine Corps	104	4,522	1,169	91	5,795
DoD 4th Estate	493	22,512	20,909	398	43,914
Department of Education	63	1,108	309	44	1,480
Department of Energy	120	3,003	2,890	94	6,013
Department of Health and Human Services	2,744	19,527	19,198	2,295	41,469
Department of Homeland Security	1,350	25,309	4,813	1,058	31,472
Department of Housing and Urban Development	111	2,953	2,320	82	5,384
Department of Justice	476	15,736	24,778	383	40,990
Department of Labor	122	3,271	2,160	95	5,553
Department of State	215	10,476	2,399	168	13,090
Department of the Interior	1,181	11,362	17,967	843	30,510
Department of the Treasury	675	8,163	16,430	549	25,268
Department of Transportation	315	8,415	2,498	261	11,228
Environmental Protection Agency	344	4,997	2,927	311	8,268
General Services Administration	252	3,344	9,141	164	12,737
Large independent agencies	255	4,498	4,185	199	8,938
National Aeronautics and Space Administration	260	4,375	4,351	232	8,986
National Science Foundation	7	419	266	7	692
Office of Management and Budget	14	188	334	11	536
Office of Personnel Management	35	1,584	4,642	26	6,261
Small Business Administration	53	881	474	39	1,408
Social Security Administration	460	6,083	18,169	410	24,712
U.S. Agency for International Development	61	2,953	15	37	3,029
Small/Independent agencies	67	1,893	2,419	45	4,379
Total	13,722	290,358	311,726	11,223	615,806

*Note: Overall total does not include sent items.

Types of Inquiries Received

The types of inquiries received are listed below and demonstrate the frequently asked questions that the Help Center responded to through email. The Help Center Staff answered all inquiries using the appropriate response from the OPM FEVS Contractor Answer Book, which consisted of 62 questions, which mostly fell into the following categories:

- ❑ Individuals verifying the survey was legitimate;
- ❑ Individuals who recently moved positions within the government;
- ❑ Individuals who had lost their survey URL;
- ❑ Individuals reporting they were no longer Federal employees;
- ❑ Individuals who had received a reminder from within their agency (not from OPM), who were not in the sample and so did not get a survey invitation and were wondering how to take the survey;
- ❑ Individuals with questions about confidentiality, particularly for members of small subgroups; and
- ❑ Individuals having difficulty accessing the survey.

Toll-Free Calls

The Help Center did not utilize a toll-free hotline in 2019, although the number used in previous years remained active. Mentions of the toll-free number were removed from communications with respondents. Calls sent directly to voicemail and messages were returned within one business day. Thirteen calls were received during the data collection period, which were logged in the SMS.

Chapter 5: Data Cleaning and Weighting

This chapter outlines the data cleaning and recoding performed on the analysis dataset as well as weighting of survey cases to represent the Federal employee population.

Data Cleaning and Recoding

Given that the OPM FEVS is a Web-based survey, the instrument had built-in programs to inspect data for various response errors or out of range values; thus, data cleaning was a continuous operation throughout the data collection period. After data collection, the data cleaning and editing process involved assigning final disposition codes and recoding some of the variables for analysis purposes. Many of the demographic variables were recoded to report on collapsed categories, for example, the race and ethnicity variable was recoded as minority and non-minority.

Weighting

The process of weighting refers to the development of an analysis weight assigned to each respondent to the 2019 OPM FEVS. The weights are necessary to achieve the survey objective of making unbiased inferences regarding the perceptions of the full population of Federal employees. Without the weights, the OPM FEVS could result in biased population estimates. While the 2019 OPM FEVS was a census and all employees had an equal probability of being selected to participate, nonresponse remains a source of potential bias (and imprecision) in the 2019 OPM FEVS estimates. In an ideal scenario, all members of the survey sample receive the survey invitation and complete the survey. In practice, however, some survey cases cannot be located (e.g., undeliverable emails) and others who receive the survey do not complete it. Undeliverable survey invitations as well as varying response rates across subgroups of employees occurred during the 2019 OPM FEVS. Analysis of data from the 2019 OPM FEVS therefore still requires the use of weights to adjust for survey nonresponse and to match known population control totals.

For the 2019 OPM FEVS, the weighting process used the final disposition codes and information from the sampling frame. The disposition codes determined whether each employee returned a completed questionnaire or if information obtained indicating the employee was ineligible to participate in the OPM FEVS. Variables utilized from the sampling frame include the stratum identifier and a set of demographic variables known for both respondents and non-respondents[9].

Statisticians used a three-step, industry-standard process to develop the full-sample weights. First, the process calculated base weights for each sampled employee equaling the reciprocal of each individual's selection probability (i.e., 1 for all employees for 2019 since it was a census). Second, statisticians adjusted the base weights for nonresponse within agency subgroups. Those adjustments inflate the weights of survey respondents to represent all employees in the subgroup, including non-respondents and ineligible employees. Third, statisticians used a procedure known as raking to ensure weighted distributions matched known population distributions by gender, sub-agency, and minority status within agencies. This technique can increase the precision of survey estimates. Unless otherwise noted, all 2019 OPM FEVS estimates use the full-sample weights. The full-sample weights were used to compute measures of precision by using Taylor linearization in all analyses, except for government-wide trend analyses. For this analysis, the measures of precision were computed by using replicate weights, which were developed using the Jackknife or JKn method. See Appendix F for more information on the 2019 OPM FEVS weighting processes and Appendix G for an illustration of the weight adjustment.

[9] The sampling-frame variables were from administrative data in the EHRI-SDM database.

Chapter 6: Data Analysis

This chapter outlines the statistical methodology used to analyze the 2019 OPM FEVS survey responses received from all 615,395 respondents.

Frequency Distributions

As in prior administrations, the primary data analysis in 2019 included calculating governmentwide, agency, and subagency frequency distributions for each survey question. In addition, analysts calculated frequency distributions for demographic groups and work-related characteristics. All percentages and statistical analyses used weighted data unless noted otherwise.

Distributions of Positive, Negative, and Neutral Responses

Many of the OPM FEVS items were on 5-point Likert-type response scales. Three such scales used: (a) *Strongly Agree, Agree, Neither Agree nor Disagree, Disagree, Strongly Disagree*; (b) *Very Satisfied, Satisfied, Neither Satisfied nor Dissatisfied, Dissatisfied, Very Dissatisfied*; and (c) *Very Good, Good, Fair, Poor, Very Poor*.

Analysts collapsed the positive and negative response options to facilitate managers' use of the data. Analysts produced governmentwide, agency, subagency, and other subgroup estimates of the collapsed positive and negative responses. The proportion of positive, neutral, and negative responses are as follows:

- **Percent Positive**: the combined percentages of respondents who answered Strongly Agree or Agree; Very Satisfied or Satisfied; or Very Good or Good, depending on the item's response categories.
- **Percent Neutral**: the percentage of respondents choosing the middle response option in the 5-point scale (Neither Agree nor Disagree, Neither Satisfied nor Dissatisfied, Fair).
- **Percent Negative**: the combined percentages of respondents answering Strongly Disagree or Disagree; Very Dissatisfied or Dissatisfied; or Very Poor or Poor, depending on the item's response categories.

Do Not Know and No Basis to Judge Responses

For items 9-19, 21-27, 29-39, 41-47, 53-62 and 72 of the survey, respondents had the additional option of answering Do Not Know or No Basis to Judge. The responses Do Not Know or No Basis to Judge were not included in the calculation of response percentages for those items.

Work-Life Program Participation Responses

In 2019, the new work-life items (Q77, Q80-84) had, in addition to the satisfaction responses, three additional response options – "*I choose not to participate in these programs*", "*These programs are not available to me*", and "*I am unaware of these programs*". Response percentages for the work-life items were calculated with and without the participation response options.

Missing Data

Any missing data, or unanswered items by respondents, were not included in the calculation of response percentages for those items.

Data Suppression

To maintain respondent confidentiality, all demographic results used suppression rules in 2019. If there were fewer than four responses for a single demographic response option, all results for that question were suppressed (see Table 7a). If there were fewer than 4 responses in multiple response options for a given demographic item, only those results were suppressed, and the remaining data were displayed (see Table 7b). Note while the number of respondents (N) are shown in the Tables 8a and 8b for illustrative purposes, they were not shown in the reports to protect confidentiality.

Table 7a. Sample Full Data Suppression

What is your supervisory status?	N	%
Non-Supervisor	50	--
Team Leader	25	--
Supervisor	15	--
Manager	8	--
Senior Leader	**2**	--
Total	**100**	--

Table 7b. Sample Partial Data Suppression

What is your supervisory status?	N	%
Non-Supervisor	60	60%
Team Leader	25	25%
Supervisor	10	10%
Manager	**3**	--
Senior Leader	**2**	--
Total	**100**	--

Indices

The 2019 OPM FEVS reported three sets of indices. These composite measures join specific observations in more general dimensions or constructs, and include: Employee Engagement Index, Global Satisfaction Index, and the New Inclusion Quotient (New IQ) Index. The next sections review each index in turn.

Employee Engagement Index

The Employee Engagement Index is a measure of the conditions conducive to engagement. The index consists of 15 items grouped into three subindices: Leaders Lead, Supervisors, and Intrinsic Work Experience (see Table 8).

Analysts calculated subindex scores by averaging the unrounded percent positive of each of the items in the subindex. Averaging the three unrounded subindex scores created the overall Employee Engagement score. Index and subindex scores were rounded for reporting purposes.

Table 8. Employee Engagement Index (15 items)

Employee Engagement Index (3 Subindices)	
Leaders Lead (5 items)	
53	In my organization, senior leaders generate high levels of motivation and commitment in the workforce.
54	My organization's senior leaders maintain high standards of honesty and integrity.
56	Managers communicate the goals of the organization.
60	Overall, how good a job do you feel is being done by the manager directly above your immediate supervisor?
61	I have a high level of respect for my organization's senior leaders.
Supervisors (5 items)	
47	Supervisors in my work unit support employee development.
48	My supervisor listens to what I have to say.
49	My supervisor treats me with respect.
51	I have trust and confidence in my supervisor.
52	Overall, how good a job do you feel is being done by your immediate supervisor?
Intrinsic Work Experience (5 items)	
3	I feel encouraged to come up with new and better ways of doing things.
4	My work gives me a feeling of personal accomplishment.
6	I know what is expected of me on the job.
11	My talents are used well in the workplace.
12	I know how my work relates to the agency's goals.

Global Satisfaction Index

Global Satisfaction Index is a combination of four items assessing employees' satisfaction with their job, their pay, and their organization, plus their willingness to recommend their organization as a good place to work (see Table 9).

Analysts calculated the overall Global Satisfaction Index scores by averaging the unrounded percent positive of each of the four items. Index scores were rounded for reporting purposes.

Table 9. Global Satisfaction Index (4 items)

Global Satisfaction (4 items)	
40.	I recommend my organization as a good place to work.
69.	Considering everything, how satisfied are you with your job?
70.	Considering everything, how satisfied are you with your pay?
71.	Considering everything, how satisfied are you with your organization?

The New Inclusion Quotient (The New IQ) Index

The New IQ is the concept that individual behaviors, repeated over time, form the habits that create the essential building blocks of an inclusive environment. These behaviors can be learned, practiced, and developed into habits of inclusiveness and subsequently improve the inclusive intelligence of organizational members. Workplace inclusion is a contributing factor to employee engagement and organizational performance. The New IQ consists of 20 items related to inclusive environments (see Table 10). These 20 items are grouped into “5 Habits of Inclusion”:

- ❑ Fair,
- ❑ Open,
- ❑ Cooperative,
- ❑ Supportive, and
- ❑ Empowering.

Analysts calculated the subindex scores by averaging the unrounded percent positive of each of the items in the subindex. Averaging the five unrounded subindex scores created the overall New IQ score. Index and subindex scores were rounded for reporting purposes.

Table 10. The New IQ Index Items (20 items)

The New IQ Index (5 subindices)	
Fair (5 items)	
23.	In my work unit, steps are taken to deal with a poor performer who cannot or will not improve.
24.	In my work unit, differences in performance are recognized in a meaningful way.
25.	Awards in my work unit depend on how well employees perform their jobs.
37.	Arbitrary action, personal favoritism and coercion for partisan political purposes are not tolerated.
38.	Prohibited Personnel Practices (for example, illegally discriminating for or against any employee/applicant, obstructing a person's right to compete for employment, knowingly violating veterans' preference requirements) are not tolerated.
Open (4 ITEMS)	
32.	Creativity and innovation are rewarded.
34.	Policies and programs promote diversity in the workplace (for example, recruiting minorities and women, training in awareness of diversity issues, mentoring).
45.	My supervisor is committed to a workforce representative of all segments of society.
55.	Supervisors work well with employees of different backgrounds.
Cooperative (2 ITEMS)	
58.	Managers promote communication among different work units (for example, about projects, goals, needed resources).
59.	Managers support collaboration across work units to accomplish work objectives.
Supportive (5 items)	
42.	My supervisor supports my need to balance work and other life issues.
46.	My supervisor provides me with constructive suggestions to improve my job performance.
48.	My supervisor listens to what I have to say.
49.	My supervisor treats me with respect.
50.	In the last six months, my supervisor has talked with me about my performance.
Empowering (4 items)	
2.	I have enough information to do my job well.
3.	I feel encouraged to come up with new and better ways of doing things.
11.	My talents are used well in the workplace.
30.	Employees have a feeling of personal empowerment with respect to work processes.

Index Rankings

The agencies were rank ordered on the different indices in a variety of ways. First, the 36 departments, large, and medium agencies were rank ordered separately from the other agencies (see Table 11). The other small/independent agencies were then rank ordered separately. Finally, the agencies were rank ordered based on five agency size groupings: 1) Very Small Agencies with less than 100 employees; 2) Small Agencies with 100-999 employees; 3) Medium Agencies with 1,000-9,999 employees; 4) Large Agencies with 10,000-74,999 employees; and 5) Very Large Agencies with more than 75,000 employees (see Table 5 for size). Agencies with less than 10 respondents were excluded from the rankings. The Agency Management Reports (AMRs) and Small Agency Management Reports (SAMs) present the size rankings by the agency size.

In all cases, the rankings were calculated from the rounded percent positive results for the overall index, which allowed for ties. For instance, the 36 departments, large, and medium agency rankings ranged from ‘1’ for the highest percent positive (if there was a tie, all tied agencies would be ranked 1st) to ‘36’ (for the departments, large, and medium agencies) for the lowest percent positive (even if there was a tie). When ranking the departments, large, and medium, Army, Army Corps of Engineers, Air Force, Navy, Marine Corps, and Other Defense agencies/activities, comprised the Department of Defense (DOD) and did not receive their own ranking, but received the DOD ranking overall.

Table 11. The 36 Departments, Large, and Medium Agencies

Departments/Large Agencies	Medium Agencies
Department of Agriculture	Court Services & Offender Supervision Agency
Department of Commerce	Department of Education
Department of Defense	Department of Housing and Urban Development
Department of Energy	Equal Employment Opportunity Commission
Department of Health and Human Services	Federal Communications Commission
Department of Homeland Security	Federal Energy Regulatory Commission
Department of the Interior	Federal Trade Commission
Department of Justice	National Archives and Records Administration
Department of Labor	National Credit Union Administration
Department of State	National Labor Relations Board
Department of Transportation	National Science Foundation
Department of the Treasury	Nuclear Regulatory Commission
Environmental Protection Agency	Office of Personnel Management
General Services Administration	Securities and Exchange Commission
National Aeronautics and Space Administration	Small Business Administration
Office of Management and Budget	U.S. Agency of International Development
Pension Benefit Guaranty Corporation	U.S. Agency for Global Media
Railroad Retirement Board	
Social Security Administration	

Chapter 7: Public Release Data Files

Data Masking Methodology for Disclosure Avoidance

Starting in 2016, the FEVS PRDF uses a new method to identify at-risk individuals and an optimized masking process to reduce the risk of re-identification and disclosure of confidential survey responses while maximizing the amount of demographic data that can be kept intact. There are two key aspects to re-identifying individuals, including where the employee works and their demographic profile.

The first task is to limit identifiable work units. Agencies or level 1 work units with less than 300 respondents were masked at the agency or level 1, respectively. Testing showed this number was an acceptable medium between being able to report more work units while keeping most of the demographic data intact. The inclusion of work units at lower levels begins to limit the number of demographic items.

The second task in the disclosure avoidance process is to limit the demographic information by reducing the number of demographic variables included in the file and collapsing response choices that remain. The fewer distinctions in the demographic information allow for less masking of groups at risk for disclosure. By collapsing or dichotomizing response choices in a logical way, such as combining the original supervisory status categories into a more simplified Non-supervisor/Supervisor-type response accomplishes less masking.

The third task is to identify people who are at-risk of disclosure. Individuals are grouped by combining their demographic responses together into a string of characters[10]. Table 12 shows an example demographic profile.

Table 12. Sample Demographic Profile

Demographic Characteristic	Demographic Response	Demographic Profile
SEX	(**A**) Male	Combined: **A B A B**
EDUCATION	(**B**) Bachelor's Degree	
MINORITY	(**A**) Non-minority	
SUPERVISOR	(**B**) Supervisor/Manager/Executive	

[10] For missing demographic data, a dummy value "X" is used.

Everyone in the same work unit who has a profile of **ABAB** is part of what is called a “cell” that identifies them as having a unique combination identifying characteristics. The FEVS uses a Rule of Ten to protect respondent confidentiality – at least 10 responses are required to produce a report for any work unit. This same rule is used to produce the public release data file – any cell with fewer than 10 respondents is considered at risk of disclosure.

The fourth task involves masking the demographic data by rolling the at-risk cells into larger cells to avoid disclosure. This is accomplished by systematically setting demographic values (such as A or B) to missing (using the dummy value “X”). A demonstration of this masking/substitution procedure follows.

Masking Procedure Demonstration

In the first pass, three at-risk cells have counts less than 10 in Table 13. Four possible substitutions are presented by replacing one of the demographic values in sequence. For the first at-risk cell (AAAA), changing the fourth “A” value to the “X” value matches the sequence of the AAAX cell, which is not at-risk. Everyone in cell AAAA will be reassigned to cell AAAX at the end of this pass through the data. For the at-risk cells ABAB and BABA, a single substitution will not move either into a not-at-risk cell, so not treatment is applied.

Table 13. Masking Procedure Pass 1 (Single Substitution)

CELL	COUNT	SOLUTION
AAAA	3	**AAAX**
AAAX	13	--
ABAB	6	Still at risk
AXXB	24	--
BABA	3	Still at risk

In the second pass, Table 14 shows two substitutions performed simultaneously. Changing the two middle values of at-risk cell ABAB will allow them to be merged with the cell AXXB which is not at risk. Also note that cell AAAX’s count went from 13 to 16 because the 3 people who formerly had AAAA were combined with the 16 that have AAAX in the first pass.

Table 14. Masking Procedure Pass 2 (Double Substitution)

CELL	COUNT	SOLUTION
AAAX	16	--
ABAB	6	**AXXB**
AXXB	24	--
BABA	3	Still at risk

The third pass performs three substitutions shown in Table 15. This does not help move BABA into a not-at-risk cell. No treatment is applied.

Table 15. Masking Procedure Pass 3 (Triple Substitution)

CELL	COUNT	SOLUTION
AAAX	16	--
AXXB	30	--
BABA	3	Still at risk

In the fourth and final pass, because the at-risk cell BABA has not moved into a not-at-risk cell, the solution is to remove all the demographic information of those 3 respondents as shown in Table 16. The combination of no demographic data and a work unit of at least 300 respondents greatly reduce their risk of being disclosed.

Table 16. Masking Procedure Pass 4 (Full Substitution)

CELL	COUNT	END SOLUTION
AAAX	16	AAAX
AXXB	30	AXXB
BABA	3	**XXXX**

Chapter 8: Presentation of Results

This chapter details the five types of reports that were produced from the 2019 OPM FEVS as well as the tools for report dissemination and performing online analyses on demand. OPM distributed survey findings in the following seven reports:

- Governmentwide reports
- All Levels, All Indices, All Items reports
- Annual Employee Survey (AES) reports
- Management reports
- Subagency reports

Table 17 shows a listing of the reports with the approximate number of each type produced. The Governmentwide reports are on the 2019 FEVS public website (www.opm.gov/FEVS), and individual agency reports were distributed via the FEVS Online Analysis and Reporting Tool (WesDaX hosted by Westat). These reports are in more detail in the sections below.

Table 17. 2019 OPM FEVS Reports

Report Type	Number of Reports 2016	2017	2018	2019
1. Governmentwide Reports (508 compliant)	**4**	**4**	**4**	**1**
Governmentwide Management Report	1	1	1	1
2. All Levels, All Indices, All Items Reports	*****	*****	**785**	**775**
Agency level All Levels Reports	*	*	83	84
1st level All Levels Reports	*	*	702	691
3. Annual Employee Survey (AES) Reports	**625**	**802**	**785**	**775**
Agency level AES Reports	80	86	85	86
1st level AES Reports	545	716	700	689
4. Management Reports (508 compliant)	**83**	**83**	**83**	**84**
Agency Management Reports	43	43	42	42
Small Agency Management Reports	40	40	41	42
5. Subagency Reports	**25,181**	**33,780**	**29,879**	**29,516**
1st level comparison	56	60	62	59
1st level breakout	543	584	566	555
2nd level comparison	425	423	413	406
2nd level breakout	2,399	2,321	2,247	2,284
3rd level comparison	1,228	1,429	1,403	1,309
3rd level breakout	5,848	6,313	5,914	5,621
4th level comparison	1,563	2,109	2,038	1,951
4th level breakout	5,182	8,281	6,748	6,476
5th level comparison	1,083	2,364	1,413	1,426
5th level breakout	2,943	5,091	3,684	3,874
6th level comparison	566	739	887	919
6th level breakout	1,263	2,016	2,112	2,091
7th level comparison	247	294	373	416
7th level breakout	798	802	998	1,060
8th level comparison	260	229	268	245
8th level breakout	509	446	495	484
9th level comparison	93	92	90	107
9th level breakout	175	187	168	231
WesDaX	Unlimited	Unlimited	Unlimited	Unlimited
Total	**26,901**	**35,690**	**32,460**	**31,151**

-- signifies the report was not produced that year
* In 2016 and 2017, the All Levels, All Indices, All Items reports were only generated electronically via the pre-configured option within the OPM FEVS Online Analysis and Reporting Tool (discussed below).

Governmentwide Reports

The 2019 main Governmentwide report (*Government Management Report*) includes an overview of the respondents compared to the total Federal workforce, response rates over time, highlights from the 2019 OPM FEVS, trending of the AES item results from 2015 to 2019, index results by agency size, and top performing agencies on the Employee Engagement and Global Satisfaction indices. The report is 508 compliant and has seven appendices providing participating agencies by employee population size and response rates, analytic methods and additional FEVS resources, item change summary, trend analyses, work/life program results, respondent characteristics, and FEVS index results. Many of the appendices are provided in Excel.

Other Governmentwide data reports generated include:

- ❑ *Report by Agency:* Displays question-by-question counts and percentages for each response option for the 2019, 2018, and 2017 FEVS by participating agency and governmentwide. Counts of respondents are unweighted, but the percentage estimates for each question are weighted.
- ❑ *Report by Demographics*: Displays question-by-question counts and percentages for each response option for the 2019, 2018, and 2017 FEVS by demographic groups and also governmentwide. Counts of respondents are unweighted, but the percentage estimates for each response category are weighted.
- ❑ *Report on Demographic Questions by Agency (Unweighted):* Displays counts and percentages by participating agencies' demographic and workforce profile (e.g., work location, supervisory status, sex, age, pay category, intention to retire) for 2019, 2018, and 2017. Both respondent counts and percentage estimates are unweighted.

All Levels, All Indices, All Items Reports

The All Levels All Indices All Items Reports provide a comprehensive summary of all FEVS non-demographic items and index scores for agencies and subagencies with at least 10 respondents. It includes index and subindex scores for the Employee Engagement Index, Global Satisfaction Index, and the New IQ Index. It also includes the percent positive, neutral, and negative results for each non-demographic item across the subagencies. Results were weighted and can be benchmarked against the Governmentwide and agency size numbers. These reports were produced in Microsoft® Excel, and generated for agencies and 1st level subagencies with at least 10 respondents. Because these reports show results to all the subagencies within an agency or 1st level subagency, they tend to be large files, hence downloading them as Preconfigured reports may be less desirable. In 2019, the agency level reports generated in Excel for ease of viewing and downloading.

Annual Employee Survey Reports

The Annual Employee Survey (AES) Report provides weighted agency-specific data for all the non-demographic items on the FEVS, with the 16 items mandated by 5 CFR Part 250 Subpart C denoted with an asterisk. These reports include the following:

- number and proportion of responses in each response category,
- the proportion of positive and negative responses to each survey item (where relevant),
- the proportion of positive, neutral and negative responses to each survey item (where relevant) for 2012 to 2019 historical data for trending,
- new items for 2019 including performance and partial government shutdown,
- proportions of responses for telework and work-life programs,
- agency specific items,
- the percentages to the demographic questions, and
- item change summary between the 2018 and 2019 instruments.

The AES reports include a dashboard interface to allow users to select and display highest and lowest percent positive or negative items as well as highlight how many items were identified as strengths or challenges. The dashboard also includes background information such as the survey field period, the number of respondents, response rate, and if the agency frame was a census or sample. A second dashboard, available for agencies that administered demographic items, spotlights the respondent demographic profile. A third dashboard allows users to select and display the largest increases or decreases in percent positive between 2016 or 2017 or 2018 and 2019 for comparison. It displays the percentage point change for the top five increases or decreases and the total number of items that increased or decreased between the selected year and 2019. Finally, for the 61 agencies that added agency-specific items to the OPM FEVS, the results for these items were also included in the AES. The AES report was produced in Microsoft® Excel and generated for the 86 agencies with at least 4 respondents and 689 1st level subagencies with at least 10 respondents.

Management Reports

For the 2019 OPM FEVS, OPM's data presentation for the Management Reports included:

- 36 Agency Management Reports for the Departments, large, and medium agencies
- 47 Small Agency Management Reports for the small and independent agencies

The Agency Management Report (AMR) and Small Agency Management (SAM) Reports provide similar content, the AMRs for large and medium agencies and the SAMs for the small agencies. These reports were only provided to agencies with at least 10 responses. The following sections provide more information about these reports.

Agency Management Report (AMR)

The AMRs were designed to help agency directors and managers identify what they can do to improve management in their agencies. The agency management reports included the following information:

- A guide to understanding and using the results from the OPM FEVS;
- A section entitled "Respondent Overview." This section provides survey administration information (data collection period, sample size, agency and subagency response rates, agency results margin of error), and highlights of the 2019 OPM FEVS agency respondent characteristics;
- A series of sections that display scores, rankings, and trends governmentwide and by agency size for:
    - Employee Engagement Index
    - The New IQ Index
    - Global Satisfaction;
- A series of Decision Aid tables that present all items that increased, decreased, or did not change since 2017 as well as items considered a strength, challenge or caution item, when items became a new strength or were a past strength, and a feature highlighting if the question was in the top 10 positive or negative items;
- Four appendices showing item change summary, results for all items benchmarked against the governmentwide percent positive, the agency's work/life programs and demographic results, and a list of all participating agencies by employee population size.

Small Agency Management Report (SAM)

The SAMs are almost identical to the AMRs but designed specifically for small agencies, and provide comparisons to other small agencies, rather than the governmentwide averages. The Small Agency Management reports include:

- ❑ A guide to understanding and using the results from the FEVS;
- ❑ A section for agencies that administered respondent characteristic and demographic questions entitled "Respondent Overview". This section provides survey administration information (data collection period, sample size, agency and subagency response rates, agency results margin of error), and highlights of the 2019 OPM FEVS agency respondent characteristics;
- ❑ A series of sections that displays scores, rankings, and trends for all small agencies combined and by agency size for:
  - o Employee Engagement Index
  - o The New IQ Index
  - o Global Satisfaction;
- ❑ A series of Decision Aid tables that present all items that increased, decreased, or did not change since 2017 as well as items considered a strength, challenge or caution item, when items became a new strength or were a past strength, and a feature highlighting if the question was in the top 10 positive or negative items;
- ❑ Four appendices that show item change summary, results for all items benchmarked against all small agencies combined, the agency's work/life program and demographic results (where applicable), and a list of all participating agencies by employee population size.

Subagency Reports

Each agency and their components or subagencies (down to the 9th level where applicable) received separate reports showing the percent positive, neutral, and negative results for each item across the subagencies. These results include weighted percentage data for all survey items and the unweighted demographic responses.

The subagency reports for each level (1st – 9th) include both a comparison and a breakout report.

- ❑ The Comparison Reports provide the governmentwide, agency, and the specific level results (e.g., the 2nd level comparison had the governmentwide, agency, 1st level, and all 2nd level subagencies' results). In the reports for the 4th level subagency and lower, the higher-level results (e.g., governmentwide, agency) were dropped for simplicity.

- The Breakout Reports provide the governmentwide, agency, and one specific level result (e.g., the 2nd level Breakout report had the governmentwide, agency, 1st level, and one 2nd level subagency results rather than comparing all 2nd level subagencies as in the comparison reports). In the reports for the 4th level subagency and lower, the higher- level results (e.g., governmentwide, agency) were dropped for simplicity. These reports also include two sections which highlighted the level's top 10 positive and negative items, as well as items in which they are leading or trailing the level directly above their level (e.g., 4th level would be compared to the 3rd level subagency).

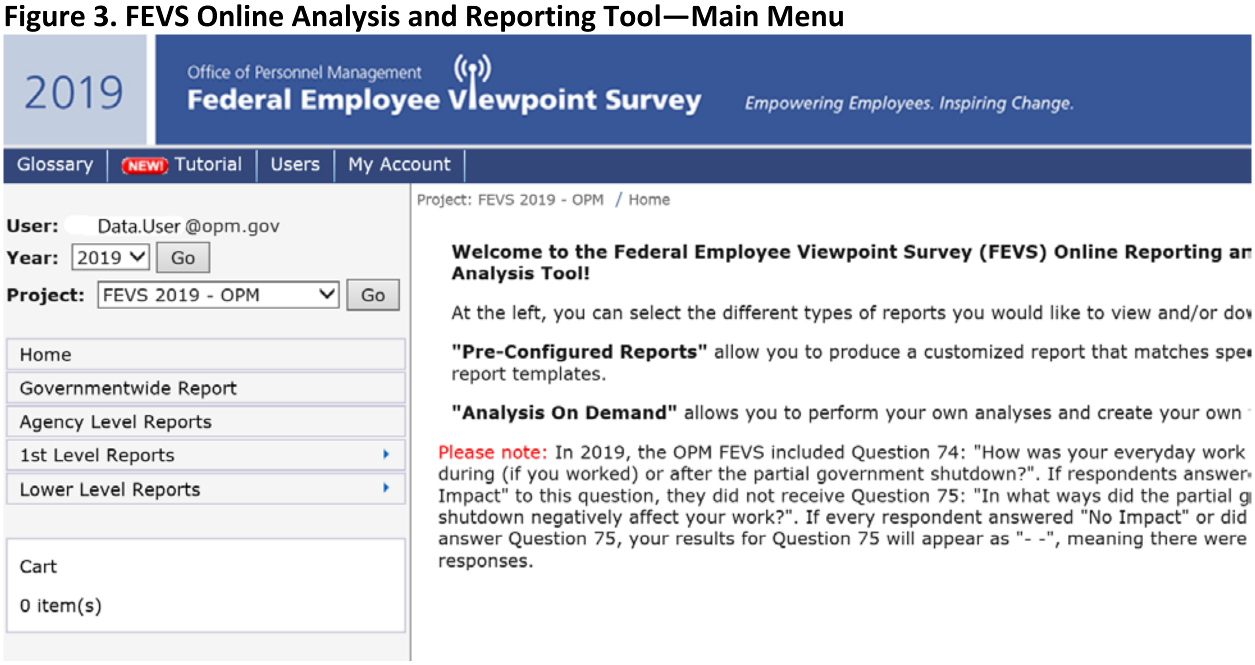
These reports also include an embedded Microsoft® Excel® file, which provide the results in electronic form to allow agency leaders to sort the data as needed.

No reports were produced when a subagency had fewer than 10 respondents.

Delivery of Agency Results, Reports and Ad Hoc Analyses – WesDaX

The FEVS Online Analysis and Reporting tool is run by Westat's Data Xplorer (WesDaX) and is an online query and analysis system. It allows OPM and Federal agency users to view and download their reports by following the links as illustrated in Figure 3. The online reporting system is available for users to access their data at any time.

Figure 3. FEVS Online Analysis and Reporting Tool—Main Menu



Governmentwide Reports:

Users are able to view/download the following 508 compliant PDF reports:

- ❑ Governmentwide Management Report
- ❑ Report by Agency
- ❑ Report by Demographics
- ❑ Unweighted Report by Demographic Questions by Agency

Agency Level Reports:

Users are able to view/download their agency level reports. These include the

- ❑ Annual Employee Survey Report,
- ❑ Agency Management Report, or Small Agency Management Report (508 compliant), and
- ❑ All Levels All Indices All Items Report.

1st Level Reports:

Users are able to drill down and view/download, in PDF format, for any 1st level subagency reports provided. These include the:

- ❑ 1st Level Annual Employee Survey (AES) Report, and
- ❑ 1st Level Subagency Comparison and Breakout Reports, and
- ❑ 1st Level All Levels All Indices All Items Reports.

Lower Level Reports:

Users are able to drill down and view/download, in PDF format, any applicable 2nd -9th level Subagency Comparison and Breakout Reports.

Preconfigured Reports:

Users are able to manually configure many of the preceding agency reports to several formats, including PDF, Excel, HTML, and RTF. These include 1st - 9th level subagency comparison and breakout reports. In addition to these reports, the following are also available via a pre-configured report

- ❑ Agency and 1st level occupational series reports;

- All levels response rate reports;
- Agency and 1st level indices reports (Employee Engagement, Global Satisfaction, and the New IQ);
- Agency and 1st level Index Creation reports whereby users could create their own index scores, and;
- Agency and 1st level Decision Aid reports – similarly to the results shown in the Decision Aid sections of the AMRs and SAMs, users can now output results to Excel and sort/filter on the items by the degree and type of change (i.e. increase, decrease, or no change).

Cart:

Similar to online shopping carts, this feature allows users to add multiple reports from the different report options to a cart to download at one time. The feature zips all selected reports into one file for downloading to a location of the user's choice.

In addition to being able to view and download the above reports through WesDaX, users have access to Analysis on Demand feature:

Analysis on Demand:

This feature allows users to drill down into the data to explore relationships of interest. Users can subset the data by year, select variables from a list and produce simple frequency distributions, two-way tables (cross-tabulation), three-way tables, and trend analysis (only for large agencies). A select-all feature allows users to be able to select or deselect all variables from a list.

After selecting the year(s), users can choose the type of table for a simple frequency, or two-way or three-way table or trends over time, they can also select their variables of interest, as well as types of statistics desired (e.g., weighted number of responses, cell, row, or column percentages, standard errors, confidence intervals, etc.). It should be noted that statistical analysis such as standard errors, confidence intervals, chi-square tests and significance testing for trends are only available for large agencies. Optional features are to filter the data by a subagency, demographic, or responses to an item, and/or benchmark to compare results to the entire dataset or specific agencies. A set of video tutorials facilitate use of Analysis On Demand: https://www.dataxplorer.com/Public/TutorialFEVS.aspx.

Users are able to tailor the type of analysis to their interests and download the analysis output. Queries are automatically saved and users are able to view/download the results upon logging in. This feature allows users to be able to run multiple queries simultaneously and not having any time-out issues. The twenty most recent queries are automatically saved for users.

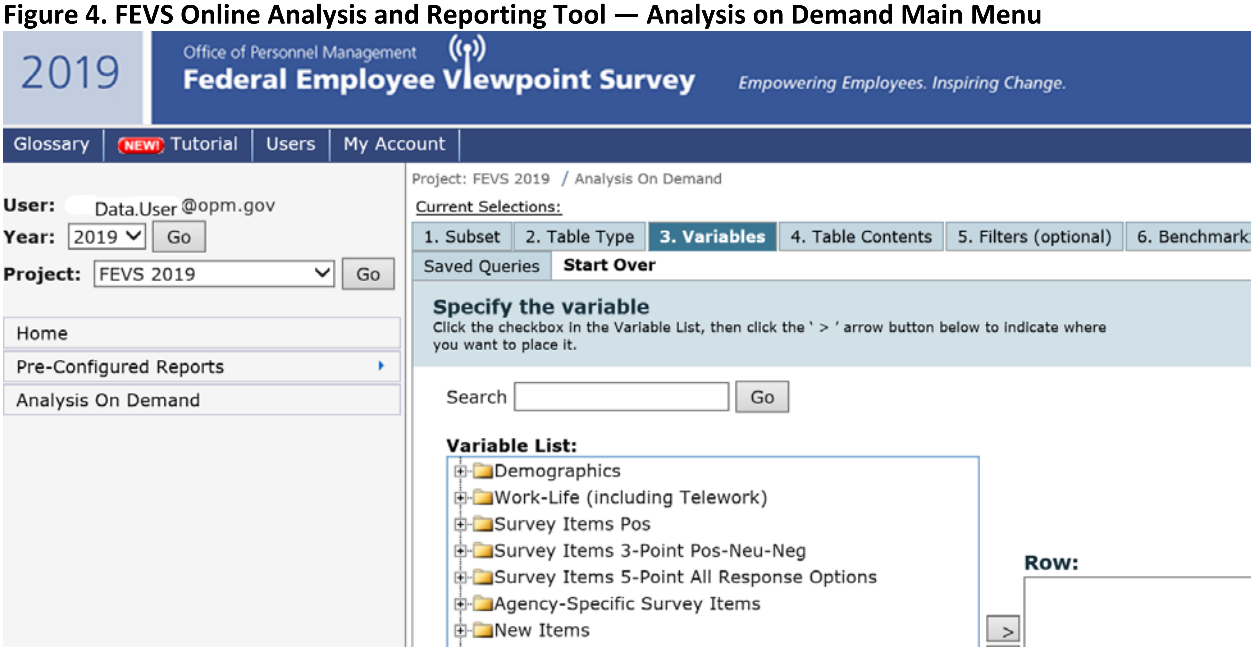
Users are able to share queries with all users from their agency. They can share queries with users from their own subagency or users from other subagencies within the same agency. For example, a user from the Office of the Director of OPM can share queries within own component and with users from the Office of the Inspector General of OPM. This sharing feature helps minimize the need to recreate queries that are commonly used.

Since 2014, users are able to create charts from results in Analysis on Demand. Users were able to select various chart type (bar, pie, donut, line, and area), chart size, color palette, and data cells. Users could specify to include or exclude the data values within the chart. For 2019, new folders include

- Demographics
- Work-Life (including Telework)
- New Items
  - Performance
  - Partial Government Shutdown

Figure 4 provides the main menu for Analysis on Demand displaying the new folders for 2019.

Figure 4. FEVS Online Analysis and Reporting Tool — Analysis on Demand Main Menu



Account Access:

All agency level and 1st level points of contacts (POC) and users were carried over from 2018 and provided access to 2019 data. POCs had the capability to grant access to the online reporting tool to others in their agency. This access could be given for all agency results or to only certain 1st level subagencies. For 1st level access, the individual would only be able to view or review data for his/her 1st level subagency, the agency as a whole, and governmentwide results.

Summary of Quality Control Process

In order to ensure the highest accuracy and validity of the data, each number within each report goes through two levels of quality control (QC). The first level of QC for the reports was the electronic quality control with the use of SAS®. Two programmers created the numbers independently based on a set of pre-defined specifications and electronically compared the numbers to ensure they matched. The second level of QC was performed by staff members who compare the input (SAS®-produced results) to the output (the actual report with the data incorporated into it). While each type of report has a different process due to the different types of data, the general process is the same. Staff members are put into teams of two, to ensure the highest level of accuracy when comparing data. One staff member reads off each number from the input data, and the other staff member reads off the number from the output data. If they match, a check mark is placed by the number. If they do not match, they inform the QC manager, who relays the error to the project manager and programmers to get it fixed. If the error is due to a problem with the code, the output data reports are re-run and the staff members go back and QC the new reports. The QC manager keeps all finished reports in a locked filing cabinet to ensure security in case there is a need to review them.

Appendix A: Item Change Summary

OPM FEVS items were modified in 2019 for a variety of reasons, often to improve the interpretation, understanding or actionability of the items. These changes are in this appendix.

New Item Text (2019)	Change	Previous Item Text (2018)
Performance 72. Currently, in my work unit poor performers usually: o Remain in the work unit and improve their performance over time o Remain in the work unit and continue to underperform o Leave the work unit - removed or transferred o Leave the work unit – quit o There are no poor performers in my work unit o Do not know	New Item in New Section	Not an item or section in the 2018 OPM FEVS
Partial Government Shutdown 73. Which of the following best describes the impact of the partial government shutdown (December 22, 2018 – January 25, 2019) on your working/pay status? o The shutdown had no impact on my working /pay status o I did not work and did not receive pay until after the lapse ended o I worked some of the shutdown but did not receive pay until after the lapse ended o I worked for the entirety of the shutdown but did not receive pay until after the lapse ended o Other, not listed above	New Item in New Section	Not an item or section in the 2018 OPM FEVS
74. How was your everyday work impacted during (if you worked) or after the partial government shutdown? o It had no impact o A slightly negative impact o A moderately negative impact o A very negative impact o An extremely negative impact	New Item in New Section	Not an item or section in the 2018 OPM FEVS

New Item Text (2019)	Change	Previous Item Text (2018)
74A. In what ways did the partial government shutdown negatively affect your work? (Check all that apply) ❑ Unmanageable workload ❑ Missed deadlines ❑ Unrecoverable loss of work ❑ Reduced customer service ❑ Delayed work ❑ Reduced work quality ❑ Cutback of critical work ❑ Time lost in restarting work ❑ Unmet statutory requirements ❑ Other	New Item in New Section	Not an item or section in the 2018 OPM FEVS
75. Are you looking for another job because of the partial government shutdown? o I am looking for another job specifically because of the shutdown. o I am looking for another job, but the shutdown is only one of the reasons. o I am looking for another job, but the shutdown had no influence on that decision. o I am not looking for another job currently.	New Item in New Section	Not an item or section in the 2018 OPM FEVS
76. My agency provided the support (e.g., communication, assistance, guidance) I needed during the partial government shutdown o Strongly Agree o Agree o Neither Agree nor Disagree o Disagree o Strongly Disagree o No support required	New Item in New Section	Not an item or section in the 2018 OPM FEVS
78. How satisfied are you with the Telework program in your agency?	Text change	73. How satisfied are you with the following Work-Life programs in your agency? Telework
79. Which of the following Work-Life programs have you participated in or used at your agency within the last 12 months? (Mark all that apply): ❑ Alternative Work Schedules ❑ Health and Wellness ❑ Employee Assistance Program – EAP ❑ Child Care Programs ❑ Elder Care Programs ❑ None listed above	New Item	Not an item in the 2018 OPM FEVS

New Item Text (2019)	Change	Previous Item Text (2018)
86. What is your supervisory status? o Senior Leader o Manager o Supervisor o Team Leader o Non-Supervisor	Response options re-ordered	80. What is your supervisory status? o Non-Supervisor o Team Leader o Supervisor o Manager o Senior Leader
90. How long have you been with your current agency? o Less than 1 year o 1 to 3 years o 4 to 5 years o 6 to 10 years o 11 to 14 years o 15 to 20 years o More than 20 years	Response option 11 to 20 years split into 2 categories	90. How long have you been with your current agency? o Less than 1 year o 1 to 3 years o 4 to 5 years o 6 to 10 years o 11 to 20 years o More than 20 years
93. Are you of Hispanic, Latino, or Spanish origin?	Text change	82. Are you Hispanic or Latino?

Appendix B: 2019 Federal Employee Viewpoint Survey Instrument

Section I: My Work Experience

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1. I am given a real opportunity to improve my skills in my organization.	❍	❍	❍	❍	❍
2. I have enough information to do my job well.	❍	❍	❍	❍	❍
3. I feel encouraged to come up with new and better ways of doing things.	❍	❍	❍	❍	❍
4. My work gives me a feeling of personal accomplishment.	❍	❍	❍	❍	❍
5. I like the kind of work I do.	❍	❍	❍	❍	❍
6. I know what is expected of me on the job.	❍	❍	❍	❍	❍
7. When needed I am willing to put in the extra effort to get a job done.	❍	❍	❍	❍	❍
8. I am constantly looking for ways to do my job better.	❍	❍	❍	❍	❍

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Do Not Know
9. I have sufficient resources (for example, people, materials, budget) to get my job done.	❍	❍	❍	❍	❍	❍
10. My workload is reasonable.	❍	❍	❍	❍	❍	❍
11. My talents are used well in the workplace.	❍	❍	❍	❍	❍	❍
12. I know how my work relates to the agency's goals.	❍	❍	❍	❍	❍	❍
13. The work I do is important.	❍	❍	❍	❍	❍	❍
14. Physical conditions (for example, noise level, temperature, lighting, cleanliness in the workplace) allow employees to perform their jobs well.	❍	❍	❍	❍	❍	❍
15. My performance appraisal is a fair reflection of my performance.	❍	❍	❍	❍	❍	❍
16. I am held accountable for achieving results.	❍	❍	❍	❍	❍	❍
17. I can disclose a suspected violation of any law, rule or regulation without fear of reprisal.	❍	❍	❍	❍	❍	❍
18. My training needs are assessed.	❍	❍	❍	❍	❍	❍

19. In my most recent performance appraisal, I understood what I had to do to be rated at different performance levels (for example, Fully Successful, Outstanding).

- ❍ Strongly Agree
- ❍ Agree
- ❍ Neither Agree nor Disagree
- ❍ Disagree
- ❍ Strongly Disagree
- ❍ No Basis to Judge

Section II: My Work Unit

20. The people I work with cooperate to get the job done.

- ❍ Strongly Agree
- ❍ Agree
- ❍ Neither Agree nor Disagree
- ❍ Disagree
- ❍ Strongly Disagree

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Do Not Know
21. My work unit is able to recruit people with the right skills.	❍	❍	❍	❍	❍	❍
22. Promotions in my work unit are based on merit.	❍	❍	❍	❍	❍	❍
23. In my work unit, steps are taken to deal with a poor performer who cannot or will not improve.	❍	❍	❍	❍	❍	❍
24. In my work unit, differences in performance are recognized in a meaningful way.	❍	❍	❍	❍	❍	❍
25. Awards in my work unit depend on how well employees perform their jobs.	❍	❍	❍	❍	❍	❍
26. Employees in my work unit share job knowledge with each other.	❍	❍	❍	❍	❍	❍
27. The skill level in my work unit has improved in the past year.	❍	❍	❍	❍	❍	❍

28. How would you rate the overall quality of work done by your work unit?

- ❍ Very Good
- ❍ Good
- ❍ Fair
- ❍ Poor
- ❍ Very Poor

29. My work unit has the job-relevant knowledge and skills necessary to accomplish organizational goals.

- ❍ Strongly Agree
- ❍ Agree
- ❍ Neither Agree nor Disagree
- ❍ Disagree
- ❍ Strongly Disagree
- ❍ Do Not Know

Section III: My Agency

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Do Not Know
30. Employees have a feeling of personal empowerment with respect to work processes.	❍	❍	❍	❍	❍	❍
31. Employees are recognized for providing high quality products and services.	❍	❍	❍	❍	❍	❍
32. Creativity and innovation are rewarded.	❍	❍	❍	❍	❍	❍
33. Pay raises depend on how well employees perform their jobs.	❍	❍	❍	❍	❍	❍
34. Policies and programs promote diversity in the workplace (for example, recruiting minorities and women, training in awareness of diversity issues, mentoring).	❍	❍	❍	❍	❍	❍
35. Employees are protected from health and safety hazards on the job.	❍	❍	❍	❍	❍	❍
36. My organization has prepared employees for potential security threats.	❍	❍	❍	❍	❍	❍
37. Arbitrary action, personal favoritism and coercion for partisan political purposes are not tolerated.	❍	❍	❍	❍	❍	❍
38. Prohibited Personnel Practices (for example, illegally discriminating for or against any employee/applicant, obstructing a person's right to compete for employment, knowingly violating veterans' preference requirements) are not tolerated.	❍	❍	❍	❍	❍	❍
39. My agency is successful at accomplishing its mission.	❍	❍	❍	❍	❍	❍

40. I recommend my organization as a good place to work.

- ❍ Strongly Agree
- ❍ Agree
- ❍ Neither Agree nor Disagree
- ❍ Disagree
- ❍ Strongly Disagree

41. I believe the results of this survey will be used to make my agency a better place to work.

- ❍ Strongly Agree
- ❍ Agree
- ❍ Neither Agree nor Disagree
- ❍ Disagree
- ❍ Strongly Disagree
- ❍ Do Not Know

Section IV: My Supervisor

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Do Not Know
42. My supervisor supports my need to balance work and other life issues.	❍	❍	❍	❍	❍	❍
43. My supervisor provides me with opportunities to demonstrate my leadership skills.	❍	❍	❍	❍	❍	❍
44. Discussions with my supervisor about my performance are worthwhile.	❍	❍	❍	❍	❍	❍
45. My supervisor is committed to a workforce representative of all segments of society.	❍	❍	❍	❍	❍	❍
46. My supervisor provides me with constructive suggestions to improve my job performance.	❍	❍	❍	❍	❍	❍
47. Supervisors in my work unit support employee development.	❍	❍	❍	❍	❍	❍

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
48. My supervisor listens to what I have to say.	❍	❍	❍	❍	❍
49. My supervisor treats me with respect.	❍	❍	❍	❍	❍
50. In the last six months, my supervisor has talked with me about my performance.	❍	❍	❍	❍	❍
51. I have trust and confidence in my supervisor.	❍	❍	❍	❍	❍

52. Overall, how good a job do you feel is being done by your immediate supervisor?

- ❍ Very Good
- ❍ Good
- ❍ Fair
- ❍ Poor
- ❍ Very Poor

Section V: Leadership

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Do Not Know
53. In my organization, senior leaders generate high levels of motivation and commitment in the workforce.	❍	❍	❍	❍	❍	❍
54. My organization's senior leaders maintain high standards of honesty and integrity.	❍	❍	❍	❍	❍	❍
55. Supervisors work well with employees of different backgrounds.	❍	❍	❍	❍	❍	❍
56. Managers communicate the goals of the organization.	❍	❍	❍	❍	❍	❍
57. Managers review and evaluate the organization's progress toward meeting its goals and objectives.	❍	❍	❍	❍	❍	❍
58. Managers promote communication among different work units (for example, about projects, goals, needed resources).	❍	❍	❍	❍	❍	❍
59. Managers support collaboration across work units to accomplish work objectives.	❍	❍	❍	❍	❍	❍

60. Overall, how good a job do you feel is being done by the manager directly above your immediate supervisor?

- ❍ Very Good
- ❍ Good
- ❍ Fair
- ❍ Poor
- ❍ Very Poor
- ❍ Do Not Know

61. I have a high level of respect for my organization's senior leaders.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree
- Do Not Know

62. Senior leaders demonstrate support for Work/Life programs.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree
- Do Not Know

Section VI: My Satisfaction

	Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Very Dissatisfied
63. How satisfied are you with your involvement in decisions that affect your work?	❍	❍	❍	❍	❍
64. How satisfied are you with the information you receive from management on what's going on in your organization?	❍	❍	❍	❍	❍
65. How satisfied are you with the recognition you receive for doing a good job?	❍	❍	❍	❍	❍
66. How satisfied are you with the policies and practices of your senior leaders?	❍	❍	❍	❍	❍
67. How satisfied are you with your opportunity to get a better job in your organization?	❍	❍	❍	❍	❍
68. How satisfied are you with the training you receive for your present job?	❍	❍	❍	❍	❍
69. Considering everything, how satisfied are you with your job?	❍	❍	❍	❍	❍
70. Considering everything, how satisfied are you with your pay?	❍	❍	❍	❍	❍
71. Considering everything, how satisfied are you with your organization?	❍	❍	❍	❍	❍

Section VII: Performance

72. Currently, in my work unit poor performers usually:

- ❍ Remain in the work unit and improve their performance over time
- ❍ Remain in the work unit and continue to underperform
- ❍ Leave the work unit – removed or transferred
- ❍ Leave the work unit - quit
- ❍ There are no poor performers in my work unit
- ❍ Do not know

Section VIII: Partial Government Shutdown Questions

73. Which of the following best describes the impact of the partial government shutdown (December 22, 2018 – January 25, 2019) on your working/pay status?

- ❍ The shutdown had no impact on my working/pay status
- ❍ I did not work and did not receive pay until after the lapse ended
- ❍ I worked some of the shutdown but did not receive pay until after the lapse ended
- ❍ I worked the entirety of the shutdown but did not receive pay until after the lapse ended
- ❍ Other, not listed above

74. How was your everyday work impacted during (if you worked) or after the partial government shutdown?

- ❍ It had no impact (*Skip to question 75*)
- ❍ A slight negative impact
- ❍ A moderately negative impact
- ❍ A very negative impact
- ❍ An extremely negative impact

74A. In what ways did the partial government shutdown negatively affect your work? (Check all that apply).

- ❑ Unmanageable workload
- ❑ Missed deadlines
- ❑ Unrecoverable loss of work
- ❑ Reduced customer service
- ❑ Delayed work
- ❑ Reduced work quality
- ❑ Cutback of critical work
- ❑ Time lost in restarting work
- ❑ Unmet statutory requirements
- ❑ Other

75. Are you looking for another job because of the partial government shutdown?

- ❍ I am looking for another job **specifically** because of the shutdown
- ❍ I am looking for another job, but the shutdown is **only one** of the reasons
- ❍ I am looking for another job, but the shutdown had **no influence** on that decision
- ❍ I am **not** looking for another job currently

76. My agency provided the support (e.g., communication, assistance, guidance) I needed during the partial government shutdown.

- ❍ Strongly Agree
- ❍ Agree
- ❍ Neither Agree nor Disagree
- ❍ Disagree
- ❍ Strongly Disagree
- ❍ No support required

Section VII: Work-Life

77. Please select the response below that BEST describes your current teleworking schedule.

- I telework very infrequently, on an unscheduled or short-term basis
- I telework, but only about 1 or 2 days per month
- I telework 1 or 2 days per week
- I telework 3 or 4 days per week
- I telework every work day
- I do not telework because I have to be physically present on the job (e.g. Law Enforcement Officers, Park Rangers, Security Personnel)
- I do not telework because of technical issues (e.g. connectivity, inadequate equipment) that prevent me from teleworking
- I do not telework because I did not receive approval to do so, even though I have the kind of job where I can telework
- I do not telework because I choose not to telework

78. How satisfied are you with the Telework program in your agency?

- Very satisfied
- Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied
- I chose not to participate in this program
- This program is not available to me
- I am unaware of this program

79.Which of the following Work-Life programs have you participated in or used at your agency within the last 12 months? (Check all that apply).

- ❑ **Alternative Work Schedules** (for example, compressed work schedule, flexible work schedule)
- ❑ **Health and Wellness Programs** (for example, onsite exercise, flu vaccination, medical screening, CPR training, Health and wellness fair)
- ❑ **Employee Assistance Program-EAP** (for example, short-term counseling, referral services, legal services, information services)
- ❑ **Child Care Programs** (for example, child care center, parenting class and support groups, back-up care, subsidy, flex spending account)
- ❑ **Elder Care Programs** (for example, elder/adult care, support groups, resources)
- ❑ **None listed above**

How satisfied are you with the following Work-Life programs in your agency?

	Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Very Dissatisfied	I choose not to participate in these programs	These programs are not available to me	I am unaware of these programs
80. Alternative Work Schedules (AWS, for example, compressed work schedule or flexible work schedule)	❍	❍	❍	❍	❍	❍	❍	❍
81. Health and Wellness Programs (for example, onsite exercise, flu vaccination, medical screening, CPR training, health and wellness fair)	❍	❍	❍	❍	❍	❍	❍	❍

	Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Very Dissatisfied	I choose not to participate in these programs	These programs are not available to me	I am unaware of these programs
82. Employee Assistance Program (EAP, for example, short-term counseling, referral services, legal services, information services)	❍	❍	❍	❍	❍	❍	❍	❍
83. Child Care Programs (for example, child care center, parenting classes and support groups, back-up care, flexible spending account)	❍	❍	❍	❍	❍	❍	❍	❍
84. Elder Care Programs (for example, elder/adult care, support groups, speakers)	❍	❍	❍	❍	❍	❍	❍	❍

Section VIII: Employment Demographics

85. Where do you work?

- ❍ Headquarters
- ❍ Field

86. What is your supervisory status?

- ❍ Senior Leader: You are the head of a department/agency or a member of the immediate leadership team responsible for directing the policies and priorities of the department/agency. May hold either a political or career appointment, and typically is a member of the Senior Executive Service or equivalent.
- ❍ Manager: You are in a management position and supervise one or more supervisors.
- ❍ Supervisor: You are a first-line supervisor who is responsible for employees' performance appraisals and leave approval.
- ❍ Team Leader: You are not an official supervisor; you provide employees with day-to-day guidance in work projects, but do not have supervisory responsibilities or conduct performance appraisals.
- ❍ Non-Supervisor: You do not supervise other employees.

87. What is your pay category/grade?

- ❍ Federal Wage System (for example, WB, WD, WG, WL, WM, WS, WY)
- ❍ GS 1-6
- ❍ GS 7-12
- ❍ GS 13-15
- ❍ Senior Executive Service
- ❍ Senior Level (SL) or Scientific or Professional (ST)
- ❍ Other

88. What is your US military service status?

- No Prior Military Service
- Currently in National Guard or Reserves
- Retired
- Separated or Discharged

89. How long have you been with the Federal Government (excluding military service)?

- Less than 1 year
- 1 to 3 years
- 4 to 5 years
- 6 to 10 years
- 11 to 14 years
- 15 to 20 years
- More than 20 years

90. How long have you been with your current agency (for example, Department of Justice, Environmental Protection Agency)?

- Less than 1 year
- 1 to 3 years
- 4 to 5 years
- 6 to 10 years
- 11 to 14 years
- 15 to 20 years
- More than 20 years

91. Are you considering leaving your organization within the next year, and if so, why?

- ❍ No
- ❍ Yes, to retire
- ❍ Yes, to take another job within the Federal Government
- ❍ Yes, to take another job outside the Federal Government
- ❍ Yes, other

92. I am planning to retire:

- ❍ Within one year
- ❍ Between one and three years
- ❍ Between three and five years
- ❍ Five or more years

Section IX: Demographics

93. Are you Hispanic, Latino, or Spanish origin?

- ❍ Yes
- ❍ No

94. Please select the racial category or categories with which you most closely identify (mark as many as apply).

- ❑ American Indian or Alaska Native
- ❑ Asian
- ❑ Black or African American
- ❑ Native Hawaiian or Other Pacific Islander
- ❑ White

95. What is your age group?

- ❍ 25 and under
- ❍ 26-29 years old
- ❍ 30-39 years old
- ❍ 40-49 years old
- ❍ 50-59 years old
- ❍ 60 years or older

96. What is the highest degree or level of education you have completed?

- ❍ Less than High School
- ❍ High School Diploma/GED or equivalent
- ❍ Trade or Technical Certificate
- ❍ Some College (no degree)
- ❍ Associate's Degree (e.g., AA, AS)
- ❍ Bachelor's Degree (e.g., BA, BS)
- ❍ Master's Degree (e.g., MA, MS, MBA)
- ❍ Doctoral/Professional Degree (e.g., Ph.D., MD, JD)

97. Are you an individual with a disability?

- ❍ Yes
- ❍ No

98. Are you:

- ❍ Male
- ❍ Female

99. Are you transgender?

- ❍ Yes
- ❍ No

100. Which one of the following do you consider yourself to be?

- ❍ Straight, that is not gay or lesbian
- ❍ Gay or Lesbian
- ❍ Bisexual
- ❍ Something else

Appendix C: Email Communications

Sample Invitation Email

Subject: The 2019 OPM FEVS: Empowering Employees. Inspiring Change.

Let leadership hear your opinions about your agency, your supervisor and your job! Be your agency's driving force. Change starts with you. Today, the 2019 Office of Personnel Management Federal Employee Viewpoint Survey (OPM FEVS) kicks off, providing you a safe and confidential way to voice your opinions. Please take 20 to 30 minutes to complete the survey. Participation is voluntary and you may use official time.

Here is your ***personalized*** link: **Click here to access your survey**

Please do not forward your email. Otherwise, someone else will be your voice!

Note: If the link above does not work or has been disabled, please COPY the following link, beginning with "https:", and PASTE it into your Web browser. When copying the link, please make sure you copy the entire link from beginning to end:
[UNIQUE LINK]

Need help?
We are committed to providing everyone a voice. If the survey format interferes with your ability to respond due to a disability, such as assistive technology incompatibility, or if you are experiencing other difficulties accessing your survey or have questions about the OPM FEVS, please contact our Survey Support Center by replying to this message.

The OPM FEVS team thanks you!

First Reminder Email

We understand that you are very busy doing your job and that the additional time to complete a survey may be burdensome. Your responses to the Office of Personnel Management Federal Employee Viewpoint Survey (OPM FEVS) are not taken for granted and your voice is important for improving your workplace. Please take 20 or 30 minutes out of your day and let leadership hear from you by participating in the OPM FEVS. The survey is voluntary and you may use official time. After completing your survey, your responses are combined with responses from other people to create reports, so your responses are kept confidential. Once you complete the survey, you will not receive any additional reminders from OPM.

Here is your personalized link: **Click here to access your survey**

Please do not forward your email. Otherwise, someone else will be your voice!

Note: If the link above does not work or has been disabled, please COPY the following link, beginning with "https:", and PASTE it into your Web browser. When copying the link, please make sure you copy the entire link from beginning to end: **[UNIQUE LINK]**

Need help?
We are committed to providing everyone a voice. If the survey format interferes with your ability to respond due to a disability, such as assistive technology incompatibility, or if you are experiencing other difficulties accessing your survey or have questions about the OPM FEVS, please contact our Survey Support Center by replying to this message.

The OPM FEVS team thanks you!

Example of Other Reminder Emails

Let your agency's senior leaders hear from you. Please take 20 to 30 minutes to participate in the Office of Personnel Management Federal Employee Viewpoint Survey (OPM FEVS). The survey is voluntary and you may use official time.

Here is your personalized link: **Click here to access your survey**

Please do not forward your email. Otherwise, someone else will be your voice!
Note: If the link above does not work or has been disabled, please COPY the following link, beginning with "https:", and PASTE it into your Web browser. When copying the link, please make sure you copy the entire link from beginning to end: **[UNIQUE LINK]**

Need help?
We are committed to providing everyone a voice. If the survey format interferes with your ability to respond due to a disability, such as assistive technology incompatibility, or if you are experiencing other difficulties accessing your survey or have questions about the OPM FEVS, please contact our Survey Support Center by replying to this message.

The OPM FEVS team thanks you!

Appendix D: AAPOR Response Rate

The following presents the calculation of the OPM FEVS response rate using the AAPOR Response Rate 3 formula.

Table D1. Case Assignment Allocation to Response Rate Groups, by the AAPOR RR3 Method

Response Rate (RR) Group	AAPOR RR3 Method Allocation	AAPOR RR3 Method Counts
Eligible Respondents (ER)	CO	615,395
Eligible Non-respondents (ENR)	UA, RF, IN	7,240
Unknown Eligibility (UNK)	UD, NR, NE	858,078
Ineligible (IE)	IE	63,279
Total		**1,543,992**

AAPOR Response Rate 3 formula:

Number of eligible employees returning completed surveys / (Number of known eligible employees + estimated number of eligible employees among cases of unknown eligibility):

$RR3_{AAPOR} = ER \ / \ (ER + ENR + UNK_{elig}) * 100$,

where UNK_{elig} = the estimated number of eligible cases among cases of unknown eligibility. It was calculated as follows:

$P_{elig} = (ER + ENR) / (ER + ENR + IE)$ = proportion of eligible cases among cases of known eligibility

$P_{elig} = (615{,}395 + 7{,}240) / (615{,}395 + 7{,}240 + 63{,}279)$

$P_{elig} = 0.90774499$

$UNK_{elig} = P_{elig} * UNK = 0.90774499 * 858{,}078 = 778{,}916$

Thus,

$RR3_{AAPOR} = 615{,}395 / (615{,}395 + 7{,}240 + 778{,}916) * 100$

$RR3_{AAPOR} = 615{,}395 / 1{,}401{,}551 * 100$

$\mathbf{RR3_{AAPOR} = 43.9}$ **percent**

Appendix E: Weighting of the Survey Data

Base Weights

The base weight for a sampled employee is equal to the reciprocal of an individual's selection probability. The calculated base weights were then assigned to all employees. Since 2019 OPM FEVS is a census of all eligible employees, the base weight is 1 for each sampled employee.

Survey Nonresponse Adjustment

Some sample members did not respond to the survey, usually because they chose not to participate, they considered themselves ineligible, or their surveys were undeliverable. Adjustments to the base weights reduce the bias in survey estimates that can occur when the respondent population and the survey population no longer match on important characteristics. In other words, the adjustments generally increase the base weights of respondents to account for non-respondents.

Nonresponse (NR) adjustments were calculated separately for individual agencies or sets of subagencies. Prior to 2015, NR adjustments were calculated separately for each agency. Since 2015 2019, noresponse adjustments have been calculated separately for subagencies that have 2,500 or more employees and for an agency's set of subagencies that each has fewer than 2,500 employees. Within each agency, weighting cells were constructed to group respondents and non-respondents with similar characteristics into the same cells for adjustment. The variables used to form the weighting cells included a sub-agency identifier, supervisory status, sex, minority status, age group, tenure as a Federal employee, full- or part-time status, and location (headquarters vs. field office). Large subgroups were divided into smaller weighting cells to increase variation across the cells. A categorical search algorithm was used to divide the data into smaller cells, with the goal of having response rates differ as much as possible across the cells. Cells with similar response rates were combined when necessary to achieve a minimum cell size of 30 respondents.

For the 2006 survey administration, the algorithm called CHAID (Chi-squared Automatic Interaction Detector; Kass, 1980) was used to divide the data into smaller cells. For the 2008, 2010, 2011, 2012, 2013, 2014, 2015, and 2016 survey administrations, the chi algorithm in the Search software developed and maintained by the University of Michigan was used. The chi algorithm is an ancestor of

CHAID. For the 2017 - 2019 survey administration, the CHAID option of SAS's PROC HPSPLIT procedure was used to divide the data into smaller cells.

After the weighting cells were formed, statisticians calculated two nonresponse adjustment factors. The following formula was used to compute the first nonresponse adjustment factor for each weighting cell:

$$f_c^{1,nr} = \frac{\sum_{i \in ER_c} w_i + \sum_{i \in ENR_c} w_i + \sum_{i \in I_c} w_i + \sum_{i \in U_c} w_i}{\sum_{i \in ER_c} w_i + \sum_{i \in ENR_c} w_i + \sum_{i \in I_c} w_i}$$

where $\sum_{i \in ER_c} w_i$ is the sum of base weights for eligible respondents in weighting cell c, $\sum_{i \in ENR_c} w_i$ is the sum of base weights for eligible non-respondents in weighting cell c, $\sum_{i \in I_c} w_i$ is the sum of base weights for known ineligibles in weighting cell c, and $\sum_{i \in U_c} w_i$ is the sum of base weights for non-respondents of unknown eligibility in weighting cell c. The first adjustment factor was used to distribute the base weights of non-respondents of unknown eligibility to units of known eligibility. The statisticians refer to this type of weight adjustment as a Type 1A weight adjustment (see Appendix G). This was achieved by multiplying the base weights of eligible respondents, known ineligibles, and non-respondents known to be eligible by the first adjustment factor and setting the final weight of the non-respondents of unknown eligibility to zero.

The following formula was used to compute the second nonresponse adjustment factor for each weighting cell:

$$f_c^{2,nr} = \frac{\sum_{i \in ER_c} w_i' + \sum_{i \in ENR_c} w_i'}{\sum_{i \in ER_c} w_i'}$$

where w_i' is the adjusted weight resulting from multiplying the base weight for unit i by the first adjustment factor. The second adjustment factor was used to distribute the adjusted weights of non-respondents of known eligibility to the eligible respondents. The statisticians refer to this type of adjustment as a Type 1B adjustment. (See Appendix G.) The final weights were calculated by multiplying the base weights of the eligible respondents by both adjustment factors and by setting the final weight of the non-respondents of known eligibility to zero. Thus, the nonresponse adjusted weights were $w_i^{nr} = f_c^{1,nr} \times w_i$ for known ineligibles and $w_i^{nr} = f_c^{1,nr} f_c^{2,nr} \times w_i$ for eligible respondents.

Raking

The precision of survey estimates is improved if known information about the total population is used during the weighting process. For the final stage of weighting, statisticians used a method called raking that incorporated available information on the demographic characteristics of the 2019 OPM FEVS sample population. For this third adjustment step, the sample file was subset to include only eligible respondents and known ineligibles. Then, the adjusted base weights were further adjusted so they sum to control totals computed from the sampling-frame variables. The known ineligibles are included in raking because the control totals computed from the sampling frame variables also include ineligibles. At the conclusion of raking, however, only the final weights of the eligible respondents are used with the collected survey data to compute weighted estimates.

The raking procedure was carried out in a sequence of alternating adjustments. Weighted counts for eligible respondents plus known ineligibles were arrayed into two dimensions. The first dimension was formed by the crossing of agency, sex, and minority status. The second dimension was formed by truncating the stratum identifier to four characters, and in some cases further collapsing the resulting stratum-based cells. The actual population count was known for each cell in those two dimensions. Weighted counts of eligible respondents plus known ineligibles were produced for the first dimension, and then the weights were adjusted to reproduce the population counts. Those adjusted weights were then used to produce counts for the second dimension. The weighted counts of eligible respondents plus known ineligibles were compared with population counts for the second dimension, and the weights were adjusted again to reproduce population counts. This process of alternately adjusting for one, then the other, dimension was repeated until the survey distributions for the two dimensions equaled the population control counts for both dimensions, within a specified level of precision. That is, the sum of the weights for each raking dimension was acceptably close to the corresponding population total.

The final raked weight for the *i*th respondent was computed as:

$$\tilde{w}_i^R = \tilde{f}_i^R w_i^{nr}, i \in s_g$$

where f_i^R is the product of the iterative adjustments (in each dimension group, s_g) applied to the i^{th} sample employee. The final weight equals the number of people in the survey population the i^{th} respondent represents. The weights for the eligible respondents were added to the data file. When the weights are used in data analysis, they improve the precision and accuracy of survey estimates.

Full-sample versus Replicate Weights

For the 2004, 2006, and 2008 FHCS, *full-sample weights* were used to calculate standard errors and to perform statistical tests when the Taylor linearization method is used. For the 2010-2019 administrations, full-sample weights and Taylor linearization were still used for all analyses, except *replicate weights* were used for agency and Governmentwide trend analyses. Replicate weights were used because these trend analyses were also available on demand in WesDaX, Westat's online query and analysis system.

WesDaX uses the jackknife method to determine standard errors and to perform statistical tests, which requires the calculation of sets of *replicate weights*. The replicate weights were calculated by the JKn method, which randomly assigns cases to groups, referred to as *variance units*, within sets of sampling strata, referred to as *variance strata*. The sampling strata for a particular agency were assigned to variance strata based on stratum response rates. Each set of replicate weights corresponds to deleting one variance unit and then recalculating the weights based on the remaining variance units. The nonresponse and calibration adjustments for the 2010-2019 OPM FEVS were replicated in each set of replicate weights. Consequently, standard errors calculated by using the jackknife method correctly accounts for the effects of weight adjustment on the variance of survey estimates.

Example:

The remainder of this appendix presents a numerical example of the three-step weighting procedure. For this example, we assume that all the units in the sampling frame are eligible cases. Consequently, this example does not include any adjustments for cases of unknown eligibility.

Table E1 shows how the population is partitioned into five strata, and strata 4 and 5 are combined. The rightmost column of Table E1 contains the base weights by stratum. For example, the base weight for stratum 1 is 13,470 / 950=14.179.

Table E1. Population counts, sample sizes, selection probabilities, and base weights

Stratum	Population count		Sample size	Selection probability	Base weight
1	13,470		13,470	1	1
2	12,300		12,300	1	1
3	22,980		22,980	1	1
4	450		450		
4/5		1,250		1	1
5	800		800		
Total	50,000		50,000		
				13,470/13,470	13,470/13,470

Table E2 contains the number of respondents by strata and the associated response rates. The rightmost column of Table E2 contains the sum of the base weights for all the respondents in each stratum. For example, for stratum 1 the sum of the base weights is $5{,}671 \times 1 = 5{,}671$. However, this is not close to the stratum population size of 13,470 for stratum 1 shown in Table E1. If the response rate were 100 percent in stratum 1, then the sum of the base weights for all respondents in a stratum would equal the stratum's population size. Because the response rate is not 100%, adjustments to the weights to compensate for nonresponse will be calculated.

Table E2. Sample, Respondents, Response Rates, and Base Weighted Totals

Stratum	Sample size	Number of respondents	Response rate	Base weight total for respondents
1	13,470	5,671	0.421	5,671
2	12,300	4,526	0.368	4,526
3	22,980	9,192	0.400	9,192
4/5	1,250	540	0.432	540
Total	**50,000**	**19,929**	**0.405**	**19,929**

5,671*1

One of the sampling-frame variables contains location information—that is, headquarters or field—about each case. Table E3 shows how respondents can be assigned to nonresponse-adjustment cells on the basis of location and then associated response rates and nonresponse adjustment factors calculated. For example, for the Field location, the nonresponse adjustment factor would be the reciprocal of the response rate of 0.310 for a 3.226 nonresponse adjustment factor. By using the reciprocal of the response rate, the nonresponse adjustment factor will be greater than or equal to one, so multiplying the base weight for a respondent by a nonresponse adjustment factor increases it so it represents both the respondent and associated non-respondents. The base weights are then multiplied by the adjustment factors, yielding the nonresponse-adjusted weights shown in Table E4.

Table E3. Response rates by location

Location	Number of respondents	Response Rate	Nonresponse adjustment factor
Headquarters	12,320	0.500	2.000
Field	7,609	0.310	3.226
Total	19,929	0.405	

1/0.310

Table E4. Nonresponse adjusted weights

		Adjustment factor		Adjusted weight	
Stratum	Base Weight	HQ	Field	HQ	Field
1	1	2.000	3.226	2.000	3.226
2	1	2.000	3.226	2.000	3.226
3	1	2.000	3.226	2.000	3.226
4/5	1	2.000	3.226	2.000	3.226

In Table E5, the second column from the right contains the sum of the nonresponse-adjusted weights for all the respondents in the eight cells defined by stratum and location. The rightmost column of Table E5 contains the cell's population size. The corresponding entries for the stratum totals in the two columns are not equal because of the variability in response rates across the four strata within each nonresponse adjustment cell, defined by location. If there had been no cross-stratum variability of responses rates within a nonresponse adjustment cell, the corresponding stratum totals in the two columns would have been equal to each other.

Table E5. Unweighted and weighted counts for respondents and population counts by stratum and location

Stratum	Location	Unweighted count for respondents	Weighted count for respondents	Population count
1	HQ	4,324	8,648	7,880
1	Field	1,347	4,345	5,590
Total for 1		5,671	12,993	13,470
2	HQ	1,681	3,362	3,752
2	Field	2,845	9,178	8,548
Total for 2		4,526	12,540	12,300
3	HQ	5,249	10,498	10,915
3	Field	3,943	12,720	12,065
Total for 3		9,192	23,218	22,980
4/5	HQ	394	788	800
4/5	Field	146	471	450
Total for 4/5		540	1,259	1,250
Grand Totals		**19,929**	**50,011**	**50,000**

394*2

Table E6 illustrates two iterations of raking of the weights using stratum and sex as raking dimensions. The objective of such raking is to adjust the weights so that the sum of the weights for all the respondents in each stratum equals the stratum's population control total and also the sum of the weights for all the respondents of each sex equals the sex's population control total.

Table E6. Raking of weights using stratum and sex as ranking dimensions

Iteration 1

Stratum	Weighted Count	Population Count	Raking Factor
1	12,993	13,470	1.037
2	12,540	12,300	0.981
3	23,218	22,980	0.990
4/5	1,259	1,250	0.993
Total	**50,011**	**50,000**	

13,470/12,993

Multiply weights by raking factors to get new weights and produce distribution by sex

Sex	Weighted Count	Population Count	Raking Factor
Male	21,900	23,500	1.073
Female	27,000	26,500	0.981
Total	**48,900**	**50,000**	

Calculate new weights using raking factors and produce distribution by group

Iteration 2

Stratum	Weighted Count	Population Count	Raking Factor
1	13,416	13,470	0.996
2	12,325	12,300	1.002
3	23,003	22,980	1.001
4/5	1,253	1,250	1.002
Total	**49,996**	**50,000**	

Sex	Weighted Count	Population Count	Raking Factor
Male	23,400	23,500	1.004
Female	26,400	26,500	1.004
Total	**49,800**	**50,000**	

Iterations continue until weighted counts are close or equal to population counts

Appendix F: Illustration of Weight Adjustment Operations

Table F1. Values of status variables

Status	Description
0	Case where the initial weight should not be changed
1	Eligible respondents
2	Eligible non-respondents
3	Ineligible
4	Unknown eligibility status

Table F2. Sums of weights used to define Type 1A and Type 1B Nonresponse Adjustments

Sums of weights	Status
$S_1 = \sum wgt_{status=1}$	Eligible Respondents
$S_2 = \sum wgt_{status=2}$	Eligible Non-respondents
$S_3 = \sum wgt_{status=3}$	Ineligible
$S_4 = \sum wgt_{status=4}$	Unknown (non-respondents)

Figure F1. Type 1A Nonresponse Adjustment

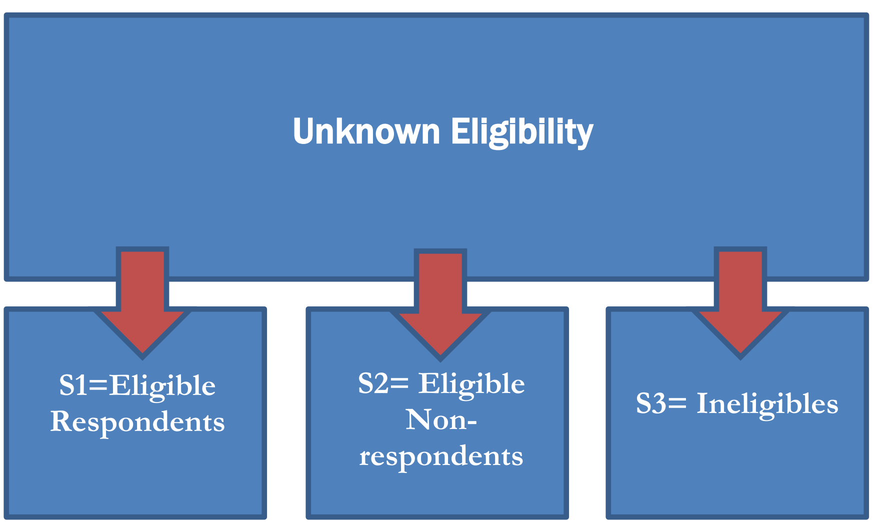


Figure F2. Type 1B Nonresponse Adjustment